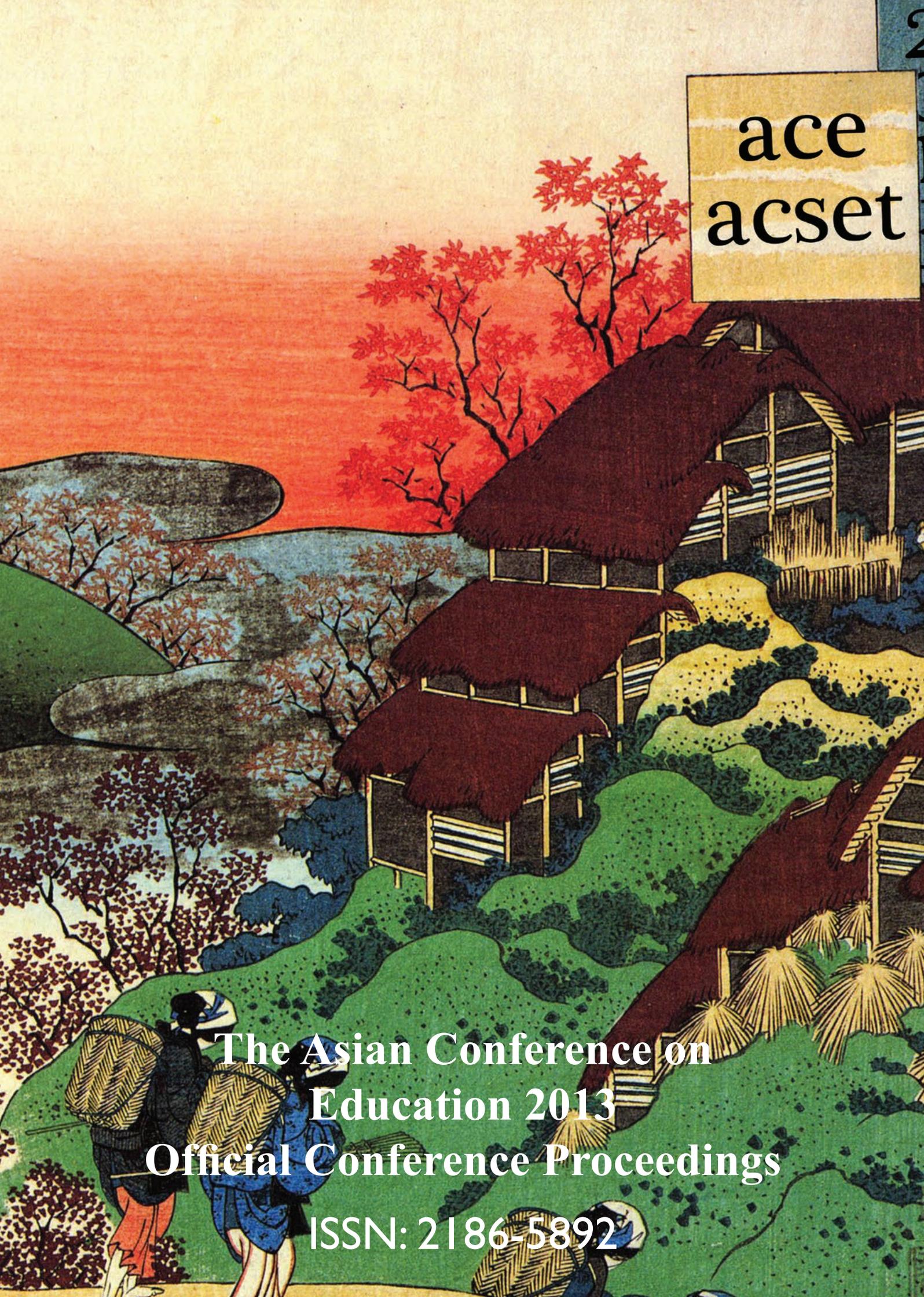


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The Changing Face of American Business Education: Past, Present and Future Trends Steven Rosen, Prefectural University of Hiroshima, Japan	p1-p13
Montessori Materials as the "Instrument" for Expansive Learning Yasuko Takeda, Osaka University, Japan	p14-p29
Task-based Language Learning: An Approach to Help Students to Become Balanced Thai-English Bilinguals Ketkanda Jaturongkachoke, The National Institute of Development Administration, Thailand Supamit Chanseawrassamee, TOT Academy, Thailand	p30-p53
A Case Study in Complexity and Accuracy in Development in ESL Academic Writing: A Dynamic Perspective Rosmawati, The University of Sydney, Australia	p54-p71
Creating Interdisciplinary Collaborations in a Learner-centered Global Environment Karen Videtic, Virginia Commonwealth University, USA	p72-p79
Methodology of Play Translator's Score Developing within the Cross-cultural Theatre Making Educational Project Larisa Akhmylovskaya, Far Eastern Federal University, Russia Andriana Barysh, Freelance Translator, Russia	p80-p87
The Effects of Input and Output during Interaction: A Diary Study of an Adult Learning Korean as a Second Language Chiu-Yin Wong, Monmouth University, USA	p88-p97
The Relevance of Mahatma Gandhi's Vision of Educational Leadership Philip Joseph, University of Goroka, Papua New Guinea	p98-p105
Promoting Alternative Higher Education in Sub-Saharan Africa: A General Survey Gbolagade Adekanmbi, Independent Scholar/Researcher, Botswana	p106-p121
Teachers as Actors: Lecturing Theory Classes for Students in Vocational Education and Training Institutes Yuk-kwan Ng, Vocational Training Council, Hong Kong Po-san Leung, Vocational Training Council, Hong Kong Iai-fong Lau, Vocational Training Council, Hong Kong Kit-man Chung, Vocational Training Council, Hong Kong	p122-p133
Uncovering a Cultural Black Box: A Case Study of a Classroom Discourse of a Regional Award-Winning Thai Social Sciences Teacher in a Topic of Culture Kunthida Rungruengkiat, King Mongkut's University of Technology, Thailand Pornapit Darasawang, King Mongkut's University of Technology, Thailand	p134-p150
The Effect of "Jarimatika" Multimedia Learning in Children Mathematic Learning Motivation Wang Weijun, Central China Normal University Farid Ahmadi, Semarang State University, Indonesia	p151-p162
The Relationship between Students' Learning Style and Academic Performance in MARA Professional College, Malaysia Mumtaz Begam Abdul Kadir, MARA Professional College, Malaysia	p163-p178
The Diversity of Learning Skills Among Entrepreneurial Students in MARA Professional College Malaysia Nik Hasrawati Nik Hassan, MARA Professional College, Malaysia Mumtaz Begam Abdul Kadir, MARA Professional College, Malaysia	p179-p190
Learning Style Preferences of Entrepreneurial Students in MARA Professional College, Malaysia Mohd Syaifulhafizi Md Noh, MARA Professional College, Malaysia Mumtaz Begam Abdul Kadir, MARA Professional College, Malaysia	p191-p203
Assessing Learning Style of Entrepreneurial Students in MARA Professional College, Malaysia Muhamad Fauzi Zainal Abidin, MARA Professional College, Malaysia Mumtaz Begam Abdul Kadir, MARA Professional College, Malaysia	p204-p216

Factor Affective Stress and Stress Removing Methods Of Undergraduate Student Teachers Siriporn Srichantha, Loei Rajabhat University, Thailand	p217-p222
Using Educational Technology to Enhance Student Engagement and Retention Shirley Wong, NMIT, Australia	p223-p229
Cross-Age Tutoring: Its Effects on High Performing Students and Students At-risk with Learning Disability in Mathematics Michel Basister, University of Nueva Caceres, Philippines	p230-p241
Creative Process Experiences with Digital Storytelling: A Tale of Two Engineering Students Rofiza Aboo Bakar, Universiti Teknologi MARA, Malaysia Hairul Nizam Ismail, Universiti Sains Malaysia, Malaysia	p242-p260
A Study on India's the Right to Education Act: Overcoming Social & Economic Challenges Ratna Banerjee, University of Petroleum & Energy Studies, India Surbhi Arora, University of Petroleum & Energy Studies, India	p261-p269
The Analytic Hierarchy Process - A Survey of "the desirable demand" of a graduated worker in Chiang Mai and Lamphun Province, Thailand. Achara Khamaksorn, Chiang Mai University, Thailand Danaitun Pongpatcharatorntep, Chiang Mai University, Thailand Teewara Suwan, Chiang Mai University, Thailand	p270-p280
Applying the Conjoint Technique in Identifying Preschool Preference of an Ideal Computer Game for Nutrition Literacy Michael Joseph Diño, Our Lady of Fatima University, Philippines Christian Del Rosario, Our Lady of Fatima University, Philippines Jenica Ana Rivero, Our Lady of Fatima University, Philippines	p281-p298
Nutrition-related Computer Game Use Resulted to Improved Health Literacy among Preschoolers in the Philippines Michael Joseph Diño, Our Lady of Fatima University, Philippines Christian Del Rosario, Our Lady of Fatima University, Philippines Jenica Ana Rivero, Our Lady of Fatima University, Philippines	p299-p314
Predictors of Nutrition-related Game Utilization among Preschoolers in the Philippines Michael Joseph Diño, Our Lady of Fatima University, Philippines Christian Del Rosario, Our Lady of Fatima University, Philippines Jenica Ana Rivero, Our Lady of Fatima University, Philippines	p315-p338
Learning Management Outcome from an Integrated Instruction between Authentic Learning and Community Academic Service for Nursing Students in the Human Society Environment and Health Subject Suchada Wongsawat, Boromarajonani Nakhonratchasima Nursing College, Thailand Wareewan Sirivanij, Boromarajonani Nakhonratchasima Nursing College, Thailand	p339-p351
The Challenge of Curriculum Design in the Transnational Classroom: Put Theory into a Practice Xuemei Tian, Swinburne University of Technology, Australia	p352-p370
The Role of Imagination in Motivating EFL Learning Fang-rong Kuo, National Hsinchu University of Education, Taiwan Chih-cheng Lin, National Hsinchu University of Education, Taiwan	p371-p391
Non-verbal Communication Training with an Interactive Multimedia Application Hiroki Tanaka, Nara Institute of Science and Technology, Japan Sakriani Sakti, Nara Institute of Science and Technology, Japan Graham Neubig, Nara Institute of Science and Technology, Japan Tomoki Toda, Nara Institute of Science and Technology, Japan Satoshi Nakamura, Nara Institute of Science and Technology, Japan	p392-p402
Higher Education and the Malaysian Public Employment Kuan Heong Woo, Universiti Sains Malaysia, Malaysia	p403-p420

English Language Teachers' Digital Literacy Development: A Case Study of English as a Foreign Language Teachers at a Vietnamese University Xuan Nguyen, Unitec Institute of Technology, New Zealand	p421-p441
Investigation into a special needs student coping with a physical handicap and the issue of low-visual acuity to understand how it affects the student's learning and social interaction; and suggesting possible strategies to overcome these barriers to learning Anthony Brian Gallagher, Nagoya University of Foreign Studies, Japan	p442-p455
Engendering Education: Ensuring Equity Ishrat Khan, University of Dhaka, Bangladesh	p456-p463
Perspectives on World Englishes in Government-Authorized High School Textbooks in Japan Tomoko Uryu, Japan College of Foreign Languages, Japan	p464-p473
Development and Evidence of the Student Participatory Class Model in Mathematics Education Koichi Kitamura, Kure National College of Technology, Japan	p474-p487
Whose Role Is It to Develop Secondary Students as Self-regulated Learners? A Study Exploring Student, Parent and Teacher Perceptions Prue Salter, University of Technology, Australia	p488-p504
A Lens Comparison of Vocational Education and Training in the Beauty Sectors in Taiwan and the UK I-Chun Hsiao, De Montfort University, Leicester, UK Emily Baines, De Montfort University, Leicester, UK	p505-p519
Why Mentoring Matters: Professional Development in a Virtual World Hazel Owen, Ethos Consultancy NZ, New Zealand	p520-p536
Changing Teachers' Perceptions on Low-Achieving Students' Cultural Capital and Habitus Rachel Lee, English Language Institute of Singapore, Singapore Susan Gwee, English Language Institute of Singapore, Singapore	p537-p549
Motivating Students in an Era of Declining Motivation and English Ability Frances Shiobara, Kobe Shoin Women's University, Japan	p550-p563
The Literacy Practices of Adolescents in a Digital World Szu-Yu Ruby Chen, Chung Yuan Christian University, Taiwan	p564-p575
Application of Designers' Sketching Skills in Design Education Yuichi Izu, Graduate School of Keio University, Japan Koichiro Sato, Keio University, Yokohama, Japan Takeo Kato, Tokai University, Hiratsuka, Japan Yoshiyuki Matsuoka, Keio University, Yokohama, Japan	p576-p585
Thailand's Educational Strategic Plan in Preparation for the ASEAN Community Nonnathi Dulyadaweessid, Bansomdejchaopraya Rajabhat University, Thailand	p586-p594
The Development of a Communicative English Learning Process for Local Cultural Communication Panornuang Sudasna Na Ayudhya, Bansomdejchaopraya Rajabhat University, Thailand	p595-p602
Modern vs. Post-modern Teacher Education: Revealing Contrasts in Beliefs and Practices Marius Boboc, Cleveland State University, USA R.D. Nordgren, National University, USA	p603-p608
Democracy, Trust, Responsibility, and Global Workforce Competence: A Case Study Revisited R.D. Nordgren, National University, USA	p609-p633
Globalisation and Internationalisation of Education: Is on Right Direction? Ershad Ali, Auckland Institute Of Studies St Helens, New Zealand	p634-p645

Are We Ready to Engage Students with Our Own Mobile Devices? Gary K. W. Wong, The Hong Kong Institute of Education, Hong Kong	p646-p657
How to Better Integrate Summer Projects: Insights from Students' Comments Tomomi Naka, Tottori University, Japan	p658-p661
English Passive Sentence Construction of Thai EFL University Students Monnipha Somphong, Thammasat University, Thailand	p662-p675
Teaching Model for Competency Improvement of Deaf People on the Industrial Job Nataya Kaewsai, King Mongkut's University of Technology North Bangkok, Thailand Worapoj Sriwongkol, King Mongkut's University of Technology North Bangkok, Thailand Piya Korakotjintanakarn, King Mongkut's University of Technology North Bangkok, Thailand	p676-p686
Primary School Teachers' Perceptions of the Use of Calculators in the Mathematics Classroom Wee Leng Ng, Nanyang Technological University, Singapore	p687-p700
The Android Appreciations Training Package in the Change Money System According to the IDFVE Model for the Technical Training Thosporn Sangsawang, Rajamangala University of Technology Thunyaburi, Thailand	p701-p714
Culture Education in College Foreign Language Teaching Shihong Liu, Nanjing University of Aeronautics and Astronautics, China	p715-p722
On Increasing Instructional Emphasis on the Differences Between Written and Spoken Grammars Mayumi Ajioka, UCLA, USA Yumiko Kawanishi, UCLA, USA	p723-p734
Implementing Mobile Assisted Language Learning in Rural Schools for Enhancing Learning Opportunity Saida Ulfa, State University of Malang, Indonesia	p735-p743
Knowledge Management Competencies Development of Student in the 21st Century Benyapa Kongmalai, Chulalongkorn University, Thailand Somnnet Areesophonpichet, Chulalongkorn University, Thailand Ajchara Chiyuprathum, Chulalongkorn University, Thailand	p744-p754
University Entrance Examination: One Critical Challenge for Iranian Multi-functional Educational Institutions Maryam Roohipoor, Andishehkhlagh High school, Iran Mitra Rezakhanloo, Andishehkhlagh High school, Iran	p755-p763
American Progressive Education and Yutori Kyoiku Craig Sower, Shujitsu University, Japan	p764-p780
A Development of Management Model Using Business Intelligence Methodology for Higher Education Students to Enter Occupation Internationally Ekachai Naowanich, King Mongkut's University of Technology North Bangkok, Thailand Namon Jeerungsuwan, King Mongkut's University of Technology North Bangkok, Thailand	p781-p794
Citizenship Responsibility Higher Learning: Combining the Spiritual-Cultural, Rights-Responsibilities, and Economics of a Civic Development Higher Learning Through a Sociology in English Alan Brady, Kwansei Gakuin, Japan	p795-p816
A Development of Analytical Thinking Skill of Graduate Students by using Concept Mapping Sornnate Areesophonpichet, Chulalongkorn University, Thailand	p817-p831
The Strategies of Improving Instruction Qualities in Taiwan Senior High Schools from the Perspective of TQM Chuang Kuei-Yu, National Chunghua University of Education, Taiwan Chao Chih-Yang, Ling Tung University, Taiwan Li Yu-Chang, National Chunghua University of Education, Taiwan	p832-p844

Yang Pao-Chin, Shin Min High School, Taiwan Chen XIU-PING, National Tainan Girls' Senior High School, Taiwan Chen Yuan-Tai, National Taichung Girls' Senior High School, Taichung, Taiwan	
Comparison of Attitudes to Science Fields of the Stakeholders of School Education in Japan and Other Countries Kseniya Fomichova, University of Yamanashi, Japan Naoya Gomi, University of Yamanashi, Japan Taku Misonou, University of Yamanashi, Japan	p845-p858
Virtual 3D Media in Royal Temple Thailand: Wat Yannasangvararam Veena Khongpit, Sripatum University, Thailand Punchanit Phangphol, Sripatum University, Thailand	p859-p865
3D Animation for Energy Reduction Campaign Chinnawat Prayoonrat, Sripatum University, Thailand	p866-p873
Learning and Teaching in Times of Change, Challenges and Transformation: Reinventing the Aims of Education Jyoti Chahal, Bareilly College, India	p874-p890
Learning Differentiation's Sub Topic in Mathematics Using an Educational and Casual Flash Based Game Norhafiza Mohamad, Universiti Kuala Lumpur British Malaysian Institute, Malaysia Pusparini Dewi Abdul Aziz, Universiti Kuala Lumpur British Malaysian Institute, Malaysia	p891-p901
Designing a Curriculum for the Advanced Stream of a Foundational Literacies Course James Owens, Kanda University of International Studies, Japan	p902-p919
How Labor Market Perceptions Affect Undergraduates' Preparation? Chih-chun Wu, National Chi Nan University, Taiwan	p920-p933
Teaching and Managing a Project-based English Course to the College Students in Diverse Levels of English Proficiency Yoshihiko Yamamoto, Ritsumeikan University, Japan Syuhei Kimura, Ritsumeikan University, Japan	p934-p952
Roles of Community Colleges to Enhance strengthening Community in Thailand Vachiraporn Surathanaskul, Chulalongkorn University, Thailand Somnnet Areesophonpichet, Chulalongkorn University, Thailand Atchara Chaioyopatham, Chulalongkorn University, Thailand	p953-p965
The Elements of Creative Culture in Thai Higher Education Institutions Runglawan Skulmalaitong, Chulalongkorn University, Thailand Somnate Areesophonpichet, Chulalongkorn University, Thailand Pruet Siribanpitak, Chulalongkorn University, Thailand	p966-p977
A Case on Learning about 'You Tubing' and 'Face booking' for Learning Michelle Mei Ling Yeo, Monash University, Australia	p978-p986
A Study on Establishing Decision Tree of Teacher Ethic Reasoning in Taiwan Huang Jia-Li, National Taiwan Normal University, Taiwan	p987-p991
Comparative Analysis of Thinking Process Between Designer and Engineer Based on Case Application of Multispace Design Method Shuji Takano, Shonan Institute of Technology, Japan Koichiro Sato, Keio University, Japan Takeo Kato, Tokai University, Japan Yoshiyuki Matsuoka, Keio University, Japan	p992-p1003
Theories and Practices in English as an International Language(EIL), World Englishes (WE), English as a Lingua Franca (ELF) Seen in Students Perception Data (1) Michiko Nakano, Waseda University, Japan Clarence Ng, Australian University of Catholic, Australia	p1004-p1021

Yi-Ti Lin, Tamkang University, Taiwan Jui-min Tsai, Tamkang University, Taiwan Jinjin Feng, Shanghai Jiotang University, China Yanyan Zhang, Wuhan University, China Kazuharu Owada, Tokyo College of Music, Japan Norifumi Ueda, Komazawa University, Japan Yusuke Kondo, Waseda University, Japan Satoshi Yoshida, Waseda University, Japan Sayako Maswana, Waseda University, Japan	
Problems and Advantages of Children with Filipino Parents in Their School Lives in the Philippines and in Japan: Through Their Experiences in Both Countries Kimi Yamoto, Osaka University, Japan	p1022-p1037
A Gamification Platform to Encourage the Students Social Etiquette Improvement Surasak Srisawan, Rajabhat Rajanagarindra University, Thailand	p1038-p1046
Invigorating Literature Teaching in Taiwan through Drama Che-Chien Weng, WuFeng University of Technology, Taiwan John O'Toole, The University of Melbourne, Australia Christine Sinclair, The University of Melbourne, Australia	p1047-p1061
Are Students our 'Customers'?: A Perspective on the Bureaucratic Implications of 'student-customer' Concept in Malaysian Higher Learning Institutions Seloamoney Palaniandy, Infrastructure University Kuala Lumpur, Malaysia	p1062-p1070
Training of Technical Teachers through Integration of Information & Communication Technology in India PK Tulsi, National Institute of Technical Teachers Training and Research, India MP Poonia, National Institute of Technical Teachers Training and Research, India SS Pattnaik, National Institute of Technical Teachers Training and Research, India	p1071-p1083
Planning and Evaluation Skills: A Search with the Teachers of Italian Schools Rosanna Tammaro, University of Salerno, Italy Anna D'Alessio, University of Salerno, Italy Ida Cicatelli, University of Salerno, Italy Marika Calenda, University of Salerno, Italy	p1084-p1095
The First Step of the Implementation of a Software to Facilitate Italian Children in Learning English Giuseppe Città, University of Messina, Italy Lucia Collerone, University of Messina, Italy	p1096-p1106
Determining Demand in Thai Job Market for Communications-Related Degree Title: A Survey of an Online Job Website George Amurao, Mahidol University International College, Thailand	p1107-p1115
Trees and Rhizomes: Students as Masters of Learning David O'Brien, The University of Melbourne, Australia Warren Sellers, The University of Melbourne, Australia	p1116-p1125
Diversity and Assistive Technology: Focusing on the Analysis of Special Education Magazines from 1999 to 2009 in Japan and the United States Jiyoung Seo, Utsunomiya University, Japan Kiyomasa Ikemoto, Utsunomiya University, Japan Jie Qi, Utsunomiya University, Japan	p1126-p1139
Model of Learning Environment for Creative Education on Social Network to Develop Creative Thinking Chantana Papattha, Rajamangala University of Technology Phra, Thailand Namon Jeerungsuwan, NakhonKing Mongkut's of Technology North Bangkok, Thailand	p1140-p1148
Time-honored Tradition Meets 21st Century Literacy: Changes in Composition Instruction Lucy Spence, University of South Carolina, United States Yuriko Kite, Kansai University, Japan	p1149-p1163

Tone in the Khorat Dialect and the Northeastern Dialect Kanitha Putthasatien, Nakhon Ratchasima Rajabhat University, Thailand	p1164-p1171
Thai Food Culture through Grammatical Patterns of English Translation Piyada Low, Kasetsart University, Thailand	p1172-p1186
Performance of In-service Basic Education Teachers Of Nueva Vizcaya, Philippines Bonimar Tominez, Nueva Vizcaya State University, Philippines Leila Dela Cruz, Nueva Vizcaya State University, Philippines	p1187-p1215
Peace Education: Community Development and National Prosperity Maha Mouchantaf, Notre Dame University, Lebanon	p1216-p1221
The Development of Pre-Service Science Teachers' Teaching Practices Through Reflective Process Akarat Tanak, Kasetsart University, Thailand	p1222-p1233
Interactive Weblogs: Breaking Barriers in L2 Writing in the Philippines Shiela Manzanilla, Southern Luzon State University, Philippines	p1234-p1250
The Factors of Research and Innovation Management Using Electronic Supply Chain for Thai Higher Education Institutions Sudasawan Ngammongkolwong, King Mongkut's University of Technology North Bangkok (KMUTNB), Thailand Namon Jeerungsuwan, King Mongkut's University of Technology North Bangkok (KMUTNB), Thailand	p1251-p1259
Critical Thinking in Second Language Learning: An Intercultural Approach Maria del Mar Calero Guerrero, Mahidol University International College, Thailand	p1260-p1270
Mathematics Assessment in Primary Classes – Formative or Summative, or Seize the Moment? Mithu Pal, Institute of Advanced Studies, India	p1271-p1283
Effectiveness of a Programme of Movement Education and Traditional Physical Education on Movement Satisfaction, Attitude Towards Physical Activity and Self-Concept of Elementary School Children K. V. K. Reddy, L. N. C. P. E, India	p1284-p1292
Education for Sustainable Development Balaji Gade, Indo American Institutions Technical Campus, India Venkateswar Pujari, Indo American Institutions Technical Campus, India	p1293-p1304
Placing Digital Literacy in Audiovisual Translation Studies Muhammad Gamal, University of Canberra, Australia	p1305-p1318
The Impact of Outcomes-Based Accreditation on the Continuous Improvement of Engineering Education in Taiwan Pei-Fen Chang, National Central University, Taiwan Miao-Chen Lin, National Central University, Taiwan	p1319-p1328
The Effect of Poverty on English Language Learning Outcome: College Level Narathip Thumawongsa, Srinakharinwirot University, Thailand	p1329-p1337
The Development of Massive Open Online Networked Learning for Thai Education Annop Piyasinchart, King Mongkut's Institute of Technology North Bangkok, Thailand Namon Jeerungsuwan, King Mongkut's Institute of Technology North Bangkok, Thailand	p1338-p1350
Transnational Education as an Emerging Feature of Migration Analiza Liezl Perez-Amurao, Mahidol University, Thailand	p1351-p1359
Tracing the Impact of Foreign Influences on Irish Playwrights: Wilde and Yeats Wiriya Dankamphaengkaew, Srinakharinwirot University, Thailand	p1360-p1371
An Exploration of Graduate Students' Writing Competencies in Educational Research Marilou Villas, Ubon Racthathani University, Thailand	p1372-p1383

Bulgarian Kindergartens on the Way to Change Rumyana Papancheva, University "Prof. Dr Asen Zlatarov", Bulgaria Krasimira Dimitrova, University "Prof. Dr Asen Zlatarov", Bulgaria	p1384-p1389
A Construction and Evaluation of Electronics Slides on Supplementary Grammar Through E-Learning on English II Course (999042) Supannikar Kamlangharn, Burapha University, Thailand	p1390-p1398
Language Contact: Challenging in Diversity Chommanad Intajamornrak, Naresuan University, Thailand	p1399-p1416
Japanese Undergraduates' Reticence toward Dialectic Pedagogy: Reasons and Remedies Keiko Khoo, Loma Linda University, USA Yoshinori Koide, Humanitec Medical & Welfare College, Japan Yuki Tsubai, Humanitec Medical & Welfare College, Japan	p1417-p1427
Students with Visual Disability and Active Touch: Levels of Understanding and Think Aloud Protocols Vasilios Argyropoulos, University of Thessaly, Greece Sofia Chamonikolaou, University of Thessaly, Greece Magda Nikolarazi, University of Thessaly, Greece	p1428-p1438
Teacher-Student Interactions Considering Virtual Space: An Action-Based Approach Narges Sajadieh, University of Tehran, Iran Samira Alirezabeigi, University of Tehran, Iran	p1439-p1446
Making of a Japanese Traditional Automation, Namely Renrigaeri, and Its Application to Education Kazuki Hiro, Nara National College of Technology, Japan Toshio Hira, Nara National College of Technology, Japan Mitsunori Ozaki, Nara National College of Technology, Japan	p1447-p1452
Structural Equation Modeling for Korean Elementary School Students' Achievements of English Capacity Jongsup Jun, Hankuk University of Foreign Studies, Korea	p1453-p1462
A Multi-level Modeling Approach to Predict Teaching Quality, Student's Satisfaction, School Climate on Student Achievement Penpak Pheunpha, Ubonratchathani University, Thailand	p1463-p1478
Developing International Professional Qualification Standards in the Computer Field for Academic Personnel of Rajamangala University of Technology Suwut Tumthong, King Mongkut's University of Technology North Bangkok, Thailand Pallop Piriyasurawong, King Mongkut's University of Technology North Bangkok, Thailand Namon Jeerungsuan, King Mongkut's University of Technology North Bangkok, Thailand	p1479-p1494
Trends in Vocational Education Provision of Municipalities in Thailand Nalinrat Rakkusol, Kasetsart University, Thailand	p1495-p1510
Utilizing Junior High English Texts at the Japanese University Level for Large Non-English Major Courses Harry Carley, Matsuyama University, Japan	p1511-p1518
Problem Analysis of English Major Undergraduate Students on Internship: A Case Study on Burapha University Rinda Warawudhi, Burapha University, Thailand	p1519-p1531
The Developmental Co-operation Strategy of Local Administration Organizations in the Provision Vocational Education Anuchai Ramwarungkura, Kasetsart University, Thailand	p1532-p1545
The Effects of Language Learning Strategies on the Students' English Learning Achievement Hao Yuan Cheng, Tzu Chi College of Technology, Taiwan Nai-Ying Chang, Hsiu-Ping University of Science and Technology, Taiwan	p1546-p1551

Advanced Level Curriculum: Speech Acts - What to Say and How to Say It  
- with Implicit Culture Behind Language

Yumiko Kawanishi, UCLA, USA

Mayumi Ajioka, UCLA, USA

p1552-p1564

Formulaic Language Patterns in Social Science and Natural Science Research Papers: A Corpus-Based Study

Yen-Yu Lin, National Chengchi University, Taiwan

Siaw-Fong Chung, National Chengchi University, Taiwan

p1565-p1577

Imaginative Education within the Framework of Action

Masoomeh Tavakoli, University of Tehran, Iran

Narges Sajadieh, University of Tehran, Iran

p1578-p1584

*American Business Education: Past, Present, and Future Trends*

Steven L. Rosen

Prefectural University of Hiroshima, Japan

0025

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Abstract

Traditional business education in America through most of the 20th century has been aimed at providing tools for short-term profit maximization within the context of the vertically integrated corporation. However, starting in the 1970's a number of social and economic historical events have presented inescapable challenges to MBA and other business education programs. The first was the breakdown of Fordism and the Keynesian welfare state in the 1970's followed by the explosion of a new wave of globalization. The second was the Silicon Valley digital revolution of the 1990's with its informal corporate culture and horizontally integrated management style. The third significant event was the collapse of Enron in 2001 which, along with other major accounting scandals, led to the introduction of corporate social responsibility (CSR) education. The global economic crisis of 2008 made CSR education even more compelling, and resulted in critical self-reflection in the field of business education as well as economics. Finally, the impending global environmental crisis has reached such a tipping point that business and business education has moved from an adversarial relationship with environmentalists to a new stance based on win-win strategies. It is the aim of this paper to give a detailed analysis of how all these major historical changes have impacted business education, and further to evaluate to what degree business schools may be undergoing a radical reorientation away from purely capitalist aims to more social contract values.

This paper examines American business education in its historical context. It argues that a paradigm shift is occurring in the business world which can be characterized as a shift away from the traditional trajectory of industrial capitalism and further, that this shift is being picked up by and reflected in modern business education. This shift includes a new emphasis on sustainability, stakeholder value over shareholder value, and a deepening sense of social contract. This new stance toward business management is may replace the old paradigm which conceives of business education as geared primarily towards profit maximization, i.e., short-term, shareholder profit. This has also traditionally included an antagonistic and often exploitative relationship to labor, and has also had an exploitative relationship with the natural environment. This paper will attempt to appraise and evaluate whether this traditional stance is being undermined and whether or not a revolutionary paradigm shift is in fact occurring within American business education today

Business is the most popular major in higher education. Today, over 100,000 MBA's are granted each year in the U.S.; it is indeed the most popular graduate degree in the world. (Datar 2010, p. 18) Furthermore, 25% of all bachelor's degrees in America are in business. (Amdam 2010, p. 594) Business provides the basic functional skills necessary to run a successful enterprise (no small feat to be sure). Business leaders and entrepreneurs have not only altered the world economy in new directions, but have also profoundly altered the contours of society and world culture (for better or worse, is an evaluative judgment outside the scope of this paper). (Walsh 2011, p. 215) Indeed, revolutionary changes in society and economy and technology seems to be moving into two countervailing directions at once; on the one hand, people with graduate degrees in business and economics have, through greed and avarice and in some cases even criminal malfeasance, led us to an economic credit crisis; they have led us down the path of recession and credit crisis. (Tett 2012, p. 307) On the other hand, one only needs to look at list of some of the top entrepreneurs of modern business history to readily realize that the innovative firms they started have affected the contours of our entire social-economic world in highly creative and beneficial ways, through innovative technology and creative global business management.

Michael Dell: in the 1990's he was one of the first to exploit lower transport and communication costs, thus starting us on the path of extended global supply-chains which characterize modern business and economics today.

Howard Schultz (Starbucks): Starbucks has made the traditional 17<sup>th</sup> century European style coffee house ubiquitous around the globe.

Steve Jobs: facilitated the IT revolution through innovations which brought high level digital communication, entertainment and computing technology for everyone personal use

Mark Zuckerberg: popularized social networking systems (SNS); 1 out of every 12 people on the planet have a Facebook account

Jim Bezos (Amazon): transformed the way we do retail business

Sergey Brin and Larry Page (founders of Google): designed a revolutionary and powerful search engine which has enabled us to retrieve information which previously was unavailable to most mortal men and women.

This is but to name but a few; it's interesting to note that this list, and other lists of key entrepreneurs like Anita Roddick (Body Shop), Sam Walton (Wal-Mart), and Richard Branson (Virgin Group) are business leaders without MBA's or business degrees of any kind. Indeed, the fact that much business innovation has come from people not formally trained in business has not been lost on business educators, who now try to foster innovation and entrepreneurship as an essential part of their curricula. (Datar pp. 256-7)

### **Historical Excursus: Business Education in the Context of the Rise of Industrial Corporate Capitalism**

In the latter half of the 19<sup>th</sup> century, America entered an era which saw the rise of industrial corporate capitalism on an unprecedented scale (usually referred to as the Second Industrial Revolution). Through new technology and new energy sources based on fossil fuels (oil, and coal) industrial production could attain new levels of extraction and exploitation of both labor and materiel never before seen in the history of mankind. Monopoly capitalism and the limited liability corporation transformed America into the richest nation on earth, a status which it still maintains today. The corporation became the multinational corporation in the 20<sup>th</sup> century and, sociologically speaking, became (and still is) the dominant institution of our time. (Kelly 2003, p. 57)

In 1881, the prestigious Wharton School of business at the University of Pennsylvania

was founded, as a way to provide higher level business skills beyond the commercial science courses being offered at the time; the complexity of the new economies of scale demanded it. (Amdam 2010, p. 584) It was explicitly founded in order to address the needs of the American industrial revolution—the need for highly qualified business people to manage large corporations in this new economy based on mass production and economies of scale. (Amdam 2010, p. 581)

Ford Motor Company became the richest corporation in the world in the 1920's, and represented a new type of business orientation called Fordism, which was the dominant business paradigm or model in the 20<sup>th</sup> century, at least until the 1970's. (Kipping 2010, p. 97) This model entails the vertically and horizontally integrated corporation using scientific principles. It was, however, not Ford Motor Co., but Alfred Sloan at GM who developed a management paradigm which heavily influenced American business education throughout the 20<sup>th</sup> century. In addition to the scientific principles and production style of Ford, Sloan introduced the science of marketing, and perfected a model of the vertically integrated corporation with separate operating divisions all under one roof. (Lamoreaux 2010, p. 41) General Motors became the prototypical multinational industrial firm in America, a symbol of America's corporate prowess.

The emphasis on business education was explicitly profit maximization, and by the 1950's, when the United States became the sole global superpower, business education attempted to perfect a scientific approach to profit maximization, using scientific quantitative methods modeled on the RAND Corp. and other scientific think-tanks. (Walsh 2012, p. 522) A core curriculum emerged with a heavy emphasis on the quantitative functional skills for finance, accounting, logistics, marketing, and in addition to that, micro and macro economics for businessmen. At Harvard, the case study method was introduced as the general method of choice, which became the model for many business schools to use for learning how to apply quantitative models and methods to real life business situations. (Rosett 1982:*passim*) Consequently, the American MBA became viewed by the whole world as the premium qualification for executive management. (Walsh 533)

A major crisis hit the U.S. economy in the 1970's resulting in the breakdown of Fordism and the Keynesian welfare state (and the beginning of the end of powerful labor unions). Business schools, however, were slow or failed to react to the new demands of the global marketplace; there was the aping of Japanese management strategies rather than a real serious attempt to develop new business orientations or

conceptual paradigms concerning the foundations of business consciousness. (Kipping p. 100)

In the 1980's, Reaganomics offered a new capitalist ideology, or more precisely, the revival of an old ideology of free market capitalism, but in the guise of a new terminology- the supply-side economics of Milton Friedman: deregulation, privatization, and tax cuts for the investor class (the supply side). In this new ideology, labelled by some "neoliberalism;" the belief that if businesses thrive and GDP grows, all segments of society will benefit because the wealth will "trickle down." Though this theory sounds very charming, in practice, such macroeconomic results were never realized; supporting the investor class through tax cuts and deregulation resulted in greater concentrations of wealth for that class of individuals. At that time (1980's onwards), off-shoring, out-sourcing and a general deindustrialization of American economy led to a downward pressure on wages and the gradual dissolution of labor unions bargaining power. Thus there resulted a shift in wealth away from the working class (who became the working poor), and toward the upper strata of the socio-economic ladder.

So called "trickle-down economics" became a code word for the rise of the business yuppie class in which Adam's Smith classical economic paradigm became reduced to the proposition, "greed is good." The MBA became the new ticket to drink from this well of capital gains (Yau 2012, p. 2); and corporations and people with MBA's generally did well in the 1980's. In 1989, after the Berlin Wall came down, American economic confidence was high, and the American MBA was held in high esteem by business persons all over the globe; other nations began to found business schools based on the American model.

In the 1990's, a technological revolution, the likes of which have arguably never been seen in history, occurred mainly in northern California; the digital revolution which came mostly out of Silicon Valley, transformed the face of the global market place. Silicon Valley venture capital represented a real paradigm shift in many ways. These successful companies were horizontally rather than vertically integrated with a young, casual, intellectual and social conscious orientation. (Graham 2010, p. 360) Many of these start-ups came not from experienced MBA trained executives but from young computer scientists and electrical engineers. Business education was forced to integrate IT skills into their core curricula, but did so without changing the fundamental outlook, which was short-term profit maximization based on scientific-quantitative strategic models. (Walsh 2012)

However, three significant events occurred in the course of business and economic history which reverberated in politics and society and, though at first had little impact on business education, eventually influenced the content and even mission of business education. The first was political; in 1999 the streets of Seattle erupted in violent protests during the WTO Ministerial Conference. At first this had little or no impact on business education; business schools at this time were still influenced by and operating under the assumption of the economist Milton Friedman, who asserted that it was not the role of the business firm to be a charitable institution; it was the role of government regulation to protect the environment and provide social welfare, not corporations. Their economic and legal obligation was solely toward shareholder profit; Milton's supply-side economic theories (enriching the investor class as a way to achieve maximum GDP growth) indeed influenced business schools throughout the 80's and 90's. The influence of Reaganomics (deregulation, privatization, cutting social welfare supports) was still strong in business circles.

Nevertheless the WTO protests in Seattle signaled the beginning of the end of complacency, the raising of awareness, that the attitude of neoliberal economic policies (embodied in international institutions like the WTO, IMF and the World Bank) was good for multinational corporations, but not necessarily for the rest of humanity. The dangers of unfettered capitalism were articulated on the television news for all to see; the American public at large started to become more attuned to the relationship between the activities of large multinational corporations and three detrimental trends: (1) labor exploitation in the third world and developing nations, (2) the increasing concentration of great wealth in the hands of a few nations or individuals, and (3) that much extractive technology was leading to irreversible environmental destruction.

WTO and G7 meeting protests seemed not to have impacted the content or direction of business education in America in any significant way, however, in 2001, an event in the business world did have a seismic effect on business culture and business education: the collapse of Enron. Enron Corporation was listed as the sixth largest corporation in America before it bankrupt in 2001. Along with it, one of America's oldest and most respected accounting firms, Arthur Anderson went out of business, as the result of shady accounting practices, and even outright fraud. This event, and the subsequent collapse of WorldCom, forced a radical reexamination of the way businesses operated in America. (Datar p. 161) Though, from a business point of view, it was primarily an accounting scandal, the Enron scandal led to soul searching about the ethical foundations of the way business was conducted in America, and the way

business managers were being taught. A renewed emphasis on CSR and business ethics began to emerge; no longer were such courses relegated to the backburner of the curricula, they became an essential part of a new emphasis on business leadership. Indeed, many of the top business schools today highlight leadership as a centerpiece of their educational mission. (Datar, pp. 86-89)

Finally, the biggest crisis in economic history since the Great Depression occurred in and around 2008, not only with the collapse of the large Lehman Bros. investment bank, but also the near collapse numerous other financial institutions (like AIG), deemed “too big to fail.” Credit markets around the world froze due to the collapse of the U.S. housing market, in which banks around the world had invested heavily. “Securitized assets with inflated value was seen as a risk-free way to effortlessly create wealth.” (Korten 2013, p. 2) In terms of economic policy, the credit crisis of 2008 resulted in a critical reassessment of the value of deregulation. In terms of business practices, there has been even more soul searching and renewed calls for more training in business ethics and corporate social responsibility (CSR). The spectacle of investment bankers awarding themselves huge bonuses while sinking their own ships, requiring large capital infusions of taxpayer money was becoming unacceptable, not only to the general public, but to teachers at business schools as well.

Thus new courses and a renewed emphasis on CSR emerged in business schools around the world. (Doane 2005, p. 24) However, CSR has been roundly criticized and even condemned from both within and without business education; in no way can be regarded as constituting a paradigmatic shift in business thinking. A clear case in point is Wal-Mart Corp. which has made sustainability a centerpiece of its management strategy, but only because it is good for the bottom line. “CSR strategies may work under certain conditions, but they are highly vulnerable to market failures.” (Doane p. 24) In other words, if, at any time, it turned out to be unprofitable, then the firm would turn away from their green orientation in a heartbeat. At best, it gives a false confidence, implying that issues of social ethical issues can be easily fit into a course curriculum which is otherwise orientated to profit maximization; at worst it becomes a kind of window dressing, an excuse for inaction and even a mask for fraud. Indeed, Enron during its heyday was highly touted for having a strong emphasis on CSR and social concerns. “No one could argue that these types of changes add up to a wholesale change in capitalism as we know it, nor that they are likely to do so anytime soon.” (Doane p. 24)

## **A New Paradigm?**

“....,according to Old Paradigm logic, economic growth will generate the financial assets necessary to correct for related social and environmental harms.” (Korton 2013, p. 3)

The traditional aim of business education is of course, to train students in the basic functional skills necessary to run or management a company. Beyond the core functional skill courses like accounting and logistics, there are other courses which are broader and deeper in that they draw on research from the social and behavioral sciences as well- micro and macroeconomics, human resource management strategy, governance, and entrepreneurship, organizational leadership courses require more than econometric or computational skills. Further, there are a new range of courses in such areas as ethics and globalization, and innovation- courses which go well beyond the purely technical scientific courses of the core curriculum.

Until very recently, in American business education, there was scant attention paid to leadership as opposed to functional skills; in other words, management in its broadest sense over purely business administration. The Yale School of Management in recent years has shifted its curriculum to emphasize the importance of such skills and other schools around the world have followed suit. This has meant “...giving equal weight to instrumental and humanistic aims, rather than casting either as means for the other’s ends. Making the case for authenticity, service, equality, concern for the planet just as fervently as the case for shareholder value maximization. Balancing instruction and assisted reflection, on oneself and on the cultures we live in. Brokering new connections. Stimulating imagination.” (Bennis 2:2005) All of this sounds very much like a fundamental paradigm shift. To what degree have these new paradigm goals been realized? There is no empirical data to support a definitive conclusion on this but some historical trends can be noticed.

The rising importance of these new courses indicates that business schools see their mission as much more than the mere training of profit maximizers (the traditional capitalist aim), and more in tune with what has been termed social contract goals. (Bennis 2005:1) For example, there seems to be a shift in perspective such that business students should not only be trained in issues of regulatory compliance, but in how to contribute to the common good through such things as socially responsible investing and sustainability practices. (HBR Blog, 2012 ‘Unilever’s CEO on Making Responsible Business Work’) However, the question still remains as to whether or not we are witnessing in a truly new paradigm shift away from profit maximization

and models for economic efficiency. Such a paradigm shift would, above all else, be focused on creating real value, not merely stockholder value (Hanauer 2014, p. 33) The focus would not be on compliance to regulation so much as cultivating an attitude *a priori* in which regulatory compliance is not even an issue because it would be the intention of the firm to make products or provide services in sustainable and socially beneficent ways. Indeed, the fact that such firms do exist is evidence of a potential paradigm shift in business; that such firms (South West Airlines, Google) are often used as business school case studies suggests that educators, at least, take seriously the notion that a fundamental re-visioning in business management is desirable. Indeed, not only American business schools, but even more so, European MBA programs explicitly advertise themselves as providing the tools necessary to function in the ever changing global market place which includes social contractual goals such as fair trade, sustainability, socially responsible investing, and increasing stakeholder value. (Mangan 2010, p. 2)

## **Conclusion**

It is clear that business education in America and around the world is undergoing some profound changes. Many of the biggest shifts are related to globalization- the nature of the global market place in the digital age where we see many new emerging markets and an ever shifting ground which is requiring business schools to adapt and develop new, more flexible models which move beyond the core functional skills. (Lurie 2009) The new paradigm which has been emerging in the business world for some time, and is beginning to make its way into business education at various levels is a renewed idea of social contract, with an additional conceptualization that nature is sacred. (Eisenstein 2011, p.392 & *passim*) In other words, we are beginning to see a profound and radical sense of social community and essential interconnectedness. (Rifkin 2009, p.503 & *passim*)

A *Harvard Business Review* blog, piece entitled, “Are Business Schools Clueless or Evil?” by Ganpiero Petriglieri, associate professor of organizational behavior at INSEAD, says that that business schools must share responsibility for the “lapses in judgment and unfettered self-interest that wreaked havoc on the global economy and sank people’s trust in corporations.” (Petriglieri 2012) He goes on to point out that there are two camps of critics- one is those who paint business schools as clueless, distracted by academic theories, and a second group whose criticism is more severe. They see business education as a force of evil, perpetuating an amoral view of the

world, peddling theories that support selfish elitism; the only true moral value in the universe of business being the bottom line. In this context, to conceive and experience nature as fundamentally sacred would indeed be a paradigmatic shift for business. “The monetization and commodification of relationships, competition for individual financial advantage, and abandonment of attachments to place are celebrated as contributions to increased economic efficiency and accelerated development progress as defined by growth in GDP.” (Korten 3)

Commitment to sustainability in and of itself does not constitute a paradigm shift if the primary motivation of such policies is maximizing the firm’s profits. It is interesting to note that Unilever’s CEO, Paul Polman admitted that such an integrated (holistic/sacred) business model which his firm has adopted is not the norm. “Nobody has ever really made that public commitment, and nobody has ever really achieved it. Otherwise, the world wouldn’t be facing these challenges.” (HBR Blog 2012) The dominant paradigm in business and business education closes in on itself- “is incapable of self-correction.” (Korten 5) In business education they may indeed teach students how to establish value added partnerships with NGO’s, but what about in the case where there is no cash value for such a partnership, but rather only because it’s the right thing to do based on a radical commitment to the social and environmental commons?

What would then constitute a real paradigmatic shift in business education and business culture? Below is this writer’s formulation:

Old paradigm: exploitation (of labor)

New paradigm: appreciation (no longer seeing labor as deficit or debit on the bottom line, as is the case with most business education)

Old paradigm: technology is designed to extract from nature useable wealth.

New Paradigm: technology is designed to develop in a sustainable way

Business education needs to move beyond the parameters of cost efficiency metrics to a different vision of business education. As noted above, the innovative entrepreneurs listed above who have changed the world, arguably for the better, do not contain any MBA’s! It’s almost as if business education needs to catch up with these business visionaries who are moving us beyond the parameters of an unsustainable paradigm. Rather than seeing personal enrichment as sacred, realizing ones dependence on and connection with nature (Loy 2007, *passim*) and humanity, and sublimating the quest

for one's exclusive personal gain for the good of the whole, would signal a profound paradigmatic shift.

## References

AMDAM, R. (2010) 'Business Education,' in *The Oxford Book of Business History*. Pp.581-602. Oxford: Oxford University Press.

BENNIS, W. and O'TOOLE (2005) 'How Business Schools Lost Their Way,' *Harvard Business Review*. pp.1-3 [May 2005]

DATAR, S., GARVIN, D. and CULLEN, P. (2010) *Rethinking the MBA: Business Education at a Crossroads*. Boston: Harvard Business Press.

EISENSTEIN, C. (2011). *Sacred Economics: Money, Gift & Society in the Age of Transition*. Berkeley, Ca.: Evolver Press.

GRAHAM, M. Graham, M. (2010) 'Technology and Innovation,' in *Oxford Book of Business History*

HANNAUER, N. and BEINHOCKER, E. (2014) 'Capitalism Refined,' *Democracy Journal*, Winter 2014

HARVARD BUSINESS REVIEW/HBR Blog Network (2012) 'Unilever's CEO on Making Responsible Business Work,' <http://blogs.hbr.org/2012/05/unilevers-ceo-on-making-respon/> retrieved Nov. 22, 2013.

JONES, G. (2007/2010). *The Oxford Handbook of Business History*. Oxford, U.K.: Oxford University Press.

KELLY, M. Kelly, M. (2003) *The Divine Right of Capital: Dethroning the Corporate Aristocracy*. San Francisco: Berret-Koehler Pub. Inc.

KIPPING, M. et. al. (2010) 'Business History and Management Studies' in Jones, G., *The Oxford Handbook of Business Studies*

KORTEN, D. (2013) 'The Pursuit of Happiness: A New Development Paradigm,'

*Living Economies Forum*. <http://livingeconomiesforum.org/living-earth-paradigm>

LAMOREAUX, N. et. al. (2010) 'Economic Theory and Business History,' in Jones, G., *The Oxford Handbook of Business History*.

LIPARTITO K. (2010) 'Business Culture,' In *The Oxford Book of Business History*. pp. 603-628. Oxford: Oxford University Press.

LOVETT, C. (2010). 'American Business Schools in the Post-American World,' *Chronicle of Higher Education*, Sept. 6.

LOY, D. (2007) *Money, Sex, War, Karma*. Somerville, MA: Wisdom Publications

LURIE, B. (2009). 'The New Social Contract for Green Business,' *Harvard Business Review Blog*. May, 11. <http://blogs.hbr.org/2009/05/the-new-social-contract-for-gr/>

MANGAN, K. (2010) 'Global Focus Draws Students to Europe for Business,' *The Chronicle of Higher Education*, Sept. 26.

MICHAEL, B. (2003) *Overview and Critique of Corporate Social Responsibility*. January, [http://works.bepress.com/bryane\\_michale/21](http://works.bepress.com/bryane_michale/21).

PETRIGLIERI, G. (2012) 'Are Business Schools Clueless or Evil?' *Harvard Business Review*, Nov. 14.

RIFKIN, J. (2009) *The Empathic Civilization: The Race to Global Consciousness in a World in Crisis*. New York: Jeremy P. Tarcher.

ROSETT, R. (1982) 'Business Education in the United States,' *Selected Paper Graduate School of Business, The University of Chicago*. No. 59 [Nov. 1982]

TETT, G. (2009/2012) *Fools Gold: How Unrestrained Greed Corrupted a Dream, Shattered Global Markets and Unleashed a Catastrophe*. London: Abacus

WALSH, J.P. (2011) 'Embracing the Sacred in Our Secular Scholarly World,' *Academy of Management Review*, Vol. 36, no. 2, pp. 215-234

- (2012) 'Mie Augie and James G. March: The Roots, Rituals, and Rhetorics of Change: North

American Business Schools after the Second World War,' *Administrative Science Quarterly*  
57:522

YAU, S. and BRUTO CO, R. (2012) From Current Business Paradigm to the Second Renaissance.  
*World Business Academy Common Cents*, (January 20) 1-11

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*Montessori Materials as the “Instrument” for Expansive Learning: An Intervention Study of Three Public Kindergarten Classes in Japan*

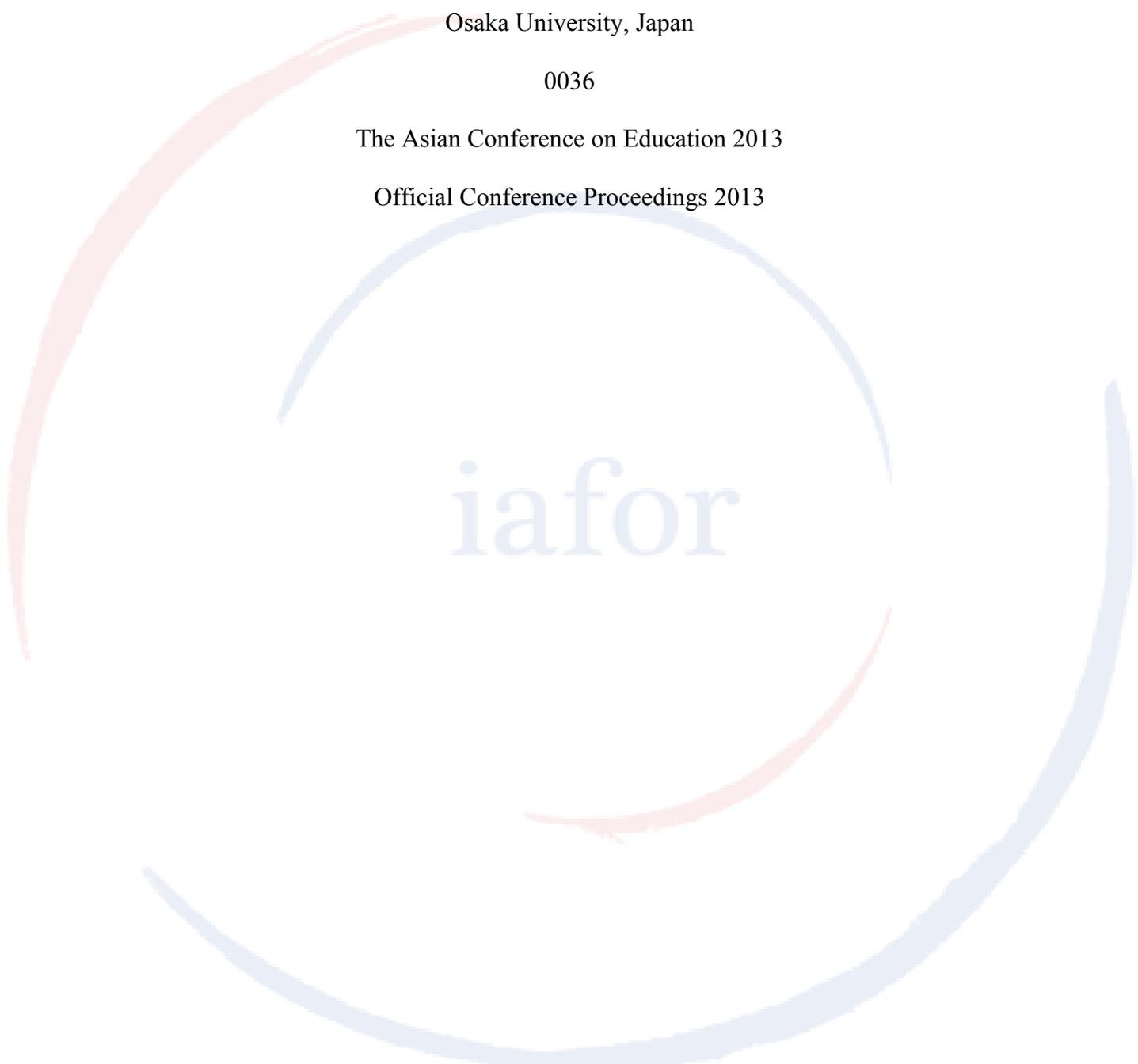
Yasuko Takeda

Osaka University, Japan

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## 1. Introduction

In the current guidelines on education targets, methods for preschool education are recommended for all the countries of the world; however, none are required. Based on previous studies of institutional guidelines, *Sekai no Youjikyoku-Hoikukaikaku to gakuryoku*" (2008)<sup>1</sup>, which investigated trends in 13 countries of Europe (Finland, France, Germany, the U.K., the United States, New Zealand) and Asia (Korea, China, Taiwan, Singapore, Thailand, India), including Japan, and *Working with Young Children in Europe Provision and Staff Training* (1997)<sup>2</sup>, as well as work on recent preschool education, i.e., EU15 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, the U.K.) from the first *World Survey of Pre-school Education* (1972)<sup>3</sup>, we focused on childcare services and childminder training of the country in the global trend of preschool education. We catch preschool education for total, and these are going to reexamine the education from the situation that is macro. Therefore, we are not arrested whether teachers concerned with a child at a place of local practice hold what kind of difficulty with this comprehensive competitive review, and we are going to generate a realistic problem. The present study introduces Montessori materials<sup>4</sup> into Japanese kindergarten classrooms as a means to innovate kindergarten education using a framework of expansive learning<sup>5</sup> and considers the possibility. In other words, this examination further clarifies the process of expansive learning by introducing these materials into public kindergarten classes.

Specifically, in this study, the use of materials developed by the Italian educational theorist Montessori and Engeström's theory of expansive learning is considered. This examination further clarifies the process of expansive learning by introducing these materials into public kindergarten classes.

In general, the materials used in the Montessori system are a component of the overall methodology<sup>6</sup> and have an indivisible relationship with this approach. In contrast, we introduce materials that are separate from the theoretical systems of Montessori education. This is because public kindergarten teachers may have difficulty introducing Montessori education into the classroom and building their own education theory. This was the impetus for our intervention study involving three Japanese public kindergarten classrooms. In addition, there are two intentions behind the separation of the materials from Montessori theory. First, the teacher applies a variety of approaches when introducing the materials and the framework of Montessori education theory, and thus avoids any interpretation of it. Second, Japanese public kindergartens oppose the introduction of Montessori education and its materials.

"So, why adopt the expansive learning theory? Expansive learning theory stems from the cultural and historical theory of Vygotsky in the early twentieth century. Vygotsky conceptualized "the zone of proximal development"<sup>7</sup> in theorizing the cultural formation of higher psychological functions (voluntary attention, logical memory, abstract thought and scientific creativity). However, Vygotsky only considered the individual, and his theory lacked a viewpoint from which to examine the individual in a group. In contrast, Engeström expanded Vygotsky's theory by incorporating the difference between social systems. Engeström's theory applied developmental research<sup>8</sup> that has been a focus in international literature in recent years. The theory analyzes the practice and innovation of study. In a prior study, a group of subjects in a

study by Engeström established “a care agreement”<sup>9</sup> (i.e., a medical treatment agreement) as part of their medical practice. There is also the “new school project”<sup>10</sup>, which incorporated this theory into a new educational practice in a study by Yamazumi. In this study, using online methods, school was regarded as “a collective instrument” that included a teacher group.

The present study supports what teachers analyze as an activity system of the self and therefore adopts the above-mentioned expansive learning theory.

First, I explain the expansive development theory proposed by Engeström and refer to an intervention study that applied this theory. I present findings from an investigation into the materials used in this method given the present condition and the demand of the public kindergarten classrooms. Then, I interpret the findings from the viewpoint of expansive learning theory in light of the data from the three public kindergarten classes. Finally, I examine the significance and problems of the materials that became clear during the investigation.

## **2. Intervention studies of expanded learning**

In this intervention study, I apply the expansive learning theory proposed by Engeström, and support innovations in the educational practice of teachers in public kindergarten classes. Following Engeström, this intervention study of expansive learning is based on Vygotsky’s method of dual stimulation. In other words, even if we present a practitioner with a problem and the solution (i.e., stimulation) that a researcher has already determined, the practitioner still brings him/herself to the problem as a psychological instrument, not a passive thing (i.e., reaction), analyzes the problem, and finds a solution. That is to say, the researcher and practitioner promote “re-instrumentation” with “re-mediation” for an object. We only offer instruments that may further an understanding of and the solution to the problem for the practitioner. The practitioner cannot remain in the present condition and falls into a double-bind situation where he or she is unable to find a concrete solution. The practitioner recognizes the contradiction of the previous activity when we use a new instrument. We can improve the activity when we analyze factors that obstruct the activity, and thus we improve our development.

The first reason for applying the expansive learning theory proposed by Engeström is that the process of expansive learning not only brings personal (vertical) change<sup>11</sup> to teachers, it can also promote extensive (horizontal) changes<sup>12</sup> to teachers’ relations with their kindergarten classes and communities. The second change affects the condition of the instruments as “artifacts of mediation”. An “artifact of mediation” must include the possibility of helping to understand the solution to a problem. What guarantees this possibility? Engeström employs a theory proposed by Bartlett to make this connection<sup>13</sup>. In other words, it is a new method and instrument; however, it is important to introduce and develop this new method and instrument to the participating research field in a given scientific experiment in other domains. The materials must include the notion of “the artifact of transmitting”. First, because it improves Montessori that the materials have already existed, and she produced her own Materials<sup>14</sup>. In general, the meanings and functions of the materials are determined by

the relations with Montessori education theory. However, developments were made through trial and error at the *Isstituto Medico Pedagogico*, the *Scuola Magistrale Ortofrenica* in Rome, and the *Case dei bambini*<sup>15</sup>. In other words, the Montessori materials benefited from improvement by Seguin<sup>16</sup> and the learning and teaching experiences of teachers and children who used the materials. The Montessori education system was completed after this trial and error by including various elements such as religious thought and peace theory. In this sense, some may say the materials are “artifacts of mediation” for Montessori. The materials have continued to be used in educational facilities all over the world for more than 100 years. In other words, the results of the materials are important as conditions of “instruments”.

We thought that we could promote this theory and support the possibility that teachers could build their own educational theories by introducing the materials into public kindergarten classes. We thus decided to analyze the change that occurred when the materials became “instruments” used by the teacher to promote Engeström’s expansive learning theory.

### 3. Background and method

#### 3-1 Kindergarten classes, teachers, and investigation period

The details about the public kindergarten classes we investigated are presented in Tables 1 and 2.

**Table 1 Primary investigation**

Note1: “older” 5~6years old children class.

	Kindergarten A	Kindergarten B	Kindergarten C
<b>Prefecture</b>	Okayama	Okayama	Osaka
<b>Infants</b>	130	173	165
<b>Class</b>	Older <sup>1</sup> 2 Middle <sup>2</sup> 2	Older 2 Middle 3 Younger <sup>3</sup> 2	Older 3 Middle 3
<b>Teachers</b>	5	9	9
<b>Key role teacher Career</b>	4 years	S 8 years	K 27 years
<b>Investigation period</b>	2007 July–December	2008 January–March	2008 April–August

Note2: “middle” 4~5years old children class.

Note3: “younger” 3~4years old children class.

**Table 2 The second investigation**

<b>Kindergarten A</b>	
<b>Prefecture</b>	Okayama
<b>Infants</b>	122
<b>Class</b>	Older <sup>1</sup> 2 Middle <sup>2</sup> 2
<b>Teachers</b>	6
<b>Key role teacher Career</b>	H 8 years
<b>Investigation period</b>	June 2009–March 2010

Note1: “older” 5~6years old children class.

Note2: “middle” 4~5years old children class.

### 3-2 Background of the introduction method

We faced difficulties when seeking cooperation for this intervention study because Montessori education has not been introduced in Japanese public kindergarten classes since World War II<sup>17</sup>. In addition, for the purpose of the investigation, the materials were not connected with Montessori theory that created difficulties prior to the introduction of the materials. The main difficulty was that the teachers should use materials unknown for this intervention study. However, the kindness of the director who thought that an intervention study to introduce materials would improve the kindergarten teachers brought the study to fruition. We did not introduce the materials into all the kindergarten classes all at once. Instead, following the wishes of each director, we began with one teacher. We made it clear, however, that we aimed to construct collaborative activities that would be implemented in the educational practice in all the kindergarten classes, and the director consented. The change may spread to other kindergarten classes even if the introduction of the materials is limited to one teacher. In other words, the possibility exists that the change would expand to the community through a division of labor. When the state of the investigation became clear in the kindergarten A class, the director introduced this intervention study to the kindergarten B director. In the kindergarten B class, one teacher introduced the materials once the director understood the purpose of the study.

The kindergarten C class in Osaka had the Board of Education introduce the kindergarten C director after receiving approval. The procedure for the investigation was similar for all kindergarten classes.

### 3-3 Experimental materials

We used the following three types of Montessori materials in this investigation: *cubo del binomio* (binomial cube); *incastri di ferro* (metal insets); and *zero è nulla* (lesson about zero). We describe below the characteristics of each type of material, as well as how each type is implemented.

### **a. *Cubo del binomio* (binomial cube)**

This material includes one large red cube, one small blue cube, three red-black cuboids and three blue-black cuboids. All of these items are incorporated in a cube box. After the child separates these items in the box, children back to the original cube by assembling items that have been separated. Configuration of this material is  $(a + b)^3$  if expressed algebraically.

### **b. *Incastri di ferro* (metal insets)**

Ten pieces of iron geometric figures appear on a sloping board with five pieces in the frame of the square. Identity alignment is possible when the pieces are removed using a knob in the center of the geometric figure. The frame size is 14 by 14 centimeters. The forms include a square, rectangle, triangle, trapezoid, pentagon, an egg shape, an oval, a curved triangle and a flower cross. Taking edge in colored pencil and put it on the paper of the same size and frame shapes, children will be able to draw the geometric shapes. This activity is an exercise to develop the muscular motion necessary to draw with a pencil.

### **c. *Zero è nulla* (lesson about zero)**

We prepare number cards which made of construction paper from 0 to 10. In addition, we prepare a basket that contains 55 walnuts. First, the children pull a number card. The children then memorize the number and only take that number of walnuts from the basket. When all the children have finished, no walnuts should be left in the basket. The child who pulled the 0 card cannot take a walnut. Children sit down on a carpet and complete this activity in groups of less than 11. The number cards and the number of walnuts changes according to the number of people participating in the activity.

## **3-4 Introduction method**

At the start of the investigation, we performed a basic demonstration for the teachers on how to use the materials. We then had teachers practice using the materials. In addition, we distributed the print reference that explains how to use the materials. Teachers selected the day and time when they would first introduce the materials. The teacher performed follow-up activities every day, and we conducted day-long observations of the children several times over the course of one month. In addition, we interviewed the teacher after each of the observations.

## **3-5 Data collection**

In addition to observing the teacher, we also observed the children on the day the materials were introduced and on a later follow-up day. We also video-recorded any changes that occurred to the children and the teacher who presented the materials. We recorded the children and teacher during the observations in the event there were changes. Recorded video became an opportunity to rethink remembered thinking and action that changes for us and teachers. We interviewed the teachers to understand

any changes in thought that co-occurred with changes in action during the study. We recorded the content of the interview with an audio recorder. The situations in which the materials were used are included in the collected data.

#### 4. Interpretation of the data

This section interprets the changes that occurred as a result of the application of Engeström's expansive learning theory and its materials in public kindergarten A (Teacher N, Teacher H) classes.

##### 4-1 Interpretation of the expansive learning theory

Engeström states that conjugations (i.e., a vertical point of view) are seen in individuals who practice the "expansive learning cycle" (figure 1), and shows five different phases of expansive learning that occur among practitioners. Phase ① is the need state. In phase ②, an object becomes the motive in a double-bind situation and models the instrument in phase ③. In phase ④, the solution is derived by application and generalization of an instrument. In phase ⑤, the activity unfolds through consolidation and reflection, which leads to a new cycle.

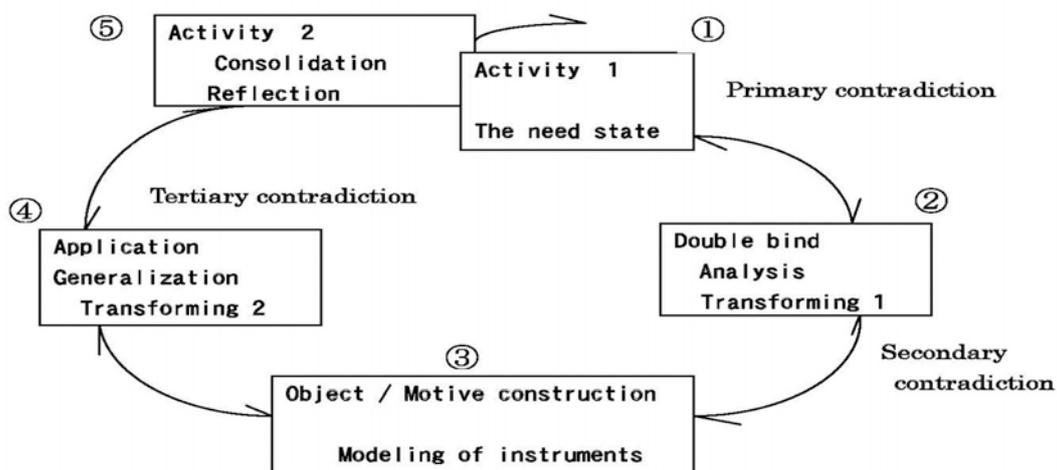


Figure 1 Expansive learning cycle

We can conceptualize the same change that occurred to the individual practitioner by focusing on changes in the relations among the individual components of the activity system. Engeström models the relations between the elements of this activity system as the "structure of the human activity" shown in figure 2

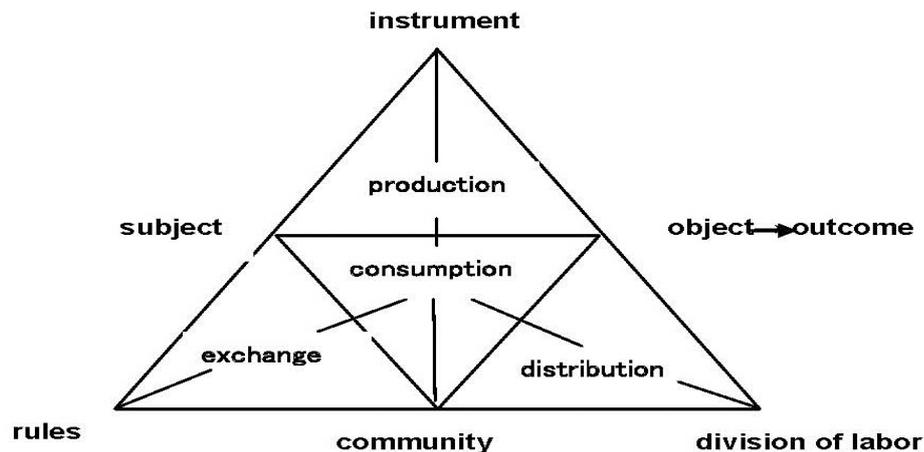


Figure 2 The structure of human activity

I can simplify this by saying the person doing the activity is concerned with an object (i.e., the “instrument”) and is also concerned with the rules associated with this object in the community. In addition, the cooperation associated with this object is called the division of labor. All these processes create the possibility of new activity through the double-bind situation without fixing the meaning and function. The changes that occur at any top of the human activity structure spread to all other tops because all the elements of the activity are linked. The person doing the activity thereby brings about new activity through a dynamic process of cooperation.

#### 4-2 The primary investigation (Expansive learning with Teacher N)

In the primary investigation, Teacher N experienced an internal contradiction as a result of the introduction of the materials. This was the case because individual changes (from a vertical point of view) showed various developments. Furthermore, the sign that signaled the change appeared at the spatial social point of view.

First, we identified the changes seen in Teacher N from the interview data. This was the first time she was in charge of an older child. She felt uneasy and stressed, so she reported to me that she wanted to postpone introducing the materials until the next day. However, she was persuaded by the director and subsequently began introducing the materials. She was surprised at the reaction of the child.

**The children were very concentrated. When the activities would begin, the children’s eyes lit up. From their eyes and postures, I could tell that this was unprecedented (9/10/2007).**

**I was surprised to see this concentration. It stimulated me adversely. Through the introduction of these materials, I realized that I always taught the children too much. In addition, I started to be careful not to give lengthy explanations. I started to think different things. It is really different from the first semester because I have had a feeling like “What on earth happened?” for these past two or three days. I understood that**

**children absorbed this from my words and manner. I thought ...I noticed that I should not say too much with words (9/12/2007).**

After this interview, Teacher N learned from the method to present the materials, and subsequently applied the method in her instruction. She instructed children not by words but by movement. The children carefully watched the movement of the teacher and began to imitate it. The direction for using materials was turning into an "instrument" of Teacher N by trial and error in imitation of the method to present the materials. Teacher N then rearranged the materials and changed their location within the classroom. A property called a feeling of abstract done order is expanded in space and other teaching materials newly by materials. Furthermore, teacher N moved the materials in the hallway, for neighboring class children to be able to use the materials freely. The director, who noticed a surge of the instruction awareness of Teacher N, will propose a review of the childcare to all teachers. It may be said that a cycle of new learning was beginning to envelop the kindergarten.

Next, we consider the change that occurred in Teacher N from a spatial social point of view. In other words, what kind of influence would the change have on the elements of the activity system in the kindergarten classes? In this case, we understand that a change in the introduction of the materials (instrument) spread from teacher (subject) to children (object) through a rule to the community (kindergarten).

Figure 3 illustrates these changes.

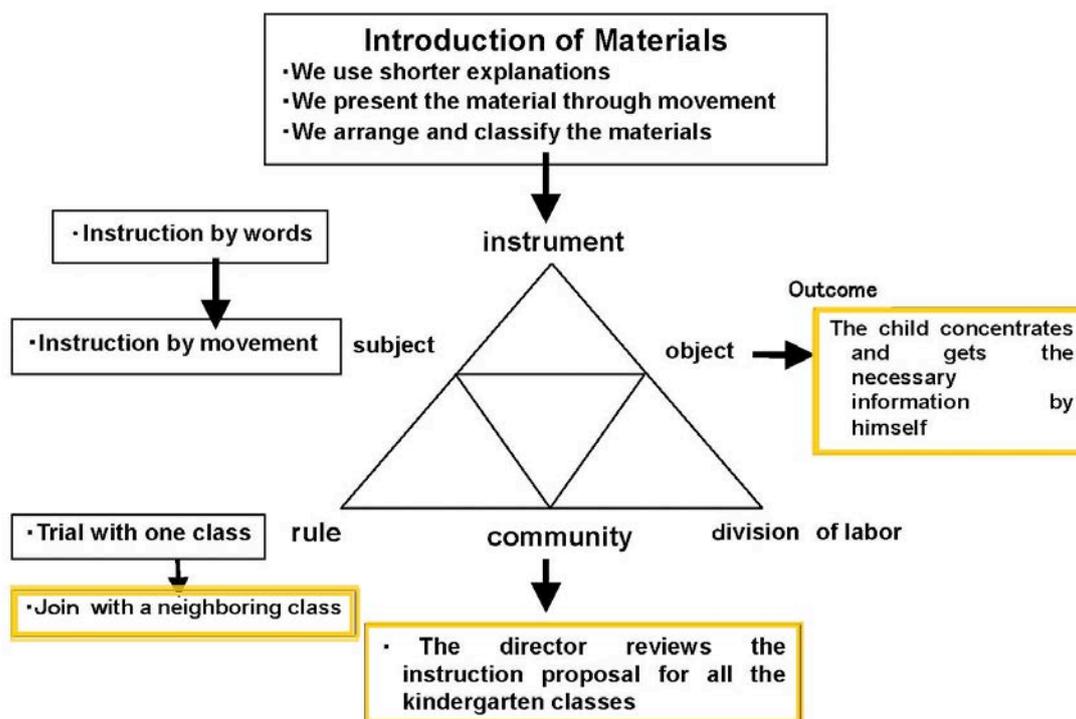


Figure 3 Change in the activity system (Teacher N)

### **4-3 The second investigation (Expansive learning with Teacher H)**

Similar changes happened to Teacher H. Teacher H was busy providing private guidance to a child who needed special support. She was troubled by the fact that she could not instruct the class. In addition, she was required to use the “zero play” materials, but experienced a double-bind because the children did not show interest. However, she finally began the presentation. The children adapted to the “zero play” materials immediately and continued to do so voluntarily. I could tell that she felt surprised and questioned the children’s actions in the interview.

Teacher H moved the “zero play” activity afterwards to “the room with everyone (joint ownership space)”. This happened because the other children and teachers participated in sequence. Additionally, she set up braided teaching materials in the room. A young child and a boy who had not yet participated subsequently began to participate. The work the children took home became the motive for expansive learning, and the entire kindergarten class was interested in the teaching tools and the materials. When he heard about the interest in the materials having spread to all the kindergarten classes, the director immediately scheduled talks with all the kindergarten classes, including the teachers and us.

I considered the change that occurred to Teacher H, triggered by the introduction of the materials, from a spatial social point of view. In this case, a change caused by the introduction of the materials spread through the division of labor and the rule element associated with the movement of materials. In addition, the change spread through the community and led to new teaching materials. Figure 4 illustrates these changes.

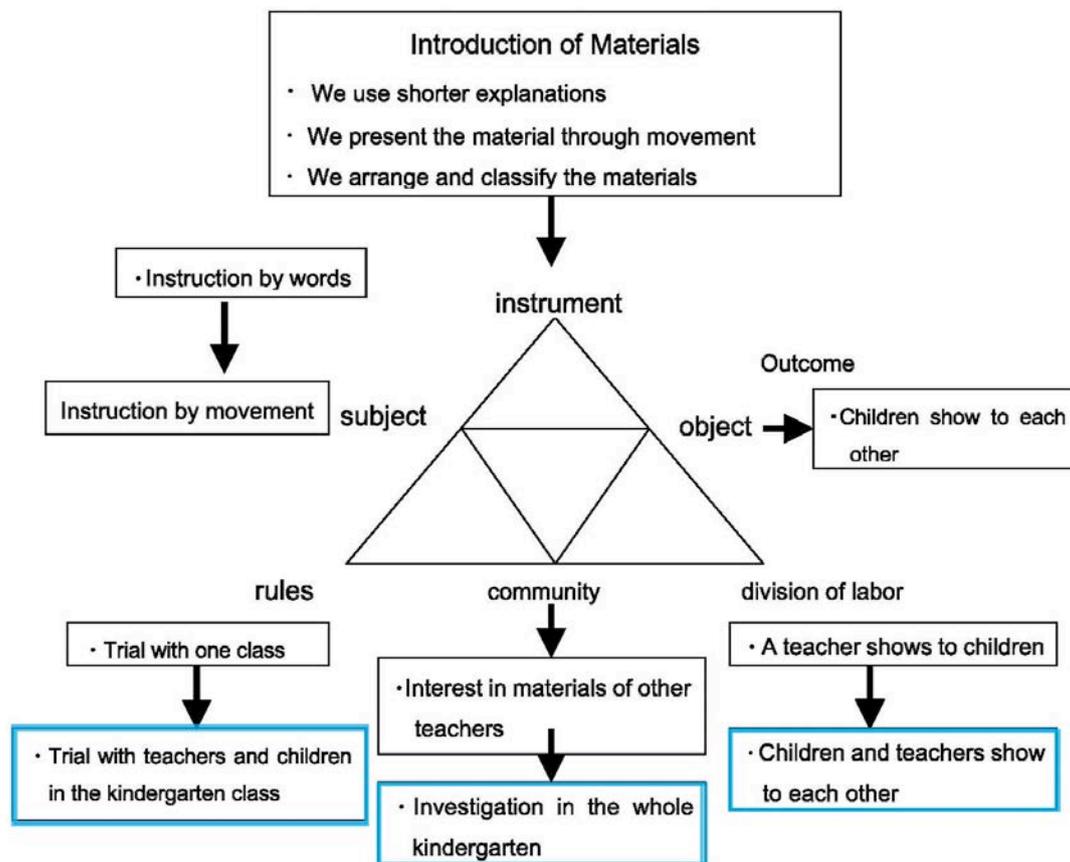


Figure 4 Change in the activity system (Teacher H)

## 5. Possibility for the instrument of expansive learning theory

I studied the materials before this full-scale intervention study to support and investigate self-innovation in the teacher's activity system in public kindergarten classes. Teachers were perplexed about the materials in the primary investigation and the second investigation when I presented them from the viewpoint of expansive learning theory. This perplexity was caused by being unfamiliar with the materials, their purpose, and their effect while, on the other hand, expecting improvement in the practice. The teachers had to use the materials, but experienced a double-bind when they were unable to find concrete solutions. However, despite this dilemma using the materials, both teachers were surprised at the children's transformation. Furthermore, because we considered the children's transformation, each teacher recognized contradictions in the instruction activity and identified their problems. For example, Teacher N learned from the method to present the materials, and subsequently applied the method in her instruction. On the other hand, Teacher H, in vacant place as a shared space, prepare the (braid) new teaching materials and materials, anyone was able to use freely. In other words, the materials led to an opportunity for self-learning through introspection where each teacher found a solution for their practice and created a new instructional method. This "temporal, personal dimension" represents an important change among teachers. Teachers should develop the idea that by using the materials, they will produce a new "instrument" and create a new "learning" environment. In terms of the development of these new materials, it is necessary to

consider the *zero è nulla* activity. The *zero è nulla* activity involved extremely general materials, with the number cards made using construction paper and the walnuts. In contrast, the kindergarten classes were unfamiliar with the materials comprising the *cubo del binomio* and *incastri di ferro* activities. In other words, the *zero è nulla* materials make it possible to model and generalize the “instrument”.

The second type of change caused by the materials represented the social (horizontal) changes; so to speak, relations with their (Teacher N and Teacher H) kindergarten classes and communities. This change happened in one class in the primary investigation. However, this change expanded the teacher’s interest in the materials to the whole group, including the participation of children and teachers from other classes and the entire kindergarten class in the second investigation. This happened because ties among the main constituent subject (teacher), the object (child), rules (school year, group), the community (kindergarten), and the division of labor (adult, child relations) made possible new activities with materials (instrument) by a year-long investigation. In addition, I was able to follow the process of the expansive change.

The expansion took place in both investigations and was facilitated by the same director of the kindergarten A class. At that time, there will be a need to consider the differences between the play equipment and materials.

Given the above-mentioned consideration, “any element of materials involves whether the child or teacher brought about a change at the organization” represents a question for the future. In other words, we should have to consider the meaning of the materials that mediate expansive learning. A public kindergarten teacher can improve his or her practice with materials while pursuing this question because it builds an education theory. At that time, there will be a need to consider the differences between the playground equipment and materials.

Will a similar effect be observed if the playground equipment contains elements that are similar to the materials? It is necessary to introduce general playground equipment using a similar method to the presentation of the materials. Alternatively, a comparative study on the classroom materials and other playground equipment without the presentation of directions is necessary. However, the answer to these questions is provided to some extent by the data from one teacher in the primary investigation: “It is difficult just to properly maintain the environment, such as the instrument and the materials in the class room, the puzzle...what if a walnut makes a good feast when playing house” (8/11/2008). This statement is related to the previous experiences of the teacher. Therefore, the materials might not function as an “instrument” if they do not show directions for use. In addition, Teacher N created new teaching tools as a model by herself. Furthermore, as for the *zero è nulla* activity, it is possible to convert it to other playground equipment, following the statement above. Thus, one of the most important elements for the function of the materials as “instruments” is the direction for its use rather than the materials itself.

If the various changes that occurred in the process of this investigation are evaluated positively for a public kindergarten class, the materials could be used, and wider choices would emerge with improvements in teaching practice. However,

directions for the use of the materials may become the key to enacting these changes. Thus, we should treat materials and their directions as one unit when we use the materials. In addition, the method that Montessori developed should be protected, and the directions for the use of the materials should be kept to a minimum. Further, the name “Montessori” should remain. This is the temporary hypothesis offered by the present study.

It will be necessary in the future to make the analysis in the learning process of the teacher individual dimensional analysis of the cooperative creation of an organization, the group level to be able to perform the study that applied an expansive learning theory more in earnest including the inspection of this temporary hypothesis.

However, even if we aim the intervention serious study, in its starting point, and small practices and education being done already in kindergarten side as in this study, in the margins of the training program being carried out already it is a reality that we do so only is not allowed. However, we would not than can not only by a small step in the first, to start this study.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is partially overlaid by a large, faint, light blue circular graphic that spans across the middle of the page. There are also some faint, light red curved lines in the background.

## Notes

1. This book introduces trends in contemporary preschool education worldwide and childcare reform, mainly focusing on childcare issues in Europe and America and Asian for each six countries and Japan. It is the following countries to have been surveyed. Finland, France, Germany, the U.K., the United States, New Zealand, Korea, China, Taiwan, Singapore, Thailand, India, and Japan.
2. With this book, today's problem is introduced to be survey by European major country information about the detailed information about the child-care facility, the childminder training course. It is the following countries to have been surveyed, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, the U.K.
3. This book describes the first investigation by Mialaret, who was the chairperson of the world preschool education system in those days followed a global trend of the preschool education by the request of the UNESCO member nation. So, data from 67 countries that replied to a questionnaire are included.
4. Material is the starting point of Montessori education and is said to be a crystallization point coupling the spiritual strength of the child, a catalyst letting you activate it. Montessori was named "concentration of attention" to it (Heiland 1995: 76). Materials are important elements of Montessori education.
5. Expansive learning theory aims at "switching their systems and acts by the originality of the participant group", and doing it (Engeström, 1999: i).
6. Montessori placed emphasis on teacher training to diffuse a method and the educational principle using materials. And she tried for construction, the maintenance of the system (Heiland, 1995: 110). As a result, Montessori education spread globally. However, this regime made the education and research study from a new point of view difficult.
7. Vygotsky defined "the zone of proximal development" as the distance between a potential development standard decided through a development standard of decided reality and an individual solution to the problem under the instruction of an adult or the collaboration with an able friend. In this study, the main constituent of the development is not a child, but the teacher as the cooperator of the materials being introduced.
8. In the 1980s, Engeström began researching participatory action as part of an "educational intervention" methodology. He studied the process of "expansive learning" to create solutions for the problems of a practitioner overcoming an obstacle and the contradictions encountered in team practice.
9. From the studies by Engeström and others on the medical practice activity of Helsinki City, he tried to replace the "care of involvement as" a long-term and continuous, medical isolated and "visit" center. The idea of "the care agreement" originated from a doctor and nurse from different medical institutions (Yamazumi, 2004: 126-129).

10. One of the intervention studies conducted at the Kansai University Center for Human Activity Theory was on a hybrid, after-school instructional activity called "new school (NS)". In NS, a university, an elementary school, home, or other organization performs project learning in the form of cross-school working (Yamazumi, 2004: 285-351).

11. According to Engeström, this "vertical" and "temporal, historic" change is called the development, and the same main constituent means that an object changes along the temporal axes. It has been already recognized in the work by Vygotsky that "a tool" has an effect in this direction.

12. The "horizontal" and "spatial, social" change is called the development, and the change that occurred in an individual and the object means the change along the space axis to spread to the community.

13. *Op.cit.* p. 199

14. Montessori, *IL Mmetodo della Pedagogia Scientifica applicator all' educazione infantile nelle Case dei Bambini*, 1909: 31

15. *Ibit.* pp.132–133

16. Seguin, O.-E. (1812–1880) had thought of the principle of Saint-Simonianism in the 1830–1850 generation for civil society establishment period after the French Revolution. He was one of the first involved with the education of physically and mentally disabled children. He systematized a physiologic training method in practice and aimed at the socialization of disabled children. Montessori materials assume teaching tools of Seguin the origin (Montessori, 1909: 31).

17. Montessori education was introduced in Japan in 1912. At a public kindergarten (Shimane Prefectures Teachers College Affiliated Kindergarten , Himeji Teachers College Affiliated Kindergarten), there is a record that incorporates the education, but it was not a practice adopted materials. The 1930s, by nationalism, militarism, western educational thought faded. Montessori education is being re-evaluated in Japan, it is the 1960s. After the war, in Japan, Montessori education was introduced in Catholic kindergarten mainly. To the public kindergartens, are not introduced at all, a matter of teacher training, class organization, materials cost, and the like.

## References

- Engeström, Y. (1999) *Kakuchō ni yoru Gakusyu: Katudouriron karano apuro-chi*, a group led by Katsuhiko Yamazumi, Shin-yo-sha: Tokyo.
- Mialare, G. (1976) World survey of pre-school education: *Educational Studies and Documents* 19 Unesco.
- Heiland, H. (1991) *Maria Montessori mit dokumentenSelbstzeugnissen und Bild*, rowohlts monographien 419, Hamburg = (1995) *maria • montessori:sonokotoba to syasin ga akasu kyouikusyazou* translation Tomomi Hirano et al. Tousinndou: Tokyo.
- Izumi Chise et al.(2008) *Sekai no Youjikyōuiku • Hoikukaikaku to gakuryoku mirai heno gakuryoku to nihon no kyouiku* 9, akasisyoten.
- Montessori M. (1909) *IL Mmetodo della Pedagogia Scientifica applicator all' educazione infantile nelle Case dei Bambini*, Roma, Max retschneider.
- Montessori, M. (1971) *Psico-Aritmética*, Casa Editorial Araluce, Barcelona.
- Overhuemer, P. et al.(1997) *Working with Young Children in Europe: Provision and Staff Training*, Paul Chapman Publishing.
- Seguin,E. (1907) *Idiocy: and its treatment by the physiological method*, Press of Brandow printing company, Albany, Columbia University.; Teachers College.; Educational reprints. N.Y.
- Yamazumi, K. (2004) *Katudouriron to kyouikujissen no souzou: kakucyoutekigakusyu he*, kansaidaigaku syuppanbu.
- Vygotsky,L.S. (1979) *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University Press.

*Task-Based Language Learning: An Approach to Help Students to Become Balanced Thai-English Bilinguals*

Ketkanda Jaturongkachoke\*<sup>1</sup>, Supamit Chanseawrassamee\*<sup>2</sup>

\*<sup>1</sup>The National Institute of Development Administration, Thailand,  
\*<sup>2</sup>TOT Academy, Thailand

0038

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Abstract

Bilingualism and/or multilingualism have long been praised as an invaluable asset, particularly in the today's contracted global era and village. Although bilingual behaviors had been harshly criticized as a deficit form of language use in early 1900s, bilingualism is getting more and more important in the current 21st century, especially in business. As Thailand and the other nine economies will become fully united in December 2015, and English is dominantly regarded as the international language used among ASEAN villagers in seamless manner, non-native English-language instructors have tried to find numerous ways to provide their students with effective English curricula. Like many other non-native English speaking instructors, the co-authors particularly examined the student-centered pedagogical method to assist their students in their English acquisition. In the present paper, the two authors scrutinized the mindset of their students toward the task-based language learning (TBLL)—focusing on the primed and impromptu presentation—proposed by Nunan and other TBLL gurus. A questionnaire with choices and open-ended questions were distributed to approximately 200 respondents taking the Intensive English Course for MBA students from November to December 2012 at a graduate school in Thailand. Based on the participatory 147 respondents, the findings revealed that a majority of students enjoyed all the TBLL presentation activities. Significantly, there were crucial differences in preferences between prepared and unprepared presentations. Weak students mentioned that they still needed some time to familiarize themselves with the task and topic, thereby preferring the primed type. On the contrary, students with higher English proficiency saw no obstacles in giving their oral presentations spontaneously. For prerequisites, the students spoke for themselves that they needed to gain better preparations in the domains of grammar, vocabulary, confidence, extrovert, and creativity.

**Keywords:** task-based learning, MBA students, presentation skills, Thailand

## 1. INTRODUCTION

Even prior to globalization, bilingualism was already a daily reality to many peoples in myriad parts of the world (Diebold, 1964; Fishman, 1972 & 1991/1997; Grosjean, 1982; Li, 1998 & 2000; Mackey, 2000; Milroy & Muysken, 1995; Romaine, 1995; Shin, 2005 & 2012, among many others). For instance, bilingualism and multilingualism becomes a norm of being a Zairian resident for the reason that languages spoken in Zaire are legion (Grosjean, 1982). Generally accepted to be monolingual, developed countries like Japan and Germany have been long inhabited by speakers of other languages: Czechs, Danes, Poles, and Turks in Germany as well as Ainu, Chinese, and Koreans in Japan (Grosjean, 1982, pp. 1-7). Of course, these groups of peoples immigrated with their mother tongues while learning the local language for their survival, assimilation, and advancement (Shin, 2012). Tucker (1998) concurred that there are more bilingual or multilingual speakers than monolingual ones in the world. In fact, “bilingualism is the norm; most people speak two or more languages, and the large proportion of the world’s population is bilingual” (Grosjean, 1982, p. 1). These phenomena are not beyond belief today because the world seems to be a borderless place where everybody irrespective of races and nationalities can come across the border to study, to work, and to live more freely than before.

Later came the globalization era. Globalization has placed greater importance of bilingualism/multilingualism all the world over alongside the increasing importance of English as a *lingua franca* in almost all countries. Many sages in the bilingualism field are in agreement that bilingualism and multilingualism have so many vital benefits to their intelligence, family life, work, or even self-esteem (Bialystok, Craik, Klein, & Viswanathan, 2004; Genesee, 1998; Grosjean, 1982; Huffman, 1998; Krashen, 1998; Li, 2000; Ramirez, 1992; Tucker, 1998). Grosjean (1982) exemplifies Akan/Fanti/English trilingual speakers in Ghana who are proud of their own multilingual abilities because they are respected. Bilinguals and multilinguals are proved to be more sensitive and thoughtful than monolinguals (Bialystok et al, 2004). Apparently, international collaborations and partnerships; financial, technical, and educational assistance schemes; or even personal/institutional/national/regional/international/etc. identity require high English proficiency in correspondence—whether oral or written (Fasold, 1987). By nature, this trend has made different peoples become bilingual or multilingual. “Bilingualism has grown increasingly significant than in the past with globalization and the increasing need for international commerce and diplomacy” (Chanseawrassamee & Shin, 2009).

In addition to the immigration and emigration, the growing importance of the English language as a *lingua franca* has been also highlighted by the emergence of the internet along with the social network, where English also holds the most imperative shared language of communication among peoples whose mother tongues are different. For the most part, with the upcoming real unity among the ten Member States of the Association consisting of Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam, English becomes the international language of this group as well (Association of Southeast Asian Nations (ASEAN), 2009). This regional requirement means that, in addition to each ASEAN villager’ mother tongue and official/national language, they have to be

fluent in English. By this means, it becomes unavoidable for all peoples—be they housewives, businessmen, workers, coordinators, doctors, etc.—to be able to communicate in English and to develop their high English proficiency. This endeavor is aimed, but not limited, to respond to the regional or global change only, but also to facilitate businesses across borders. In many gurus' perspective, Thailand—a country whose mother tongue and official language is Thai—obviously has to develop her citizens' English proficiency (Fry, 2012). Above all, English proficiency opens a person a golden opportunity to gain a better job and life (see (see Chanseawrassamee, 2007 & 2012; Chanseawrassamee & Shin, 2009; Jaturongkachoke & Chanseawrassamee, 2013a and 2013b, *for instance*).

In her dissertation, Chanseawrassamee (2007) expressly pointed out that “The influence of English is even more intense in the Internet era where English is used as the *lingua franca*. Those who do not have access to that technology nor English proficiency as a prerequisite skill may experience limited opportunities for employment because English-speaking abilities are preferred, particularly by foreign companies. English affects peoples' lives in the educational and business realms, and in everyday life... [Specifically,] many third world countries [like Thailand] depend on tourism, especially from rich English-speaking societies, for their economic survival. In today's world, those who can understand English tend to be more privileged than those who do not” (p. 5). Such notion is evidenced by her two subjects—two sons. As a result of their studies in the United States of America for three and a half years, one could win an undergraduate scholarship to study in Japan and the other has been recently admitted to an international program at a leading university in Thailand. This is merely an example of young generations who can make progress in their study life as a consequence of their high English proficiency.

In the previous decade, however, Lohsiwanont (2001) found that Thai students were faced with a lack of numerous language learning skills, particularly correct pronunciation, lack of fluency, insufficient lexis, inability to understand fast speech, and shyness. An important cause of their struggle for English competence is claimed to be the fact that Thai education usually emphasizes rote learning and frequent examinations. This made Thai students submissive learners who largely depend on fronted teachers for knowledge and nurturance more than American students do. Nevertheless, Leong and Koh (2012) argued that businesspeople are different from those in other fields of study. To be more specific, businesspeople are more enthusiastic to new innovations. Thus, they are believed to alert to new way of learning as well (Leong & Koh, 2012).

As a result of Thai students' personality traits, field of study, and global change which are believed to affect their English proficiency, the co-authors looked particularly into how they can help their MBA students to become balanced bilinguals so that these young generations can communicate well in English and get along with the globalized mainstream.

It is worth mentioning here that, in this study, the phrase “balanced bilingual” will take on Li's (2000) definition which is “someone whose mastery of two languages is roughly equivalent” (p. 6).

## 2. HOW TO TEACH BUSINESS ENGLISH: A NEW TREND

In all domains, it appears that the world has engagingly altered. In the educational realm for instance, more teachers tend to become *facilitators* or *evaluators* as opposed to *class controllers* or *fronted teachers* as they traditionally were (Nunan, 1999; Shin, 2003). This conceptual change is clearly evidenced by business English teaching in Frendo's (2005) work. In his book *How To Teach Business English*, Evan Frendo (2005) claims that the teacher's functions can be subsumed under three major categories. First, "teacher" can be regarded as "a *trainer*, who changes their students' behavior or ability so that they can perform a particular job more effectively." Second, the teacher can act as "a *coach*, who knows how to help learners to recognize their personal strengths and weaknesses so that they can plan the lessons and activities accordingly" (p. 5). Third, a teacher can be "*consultant*, who offers knowledge gained from his or her business know-how and expertise (Frendo, 2005, p. 5). Based on Frendo's work, teachers do not primarily give their students knowledge only anymore, but tending to be facilitators or helpers who guide their students to reach their goals. In other words, the major responsibility of a teacher does not involve knowledge dissemination to students only, but also facilitates their learning process and guide them to accomplish their goals.

The consequence of the teacher's facilitative trend is still problematic to some degree. On the one hand, the new role may mislead some students who are familiar with the traditionally fronted teacher to become perplexed or even frustrated (Chanseawrassamee, 2012). These students may not understand the changing roles of their instructor. Some students may be too extrovert and/or even unexpectedly dominate the class, whilst feeling they learn nothing from the teacher as facilitators. Alternatively, the full effect falls on teachers. Letting students to revere their intellectuality (O'Reilly, 1993) may negatively turn out to be an impression that the teacher is lethargic or even ignorant (Chanseawrassamee, 2012).

Despite such predicaments, the co-authors believe that *most*, if not all, English-language instructors assume full responsibility for providing their students with hands-on experience, building up linguistic attention in the domain of content-oriented communication, and encouraging them to carry out their self-study outside the classroom in a lifelong fashion (Lund & Pedersen, 2001, pp. 63-64; Paulsen & Feldman, 1995). In the present study, the co-authors hence provide the environment which they believe will hearten their students to share and express their thoughts, learn how to work as a team, and familiarize themselves with the requirements of the MBA program at a leading postgraduate institution. The significance of non-threatening environs is most recently demonstrated in many language teachers' works including Chanseawrassamee (2012) and Carnevale (2013). To accomplish the co-authors' pedagogical goals, *task-based language learning* is therefore introduced to the class.

### 3. TASK-BASED LANGUAGE LEARNING THEORIES

Task-based language learning (TBLL), or task-based language teaching (TBLT), or task-based instruction (TBI) is the term used in describing a new pedagogical way in which outcomes of learning are focused rather than methods of teaching (Richards & Rodgers, 2001, p.15). These two experts defined the task-based language as “an approach based on the use of tasks as the core unit of planning and instruction in language teaching” (p. 223). Such pedagogical philosophy uses numerous tasks as vehicles for students to apply the principles into their real and meaningful communication. The task-based language learning is very beneficial to the field of English as a second language (SLA) (see Lefrancois, 1988; Tarone & Parrish, 1994; Nunan, 1999; Richards & Rodgers, 2001, for instance).

Nunan (1999) fully described the origin of “task-based” approach in his book named *Second Language Teaching & Learning*. In the old days, English as a second language learners have to study grammatical rules and vocabulary words because they are basic parts of the English language system—so called *grammar-translation approach*. In this approach, teachers are standing or sitting in front of the classroom and provide their students with grammatical knowledge and vocabulary words. Afterward, this old view has been gradually replaced by a new concept that students do not need to learn everything, but something necessary for their needs. Specifically, adult learners are unique (see Crandall, 1979; Burt, Peyton, & Adams, 2003; Nunan, 1999, for example). Adult learners can succeed in learning English as a second language when the materials they learn benefit their real-life expectations and such the dominant language is dominant in the place they live or at their workplace. For instance, “adults who need English for access to technical texts or training for employment have a strong motivation to acquire the language” (Crandall, 1979, p. 7). This new notion led to a new approach in learning—*experiential language learning*—and, of course, the classroom tasks and activities (Nunan, 1999, p. 10).

According to Nunan (1999), in experiential learning, students’ own experiences are taken as the starting point of their learning process (p. 5). Therefore, instead of learning *all* grammar concepts and lexicons as traditionally carried out, the language curricula have diverted to “*communicative language teaching, learner-centered instruction, and task-based language teaching* (Nunan, 1999, p. 5). Over the last thirty years, these three new educational ideas have strongly influenced the education field. In the present study, the co-authors will focus on the task-based language teaching only.

Task-based learning is a classroom-based approach which adheres to and passes on the philosophy of experiential learning. In the task-based learning classroom, students learn in small groups and pairs via close cooperation. That is to say, they become more and more skillful by cooperating and sharing thoughts with other classmates under the guidance of the instructor (Nunan, 1999, pp. 83-84). “They learn how to solve language problems in a systematic way and to decide what language to use in different situations that their teachers present in the classroom. Role plays and simulations help to make the task-based classroom a lively and rich language environment for learners of all activities. ... [T]asks such as these stimulate the production of a much richer array of language functions than teacher-fronted modes of classroom organization. They also result in the negotiation of meaning, something that is largely absent in teacher-fronted tasks” (Nunan, 1999, p. 84). Task-based

syllabus was accordingly defined as “a syllabus in which the designer has taken a series of tasks (rather than a set of linguistic items, such as structures and/or functions) as the point of departure for the design process (Nunan, 1999, p. 315).

In the task-based approach, the overall purpose of the course must be first identified. Then, the relationship between the course objective, text, and tasks can be created, collected, and prepared. The task can be either inside or outside class. Nunan (1999) provided some examples of task-based activities which can be pedagogical inside the classroom like reordering of scrambled sentences or real-world knowledge outside the classroom, e.g. a set of instructions for assembling a piece of furniture or reading a recipe (p. 266). In the present study, both pedagogical and external activities will be applied.

With recognition of the value of students, their experiences, and goals; the co-authors explore alternatives to fit their goals. As the enrollees in this English Intensive Course are MBA students who need to use a great deal of English in their face-to-face interactions, the co-authors design this task-based course by giving them the presentational communication activity. Even though the presentational communication may not be as interactive as interpersonal communication, the speech interaction requires spontaneity, especially in the Question & Answer session. The co-authors hence provided the primed or prepared in contrast to impromptu or unprepared activities. As such, whether or not Thai students are ready for the impromptu activities is believed to be able to indicate their readiness for the AEC full-form opening in 2015.

#### 4. AEC2009-2015 AS A NEW REQUIREMENT

AEC refers to ASEAN Economic Community, while ASEAN stands for the Association of Southeast Asian Nations. Ten member states consisting of Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam come to work together in strengthening its region and promoting its economic competitiveness in the global market. The AEC roadmap started in 2009 and will reach its full enforcement operations in 2015 (Association of Southeast Asian Nations, 2009). According to the roadmap, skilled labor, and professional experts can cross the border more legally and conveniently, whereby an exchange of personnel appears more smoothly and comprehensively for the prosperity in this region (Association of Southeast Asian Nations, 2009, pp. 29-30).

As a State Member, Thailand, where interculturalism has long been highly valued, has warmly embraced the new economic requirements in vast varieties of aspects, particularly employment and English as a *lingua franca*. Fasold (1987) noted that even though Thailand has never been colonized, English, *a world language*, has been taught to Thais fundamentally for economic reasons (p. 10). In Thailand, at least one foreign language is compulsory for all students (Pufahl et al., 2001) and that language is English. Most recently, the National Economic and Social Development Board (NESDB) clearly stipulated in its Eleventh Plan that Thailand must be well prepared for the ASEAN Economic Community (AEC). “All Thais should realize the significance and potential impact of the AEC. The competitiveness of business should be enhanced and benefit from the AEC. Labor force skills that are in great demand in

the AEC market should be developed. Regulations and institutional management should be made to comply with ASEAN's rules" (Office of the National Economic and Social Development Board, 2013, pp. 18-19). Such stipulation implies that Thai citizens have to be able to use English as a communicative tool both at work and in their education as well as daily life.

In the employment realm, both government and private sectors have started to hire foreign staff from Cambodia, Myanmar, and Viet Nam. In the same way, Thai applicants must have the 650+ TOEIC score. For conglomerates like PTT and its subsidiaries, their employees can move upward the career ladder when they achieve 850+ TOEIC scores. In addition to language requirements for promotion, if existing employees want to apply for the company's scholarship for higher education abroad, they need very high TOEFL scores. A role model for great endeavor of a state-owned telecommunication company to drive its employees to master English was also well described in Chanseawrassamee's recent work (2012). For the time being, pharmacists, house maids, cleaners, bank staff, and even street vendors, among many others, have to be able to speak English with non-Thai customers. Taxi drivers who wish to serve foreign customers at the airport must pass an English test to be licensed.

In the education realm, numerous Thai academic institutions have progressively provided more bilingual and international/English programs from the kindergarten level up to the university level. Such change is evidenced by a constant increase of international elementary and secondary private schools from 46 in 1999, to 67 in 2002, and 89 in 2003 (Office of the Educational Council, 2004, p. 149). A similar trend has been found in the higher education programs in both public and private institutions; i.e. 356 international programs in 1999, 465 in 2002, and 521 in 2003 (Office of the Educational Council, 2004, p. 149). Like international schools, the number of Thai schools wishing to offer bilingual programs nearly doubled from 104 in 2003 to 198 in 2004 (Office of the Educational Council, 2011). Ironically, in Thai schools/universities/etc. specifically, the content of the English language taught usually do not suitably or directly fulfill the requirements of business entities.

In the current study, the co-authors looked specifically into how MBA students feel about the importance of learning English, ranging from "most," "much," "moderate," "little," and down to "not at all." As the influence of English is apparently growing, it is interesting to know how these young adult learners see the importance of English and which way can help them to master English. Exactly 194 MBA students in the Flexible Program took the Intensive English Course for 36 hours. Even though the MBA Flexible Program is a Thai program and the English subject is a non-credit course, the students are found to be eager to be prepared their English skills for the full form of AEC enforcement in 2015. Significantly, the number of class hours has doubled from 18 hours in almost 20 previous cohorts to 36 hours in the most recent one—the cohort investigated in the current study. This is an obvious attempt of a public higher-education institute to cope with the forthcoming AEC in two years ahead.

## 5. METHODOLOGY

### 5.1 36-Hour Intensive English Course Overview

The Intensive English Course is a 36-hour non-credit course. The class meets once a week on Saturdays for 6 hours per day (from 9 to 16 hours) for 6 weeks in succession. The course is offered specifically to only MBA students at a leading postgraduate institute in Bangkok. The main textbook used in this course is *English for Business Studies: A Course for Business Studies and Economics Students*, third edition, by Ian Mackenzie (2010). This course is chiefly aimed to prepare these MBA students for reading textbooks and completing written assignments, most of which are in English. Nonetheless, as the time passes and the technological and English imposition has become apparent, teaching English by using the grammar-translation approach may be deemed obsolete. The co-authors accordingly added some interesting activities, e.g. self-introductory talk, oral presentation, writing assignments, etc., to make the class more meaningful, interactive, and lively. In the previous cohorts, students were asked to present on vast varieties of topic including moon cakes, mobile phones, tourist spots, and cars. For the most recent batch, students were assigned to present on the Thai “buffet restaurant.” Such presentations were uploaded onto the YouTube and the number of votes and views was counted to find the winner. As some students in this batch mentioned some political issues in their videotapes, the co-authors could not upload the video clippings onto the YouTube.

In the current study, the intensive English course ran from November 17 to December 22, 2012. Each day, grammatical concepts, reading assignments, and writing practices were provided in one 3-hour session. The other 3-hour session would allow all students to apply what they had learned in the first session to their speaking activities—mostly oral presentations. As the number of all students was exactly 194 students, the class was divided into two sections, 100 and 94, respectively. Each section studied the same lecture topics alternatively in the morning and afternoon sessions.

For this batch, students were assigned to give 5 presentations. On the first day, Loy Kratong Festival (or the festival of floating the basket of flowers) was presented in an impromptu manner, followed by a primed one on the same topic in the following week. On Day 3, students were assigned to present on franchised restaurants in Thailand, such as McDonald’s, Pizza Hut, and Starbucks. On Day 4, each group had to give a presentation on each ASEAN country member, as a part of self-preparation for AEC. On Day 5, students were given some snacks available in Thailand, including Beryl’s chocolate, Collon, Pretz, and Pocky. That day, the students had not known the topic before; therefore, the activity was considered an impromptu one. On the last day (Day 6), there was no presentation, but a written test. In brief, there were two impromptu presentations and the other three primed ones. All the presentations, save for the first day, were videotaped. As some groups’ presentations involved political issues, their videotapes could not be uploaded onto the YouTube as the co-authors’ previous class (see Jaturongkachoke & Chanseawrassamee, 2013a). The objective of this research study was hence different from the earlier one; that is, it looked specifically into the students’ preference for task-based learning approach and between the impromptu and primed activities.

In each speaking/presentation period, a brief glimpse of preparatory presentation skills and techniques were provided. Concurrently, students learned how to pronounce English at the word, sentence, and passage levels. Some speaking activities included tongue twister, stress and rhythm, *-ed* and *-es* ending pronunciation, non-existent sounds in Thai, and patterns of professional business English statements. The students were then asked to do many speaking tasks both individually and collectively. When giving presentations, students had to learn how to make a good introduction, systematic outline, understandable visual aids, effective ending, and ample questions&answers. Tables 5.1 and 5.2 show how each activity is voted on. The winner of each group on each day varies from one activity to another. As a result, it is interesting to see that the winning group is usually good at both primed and impromptu presentations. There are no serious complaints about the number of views from the internet website any longer because everything happens and ends in class. The test score is another way to turn around the presentation scores. Each section is divided into 9 groups. The number and comments of each group (made by the second author on December 16-18, 2012) are provided underneath each section's Table.

Table 5.1 Number of Votes on the Best Presentation Group (Section 1)

Group	Team Members	Vote (Nov 17) (impromptu)	Vote (Dec 1) (primed)	Vote (Dec 8) (primed)	Vote (Dec 9) (primed)	Vote (Dec 15) (impromptu)	Total (5 weeks)	Test Score (Dec 22)	Grand Total
1	12	6	3	32	20	8	69	28.33	97.33
2	12	4	2	14	7	10	37	44.50	81.50
3	10	16	11	0	9	25	61	16.40	77.40
4	12	9	28	11	9	16	73	55.00	128.00
5	11	2	17	4	6	3	32	21.45	53.45
6	11	12	8	5	12	1	38	26.00	64.00
7	11	28	3	4	8	9	52	26.91	78.91
8	11	7	2	11	10	5	35	20.00	55.00
9	10	8	1	11	10	10	40	50.40	90.40
Total	100	92	75	92	91	87	437	32.11	

### Comments for Section 1

Group 1: "I know how much endeavor you've made to carry out a vast variety of my assignments ranging from Loy Kratong to big businesses in Thailand, AEC, and products. Honestly speaking, I am so happy to see how you seriously took my comments into your following presentations. Likewise, I feel so glad to see how much you have developed your presentation skills through time. I'm extremely impressed by your creativity in your work as well as your assistance given to other groups. Your PowerPoint slides also wow me as they are getting more and more systematic. I wrote this comment before December 22; therefore, I don't know the final results yet. Nonetheless, what you should know now is that I am so proud of your great originality and strong determination not only to win but also to share."

Group 2: "I can tell how fluent you all are in English and, of course, Japanese in case of Tukki ☺. I really love your Nissan March presentation on December 8. That day, I thought your group had a great chance to win. Even though you didn't win, your group won many classmates' hearts. Finally, your group got high votes, right? I am certain that your information was gathered and organized very systematically. Each of your team members is also highly skillful and outstanding. However, sometimes your group overlooked tiny but important factors of presentation like the equipment. You should have checked the equipment, how to use it, and test it first. Even though your group consists of good members, sometimes, your presentation may not work out well. In my opinion, your group can boost up the scores or votes if you reorganize the way you give the presentation. You may add some more exciting techniques to make it more interesting and attention-grabbing like when you gave your Nissan March presentation. Remember what you learned on the very first day of our class: "Creative ideas flourish best in a shop which preserves some spirit of fun. Nobody is in business for fun, but that does not mean there cannot be fun in business" (Pioneer American Advertising Executive Leo Burnett, 1891-1971). Your group can still have a chance to win. Do the test as best you can!"

Group 3: "Congratulations on your immense success on December 15. I really like the way you gave your presentation that day. That is, you never gave up. You tried so hard to succeed without thinking of anything else. I felt that you just did your best all along. The triumph on the last day and the high score on the first day mean that your group can organize ideas quickly. Speaking about a subject without advance time to prepare is called an "impromptu speech." While other groups just did something simple that day because it was an impromptu presentation which requires quick thoughts, your group could invent your inspired PowerPoint slides. How could you do that within a short time frame? That's amazing! What your group had done is all about trials and errors. Finally, your group won! I felt so happy for you. I hope you keep up your firm strength of mind.

In my opinion, giving an effective presentation involves so many factors: presenters, equipment, visual aids (e.g. PowerPoint), stage management, so on and so forth. Another important thing is the "ability to think quickly." Specifically, your group is getting more and more familiar with each other and presentation techniques. I also feel that you all feel more confident and are getting more and more comfortable with the classroom management. This familiarity helps you to bring valuable experiences to your presentation. Congratulations again and good luck!"

Group 4: "Congratulations on being the lead in the class! I am always impressed by your natural gestures, performances, and speeches. In addition to your naturalness, I also love your creativity and fluency. Watching your presentations from November 17 to December 15, I can see substantial developments in terms of naturalness, extroversion, liveliness, and intelligence. Even though you did not win all the time, your performance was always off the charts. I have a feeling that all members in your team are highly fluent in English presentations by nature. I hope you all decide to enroll in the international program. Don't forget this is a great chance for you all to shine and have a bright future.

Thanks a million for your active participations throughout the five weeks we were together."

Group 5: "I have so many things to say to you all.

First of all, when I saw the differences between your presentations on November 17 and December 1, I felt so happy for you even though you didn't win. You may not have known that your group was the runner up on December 1. I thought that your group could win that day or would win some day. However, after that week, I could feel some depress from your group. I don't know why.

Then, your presentations on big businesses and AEC2012 confirmed my feelings as they seemed dry. Specifically, the ones on the Pizza Company and Singapore were informative, but sounded monotonous. All presenters had the same gestures like robots—almost all presenters looked at the PowerPoint slide, said something from memorization, and turned to read the notes. To me, these gestures meant that you didn't believe in the product or what you were presenting. If you presenters do not really believe in your products or information yourselves, how can you make others or the audiences buy your idea?

As a matter of fact, presentation does not simply mean that you just stand on the stage, telling the audiences what you have prepared. Instead, giving a good presentation involves both your good preparation and the audiences—sending and receiving messages [or two-way communication]. Your presentation must be attention-grabbing so that what you presented is meaningful to all your audiences. In particular, you all must remember that the presenter group can be strong if all team members stick together. Even though other groups may ignore your presentation, the other members in your group must be there for the group.

The transition between presentation parts, i.e. introduction, the body, and the conclusion, is also important. You should enable the audiences to be with you all the time. I think so many audiences got lost because of your flat monotone. Remember what you learned on the very first day of our class: "Creative ideas flourish best in a shop which preserves some spirit of fun. Nobody is in business for fun, but that does not mean there cannot be fun in business" (Pioneer American Advertising Executive Leo Burnett, 1891-1971). It doesn't mean that fun can make

you win in all situations. Instead, fun can make your audiences remember you and choose your group in the same way as they are going to use your products, services, or even ideas.

If you look at Group 3 which has never won or even got zero on December 8, it never gave up. All the team members just did their best and stuck to their group. They all always come to class no matter what. If your group is a company, how your company prospers if only five employees come to work.

It's worthwhile mentioning here that I deeply admire the five people showing up on December 15. It's all about spirit—the show must go on no matter what happens and no matter how many members come. I would like to give you five a huge ovation!

Last but not least, thanks for helping me with all the calculations in the classroom. I really appreciate it. Good luck!"

Group 6: "I don't know why your group has never won! Honestly speaking, I always enjoy your group presentation because it is always interesting, profound, and lively. All presenters smiled and were in good mood. All slides were systematically arranged. Many of you are highly fluent in English. I really like the presentation on December 1 when you told us how to make the flower basket in detail. Ending up your presentation with the Loy Kratong song in English was also wonderful. That day, your group ended up with fourth place, which is good enough, though. I also love the presentation on Vietnam. However, you should be well-prepared in terms of the song. I mean, if special effect is included, it should be done in an effective way. I think that when you all watch all four presentations, you will feel proud of yourselves just the same way like I felt. I hope that today will be your day. Try your best to do the test na kha ☺."

Group 7: "I have felt that your group is as outstanding as other groups. The triumph on the first day means that your group can organize ideas quickly. Speaking about a subject without advance time to prepare is called an "impromptu speech." Thus, your success that day means that you are quick thinkers and organizers. Also, your group sounded creative and happy when giving presentations. Thank you for your active participation. Importantly, I think all of you work best as a whole group. When separated, you can't work well. If you take your group as a company, I can see that your company will become prosperous in no time. Based on your latest performance, I think homosexuality becomes fashionable ☺. I hope that today (December 22) will be your day. Try your best to do the test na kha ☺. Good luck!"

Group 8: "I am so sorry for you that there is only one guy in your team. It's my entire fault. As I see your section in the afternoon, I may overlook something when dividing you all in smaller groups. Doing this enables me to deal with each group more effectively. Accidentally, you all share some quiet and neat personality type. The guy is also not quite wild. Based on these reserved characters, your presentation couldn't grasp the share of mind in our classroom despite your good and creative idea. I have seen how hard you've tried to present a real and lively presentation. I know that you all tried hard to convince the audiences to believe in what you are assigned to present. I can say that I have no negative comments on your presentations at all. It's all about personal character of each member in your team that matters. I hope that today (December 22) will be your day because quite students are usually good at tests. Try your best to do the test na kha ☺."

Group 9: "I think you prefer number 10 because your group usually got not over 11 points☺. I'm just kidding na kha. Let's get to discussion your presentation. There are so many distinctive features of your presentations. First of all, your presentations on Black Canyon Coffee and Malaysia showed that you cared about your outfits. Next, I love the way you drew pictures of Hajuku. The paintings within such a short time are amazing. I am always impressed especially by the way you looked into your topic in a profound fashion. Keep this remarkable ability and try to make your presentation livelier. However, sometimes, a good presentation may be not attention-grabbing or successful because presenters are too shy, quiet, or well-mannered. Good presenters should be able to spark public reaction and attract their attention from the first start until the last slide. Take my comments into your consideration; in the future, other groups can hardly beat yours. I hope that today (December 22), you all try your best to do the test na kha ☺. Good luck!"

Next is the vote data of Section 2, followed by the second author's comments.

Table 5.2 Number of Votes on the Best Presentation Group (Section 2)

Group	Team Members	Vote (Nov 17) (impromptu)	Vote (Dec 1) (primed)	Vote (Dec 8) (primed)	Vote (Dec 9) (primed)	Vote (Dec 15) (impromptu)	Total (5 weeks)	Test Score (Dec 22)	Grand Total
1	11	2	12	19	10	6	49	17.45	66.45
2	10	3	18	8	4	11	44	16.60	60.60
3	10	12	7	10	8	16	53	9.80	62.80
4	10	19	4	12	13	8	56	27.40	83.40
5	10	26	11	8	16	7	68	22.60	90.60
6	10	14	17	4	9	10	54	23.40	77.40
7	11	1	6	9	8	8	32	19.09	51.09
8	11	2	9	8	6	5	30	10.18	40.18
9	11	9	9	9	6	4	37	6.91	43.91
Total	94	88	93	87	80	75	423	17.05	

### Comments for Section 2

Group 1: "On December 1, the pictures of Nang Noppamas did not need to be those of the superstars or celebrities. Rather, to look more natural and original, your team members could use their own pictures. I mean, you didn't need to buy or rent some costumes, but you could use your digital camera together with your computer skills to make that happen. On December 8, your group won from the presentation on McDonald's. That day, all the members spoke fluently, while maintaining eye contact. I watched this videotaping file over three times. You should look into this videotape closely as well and use it as the example for your presentation in the future. It was perfect in terms of the presentation's systematic organization as well as the presenters' eye contact, gestures, and voice. For other presentations, your group is usually among the top three. I, thus, think that you all, with such strong determination, still have a chance for today's test. If all your group members come to class today, your group has a high chance to win. Good luck!"

Group 2: "On December 1, your group won the heart of your classmates with the idea of "debate." Presentation is a way to deliver messages in order to convey your thoughts or ideas. If your friends chose your presentation, it means they believe in your idea. In terms of business, the top votes mean the customers will buy your products and services. On December 8, your presentation on Mitsubishi Mirage even made me think that a team member was working for the company. It was an amazing presentation. Unfortunately, the McDonald's group outdid your group and won that day. There is always something better, isn't there? Not to be outdone, you should try harder in your written test, OK? Good luck!"

Group 3: "On December 1, your group did a great job in your primed presentation on Loy Kratong. I love fireworks and that could grasp the audiences' attention. However, the presentation on Pizza Hut impressed me a great deal with your outfit and all accessories. I think at this point you all overcame your fears and succeeded in at public speaking. In your Singaporean presentation, many of you seemed to read rather than speak. That's why your popularity dropped. I am glad that your group came back and won in the last competition. If you look at your videotape closely like I did, you will see how natural you were that day. You all looked enjoyable and happy with what you were doing. That's the heart of a good presentation. That is, if you want to make others believe in what you are saying, you have to believe in that thing first. I can feel that your naturalness and happiness lead you to the top position. I hope that you will win the written test on December 22. Good luck!"

Group 4: “On December 1, your group did a great job in your primed presentation on Loy Kratong. I love the girl gang and you didn’t need to use celebrities’ or superstars’ pictures. You all are so beautiful. Be proud of that na kha. For the presentation on Starbucks, I think you could do this better if you gave us some samples to try. I don’t mean that you need to bring the real Starbucks coffee into the room. Instead, you could make use of the coffee we’ll have at the coffee break. Do something extraordinary and brighten up the atmosphere. The presentation on Myanmar was also great. I love the bullet you made because we need it as a reminder only. I also love Tao (Somchai) and the iPad guy on December 15. I have a feeling that you all are getting more and more comfortable with your team members, classmates, public speaking, so on and so forth. I hope your group sticks together until the end of the course so that you can give a nicer and livelier presentation in other courses in the future. You’re a really good, cooperative group. Good luck!”

Group 5: “Congratulations on your two victories on November 17 and December 9. Even though your group didn’t win all the five competitions, your score was always among the top five. This made your group the lead in the second section of this batch (Batch#24). The triumph on the first day and the high score on the last day mean that your group can organize ideas quickly. Speaking about a subject without advance time to prepare is called an “impromptu speech.” Your success on December 9 also convinced me that your group was outstanding and unique. Your presentation was systematic and the way you gave your presentation was different from other groups. Big thanks should be given to Khun Jenpob who strummed the guitar. The introduction of music into your presentation made your presentation different from other groups as well. The beginning and the ending of your presentation, made by PM Pla, enabled others to recognize your team. That’s why your team won. Keep up your excellent and creative job! Good luck with your test on December 22!”

Group 6: “Honestly, I really like your Loy Kratong presentation on December 1. It was fantastic and unique. The PowerPoint slides were neatly invented and organized. The number of the group is located at the top left of each slide. Your group thus took third place. On December 8, despite your good presentation, your group became the last competitor with the KFC presentation. I can tell that the presentation was perfect. The outfit was well prepared. There was only one speaker/presenter who looked quite often at her note. It’s just the matter of destiny. The transition between slides or presenters is an important issue on December 9 when the second half of the group presented on Vietnam. The presentation was informative; however, it was dry and unexciting. I know you cared about the appearance, the topic, and the speech. Nonetheless, sometimes good presentation requires something more such as being lively, attention-grabbing, fun, etc.

To me, it is interesting that when the stage fright has gone, you all became more outgoing and confident. You took all tasks seriously and tried to do your best. Fun has gone! Remember what you learned on the very first day of our class: “Creative ideas flourish best in a shop which preserves some spirit of fun. Nobody is in business for fun, but that does not mean there cannot be fun in business” (Pioneer American Advertising Executive Leo Burnett, 1891-1971). Good luck with your test on December 22!”

Group 7: “Your Loy Kratong presentation on December 1 was quite interesting. I just had an impression that you should give the audience a theme. For instance, “Today, our group is going to talk about the Loy Kratong festival in Southeast Asia or Asia or a specific part of the world so that the audiences can guess which countries will be included. When I learnt that you would present on China, India, Vietnam and Thailand; I have no idea about the theme of your presentation. A good presentation does not mean that you incorporated all information and present it to the audience. In fact, a good presentation must be well organized. You should have told the audiences first about what will follow. That’s why the outline is important. There should also be proper transition from one slide or point to another.

For the presentations on December 8 and 9, your group could do them well. Again, the same problems occurred—it was too informative. Nobody can absorb such detailed information in just only ten minutes or so. It does not mean that I don’t appreciate your effort. I know and can feel how hard your group has tried. However, think about the audiences. Some yawn and others feel asleep. Your group does not have any stage fright, but you “tried too hard to be perfect.” Some slides even have too much information. Giving a good presentation only requires bullets for reminding presenters to make a point and/or for enabling audiences to follow your ideas. When you become too serious with the perfection of your presentation, you insert what you think is needed to say in your speech and slides. When your presentation is too informative, too detailed, too long, you can’t grasp your audiences’ attention and fun has gone. Remember what you learned on the very first day of our class: “Creative ideas flourish best in a shop which preserves some spirit of fun. Nobody is in business for fun, but that does not mean there cannot be fun in business” (Pioneer American Advertising Executive Leo Burnett, 1891-1971). That’s why I really love your presentation on December 15 when you all felt free to express yourselves and dance. Rewind all the videotaping records and you will feel the same. Good luck with your test on December 22!”

Group 8: “On December 1 when you gave your Loy Kratong presentation, it was risky. Rang Ngao is a hot movie for the time being; therefore, you must have thought of some comparison and contrast. I mean if you took risk, you had a high chance to lose and finally Group 5 won. I mean, it would be much better if you did something in your way, not a copy. Then, on December 8, you started your Nissan March presentation with Khun Ken. It’s OK until, to some point, Khun Ken looked at the note and all the rest presenters did the same thing. I don’t know why, but

your note-reading gestures seemed too much. You may say that other groups did the same thing; I would say that they did it in a trickier manner. I know that the topic may be unfamiliar to you, but you can't deny that automobile industries have played a significant role in our national development so far. This year, Honda gives a 10% bonus to its employees whereas Mitsubishi staff receives a 7% bonus. This is all about how businesses take part in developing (or destroying) our country. As business people, you should be aware of these mainstreams or current situations because all industries are interdependent.

The presentation on Cambodia was the same. Your star was nice with "kayom+name." At that moment, I thought your group might win. However, after the nice introduction, all presenters looked at the visual aids, kept reading, looked at the notes, etc. It may be possible to remember all information, but, at least, you must have some techniques to make the audiences feel that you are well-prepared. This automatically destroyed your nice introduction. On December 15, all members became lively again. If you all kept doing this since the first start, you could win. Be yourselves and don't try too hard next time. Good luck with your test on December 22!"

Group 9: "On December 1, some presenters used the notes. For the audiences to follow, there should have been a more systematic outline, e.g. (1) History of Loy Kratong sai → (2) Its features → (3) Tourist spots in Tak → (4) OTOP products → etc. For instance, along with the outline slide, you should tell them that today you were going to talk about history of Loy Kratong Sai in Tak. Then, you should explain how the festival is celebrated nowadays. You should also tell the audience that your presentation would include some tourist spots there. I think you need logical transitions from one point to another.

The presentation on the Mall was not as good as I had expected. Despite all your effort and enthusiasm, many presenters turned to the PowerPoint slides, took a look at the visual aids, kept reading, looked at the notes, etc. It may be impossible to remember all information, but, at least, you must have some techniques to make the audiences feel that you are well-prepared. This automatically destroyed your nice introduction or excellent visual aids. Later, on December 9, the presentation on Indonesia is quite interesting. The male host was quite fluent with his survival skills. The girl speaker was quite fluent until the point where she stumbled. The other male speaker also developed his personal survival skills in public speaking with the way he slightly and naturally twisted his body to read the PowerPoint slides. Nonetheless, he often shook his legs or feet. This is not nice when he is on stage. After all, I could say that the first three speakers passed. The last female kept looking at her notes on her lap and there was no way for her to do like the second male speaker. Now, you all see how important the stage management is, right? You all can imagine how the audiences would feel when the speakers kept reading.

On December 15, only six members came. Even though the presentation sounded lively, it could not grasp the audiences' attention. If you look at Group 3 which has never won, it never gave up. All the team members just did their best and stuck to their group no matter what happened. They all always come to class without any conditions. If your group is a company, how your company prospers if only six employees—only a half of the company—come to work. You must feel lonely and want to go back home as well. Colleagues at a company or your team members here are interdependent. If some take leaves, others usually take leaves too. That's natural. That's why many department stores must issue a rule that nobody takes holidays during the greeting seasons. Or, they may take turn on a yearly basis. You may think that it's just a period of time when they can sell goods and services. An underlying reason is that when one is allowed to leave, others will do the same. Stick to your group and try to attend all lessons and absorb all business concepts for your futuristic use. Don't miss a class without logical reason na kha. Good luck with your test on December 22!"

Please be noted that the Thai ending word "na kha" here is aimed to convey politeness and somewhat imposition.

Winning an activity, each group was rewarded some overseas snacks, e.g. Ritter chocolate from Germany, Arnott's Tim Tam chocolate bars from Australia, Julie's cheese sandwich from Malaysia, and Troberone from Switzerland. Twice during the course, Professor Ketkanda went to Japan on business, she bought Royce chocolate and Japanese KitKat for the winners. The reward for presentation depended on the prompt in-class votes. In this research study, the point accumulation strategy was used. The group which had the highest scores on the last day of class won received gift vouchers from Oishi Grand for 12 persons. The gift voucher cost around 650 baht each. Consequently, while the students practiced English speaking skills, they learned business strategies including point accumulation, overseas packaging, group loyalty, sense of belonging, and teamwork. The impact of rewards and games upon the students' learning progress, in-class interaction, and learning attitude is fully

discussed and reported by Chanseawrassamee (2012) and Carnevale (2013). All the video clips will be shown to the successive cohorts of students as examples.

## 5.2 Questionnaire

In the present study, both authors acted as the participatory co-researchers as they were the two instructors of the course. The co-authors' chief purpose of comparing the primed, or prepared, and impromptu, or unprepared, activities into their course was due to the need for spontaneity of modern business interactions. The co-authors wished to test whether or not the new approach fitted their students and could help them to learn English more effectively while wanting to know which type of activity is going to help their students to become more natural and fluent in business communication.

The respondents were asked to complete the questionnaire in either Thai or English as they wished. In the questionnaire, they were asked to select the most favorable way of learning English, specifically related to making an effective presentation in English. There are three fundamental questions for students to answer. First of all, they were asked to express their attitude towards the importance of the English language. Percentage of each answer was then calculated to find the respondents' overall preference. Open-ended questions for free expression of opinion were also provided for each student's free articulation. One hundred per cent of the participants were willing for further informal discussion.

## 5.3 Participant

On the last day of class, questionnaires were distributed, filled in, and returned from 147 students (male: 53; female: 94) out of the entire 194 in the "Intensive English" course provided at a postgraduate institution in Thailand. Their ages were between 20 and 41, with an average of 26.5 years old. Their fields of study varied from one to another because this is an MBA course, which, by nature, incorporated diverse fields of study comprising food science and technology, petrochemical & polymeric materials, weaving technology/ materials/ industrial chemistry/ computer science, pharmacy, biology, biotechnology, microbiology, chemical/ industrial/ electrical/ computer/telecommunication/ mechanical/ environmental/ IT/ civil/ control engineering, marketing/ agricultural/ international business, finance & banking, economics, economics & trade, accounting, Thai, Japanese, Chinese, English, commercial music, English communication, communication arts, mass communication, humanities, arts, digital arts, agricultural economics and resources, social administration, geology science, medical technology, botany, product design, radiological technology, environmental management, statistics, applied statistics, history, and public administration. To take this intensive course, all these students had passed a written examination and an interview at a famous postgraduate institute where this research was conducted. Hence, the participants were considered to have a medium to high degree of English proficiency.

As the "Intensive English" course was provided before the first semester began, all participants were new to each other and needed to learn to work both as an individual and as a group. This Intensive English course thus functioned as a starting point of these all newcomers to learn to know each other whilst learning English.

## 6. FINDINGS & DISCUSSIONS

This portion discloses the number of each option selected by each section. Table 6.1 shows such a number.

*Question 1: Currently, many Thais both from the government and private sectors are zopped to the full form of the AEC2015. They also feel that it is necessary for them to be fluent in both Thai and English so that they can communicate well with other ASEAN people and all global citizens. In particularly, Thai businessmen should be confident to join the AEC2015 with dignity and pride. As you are a graduate student in the Graduate School of Business Administration who will become a practitioner/businessperson in the very near future, how important do you think the English language is? (Choose only one option.)*

The participants were asked to rate the significance of English learning in a 5-likert scale style: *most, much, moderate, little, and not at all*. The findings of the overall participants' attitude were shown below.

Table 6.1 Students' Attitude toward Importance of English learning

Section	Gender	No.	5-Likert Scale Preference				
			Most	Much	Moderate	Little	Not at all
1	Male	27	22 (81.5%)	5 (18.5%)	0 (0%)	0 (0%)	0 (0%)
	Female	57	47 (82.5%)	10 (17.5%)	0 (0%)	0 (0%)	0 (0%)
Sub-total (1)		84	69 (82.1%)	15 (17.9%)	0 (0%)	0 (0%)	0 (0%)
2	Male	26	22 (84.6%)	4 (15.4%)	0 (0%)	0 (0%)	0 (0%)
	Female	37	29(78.4%)	8 (21.6%)	0 (0%)	0 (0%)	0 (0%)
Sub-total (2)		63	51 (81.0%)	12 (19.0%)	0 (0%)	0 (0%)	0 (0%)
Total		147	120 (81.6%)	27 (18.4%)	0 (0%)	0 (0%)	0 (0%)

In Table 6.1 above, most students saw the importance of English learning at the “most” and “much” degree with 81.6% and 18.4%, respectively. No students saw English study as “moderately,” “little,” or “not important at all.” Males and females demonstrated the similar percentage of their attitude toward English—in the region of 80% for the “most” level and 20% for the “much” one. This means that all students—whether male or female—perceived the importance of learning to use English in the modern world at a high degree alike.

Next, to find whether the respondents liked the task-based approach used in the classroom or not, the respondents were asked about their attitude toward activities—i.e., primed presentation and impromptu presentation—introduced to the classroom. There were only two students who disliked the presentation activities.

Question 2: *How do you feel about task-based approach the two instructors employed in this class; that is all English-language presentations provided. (Choose only one option).*

Table 6.2 Students' Attitude toward Task-based Language Learning Approach

Section	Preference	No.	Percentage
1	Like	83	98.8%
	Dislike	1	1.2%
	Sub-total (1)	84	100%
2	Like	62	98.4%
	Dislike	1	1.6%
	Sub-total (2)	63	100%
1 + 2	Like	145	98.6%
	Dislike	2	1.4%
	Total	147	100%

At this stage, as the number is quite in common, the co-authors did not divide the number in terms of gender. In the questionnaire, the participants expressed that the majority of them felt happy with the task-based learning approach. This result argued with the belief that students do not like task-based language learning approach; for example, instructors who used this approach were lazy (Chanseawrassamee, 2012). The findings also confirmed that the majority of students felt happy with the oral activities. Those who have a negative attitude toward this task-based language learning approach show some awkwardness toward presentations that they do not want to stand in front of the class, as follows:

I like writing activities more because I feel shy when standing in front of many people.

I don't like oral presentation because I think I can use writing in my work than speaking. However, I want it to be an individual task rather than a group one.

As the world has changed and Thais have to become more outgoing and make friends with people of different ethnicities, the co-authors think that there will be fewer and fewer shy students. What Lohsiwanont (2001) found in the previous decade seemed to be outdated with the upcoming regional and global integration. This is an obvious change when, through time, the number of shy students has become fewer and fewer.

To research more deeply into the type of oral presentation the participants prefer between primed and impromptu presentation. Next is the result.

Question 3: *If you like the task-based language learning approach provided to you, please indicate what type of tasks you like the best. (Choose only one option along with your reason.)*

Table 6.3 Students' Attitude toward Preparedness and Unpreparedness Presentation

Section	Preference	No.	Percentage
1	Primed presentation	52	62.7%
	Impromptu presentation	31	37.3%
	Sub-total (1)	83	100%
2	Primed presentation	49	79.0%
	Impromptu presentation	13	21.0%
	Sub-total (2)	62	100%
1 + 2	Primed presentation	101	69.7%
	Impromptu presentation	44	30.3%
	Total	145	100%

The majority of participants in both groups (70.1%) still prefer the primed or prepared presentation, while the majority prefers the impromptu. Their additional comments from the open-ended questions will best explain this phenomenon. Only some unique comments will be displayed. The repetitive or similar ones will be skipped.

#### The "Primed Presentation Preference" Group

I like the primed presentation because it's a way to practice teamwork, share thoughts, build up creativity, and perform self-preparation. It's an opportunity to learn to shore responsibility.

My classmates have different level of English proficiency, so primed presentation allows them to prepare themselves for betterment and great confidence in their presentation. However, after students gain more confidence and speaking improvement, there should be more than 2-3 presentations.

Preparing before class made me feel more confident because I have some time to review my English knowledge and search for information. Preparation and rehearsals made perfect.

Primed presentation gives me a chance to practice speaking English and become more expressive.

Rehearsals allow me to speak more smoothly and fluently in front of the class. In the next presentation, we can improve ourselves and find our weaknesses for the better presentation.

The colleague team can improve the presentation in terms of research, preparation, conclusion, precision, and completion.

This approach allows my team to present in the most effective and productive manner.

Presentation with competition alerts all students. Data collection for the presentation also enables us to learn to find the main idea and attract the audiences. These together help to create a lively and fun class.

This activity is used quite often at work.

I like the topic on 10 member countries of AEC because it stimulates our learning and it enables us to know how important AEC is to us.

For outside-class activity, it's a way to make friends with other members in my group.

Creativity, freedom in thinking, group unity, and familiarity.

Because I'm not good at English, preparation before the class begins is really a must for gradual self-development. Also, primed presentation allows me to prepare some materials necessary for the presentation.

It's a way to give a good or even perfect presentation because there is more time. Preparation helps to convey key message to the audiences with greater efficiency.

It's not only a way to practice English, but personality, confidence, and leadership. Most importantly, we learn how apply the theory into real-working situations.

Oral presentation can be applied to my work. However, there should be more academic contents because the contents in the book *English for Business Studies* are very interesting.

In brief, students who prefer "primed" presentation feel that this type of activity helps them to give a more systematic presentation. They can make friends and develop closer relationship alongside learning. They also learn how to share and take responsibility, familiarize themselves with the new school rules, and practice presentation skills. In terms of language, they also learn how to pronounce English words more correctly and become more confident in public speaking.

Around 30% love to present without preparation outside class before the presentation date. This group of students is confident in their speech given. It is quite interesting for the co-authors to know that young Thai students are becoming more and more outgoing unlike what Lohsiwanont (2001) found a decade ago. The greater wish to use English in a more natural way like this also reflects the students' achievement of fluency—the ability of a person to speak without excessive hesitation (Nunan, 1999).

### The "Impromptu Presentation Preference" Group

I like the impromptu presentation because it's a way to practice and create our work with time pressure as a team.

I don't like homework. I like unprepared presentation. It's exciting.

It's challenging my ability. It's a way to practice working under pressure and within time constraint.

It's a just relaxing task and activity for me.

I love to solve immediate problems. Present problem-solving allows me to develop myself in various aspects.

The primed presentation depends on memorization rather than talking. I think impromptu speech can help me upgrade my speaking skills more.

This allows me to speak without concern of preparation, formality, and script. Speaking naturally makes me feel less anxious.

A chance to apply my knowledge, to compare myself to my peers, and learn new words. There should be no scores.

It's a good way to stimulate prompt ideas.

It's a test of basic knowledge in many aspects. It's also a brainstorming session of many learners.

Public speaking is a necessary skill for businesspeople. To speak in front of the class is a way to create courage which is an important characteristic of a leader in the future.

It's a good way to make friends. In speedy and immediate situations and without preparation, we can learn others' personality traits quite easily.

To sum up, students who prefer "impromptu" presentation are of opinion that this type of activity helps them to become more spontaneous. They can simultaneously develop the skills of immediate response or problem-solving and become quick thinkers. Many mentioned the significance of excitement and knowledge application in real time. Importantly, they recognize the meaning of the saying, "A friend in need is a friend in deed," as a respondent explicitly says, "It's a good way to make friends. In speedy and immediate situations and without preparation, we can learn others' personality traits quite easily." Of course, a friend who gives you help when you need it is a true friend.

## 7. CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

In conclusion, the globalization via the upcoming form of AEC 2015 has drastically changed the personality traits of young Thai learners as Lohsiwanont (2001) found a decade ago. In this current study, there is only one student who states that she is shy. Even though the majority of respondents are still satisfied with the primed presentation, there is a significant tendency to change to the impromptu ones. The former presentation task is proved to enable students to prepare their presentation for perfection in terms of knowledge, research, and pronunciation, while the latter preference reveals that when students are more proficient in English, they become more excited to go up to another stage of learning—analytical thinking in English and immediate problem-solving. However, it is still inconclusive that these activities will definitely help to make these new generations to become balanced bilinguals as Li (2000) has defined. At this stage, it can be claimed only that these task-based learning activities help to drive these learners to become balanced bilinguals. There is no complaint about the fairness of the voting system because all activities and judgments are made in class. The test scores on the last day just add more excitement to the final results of which group is going to win. Overall, like what specialists in the field of task-based language learning asserted (see Lefrancois, 1988; Tarone & Parrish, 1994; Nunan, 1999; Richards & Rodgers, 2001; Shin, 2003; Burt, Peyton, & Adams, 2003; for example), this study has shown that the task-based approach succeeded in encouraging these young adult learners to study English with happiness and greater efficiency, whereby students who undergo such course can have a high chance of becoming balanced bilinguals.

The study still has some gaps to fill. As it is an intensive and non-credit course, the final may not tell advancement that much. If there is a pre- and post-test in a more systematical way, the outcome may be better compared and analyzed numerically and statistically. Because the comments were distributed to both sections on the last day of class, there are no feedbacks on such instructional opinion. The findings from this study thus can give the enthusiasm of MBA students toward the task-based language learning approach in terms of preference only. In the next research, researchers can go deeper into the feedbacks and so on and so forth. The limitation of this study also falls on the fields of study. At this leading postgraduate institute, MBA students usually have higher English proficiency than those of other graduate schools as Leong & Koh (2012) pinpointed. If all schools of students are studied, there will be a more fruitful

discussion on different fields of study in terms of comparison and contrast. The differences between genders of students may be also another interesting project. This research study is just a departure for business English classrooms in the 21<sup>st</sup> century.

## 8. NOTES

The co-authors are grateful to Associate Professor Dr. Boonchai Hongcharu and the Graduate School of Business Administration for academic freedom which enables them to create non-threatening and lively environs for all their students who will be the futuristic national, regional, and global villagers. Heartfelt appreciations also go to the *Proceedings of the Fifth Asian Conference on Education (ACE 2013)* taking place in Osaka, Japan during October 23-27, 2013. Full responsibility for any remaining shortcomings is entirely their own.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, serif font. The logo is surrounded by a large, faint, circular graphic element composed of two overlapping arcs: a red one on the left and a blue one on the right, creating a partial circle around the text.

## 9. REFERENCES

- Association of Southeast Asian Nations (ASEAN). (2009, April). *Roadmap for an ASEAN community 2009-2015*. Jakarta: ASEAN Secretariat.
- Bialystok, E., Craik, F. I. M., Klein, R., & Viswanathan, M. (2004). Bilingualism, aging, and cognitive control: Evidence from the Simon task. *Psychology and Aging, 19*(2), 290-303.
- Burt, M., Peyton J. K., & Adams, R. (2003). *Reading and adult English language learners: a review of the research*. USA: Center for Applied Linguistics.
- Carnevale, A. (2013). Six games to motivate writing students. *TESOL Connections*, June, pp. 1-3.
- Chanseawrassamee, S. (2007). Bilingual development of two Thai brothers during their sojourn in the U.S. (Unpublished doctoral dissertation, University of Maryland, Baltimore County).
- Chanseawrassamee, S. (2012). Teaching Adult Learners English Through a Variety of Activities: Perception on Games and Rewards. *US-China Foreign Language, 10*(7, July), pp. 1355-1374. ISSN 1539-8080.
- Chanseawrassamee, S., & Shin, S. J. (2009). Participant- and Discourse-related Code-switching by Thai-English Bilingual Adolescents, *Multilingua - Journal of Cross-Cultural and Interlanguage Communication*. Volume 28, Issue 1, Pages 45–78, ISSN (Online) 1613-3684, ISSN (Print) 0167-8507, DOI: 10.1515/mult.2009.003 /February/2009).
- Crandall, J. (1979). *Language in education: Theory & practice (adult vocational ESL)*. USA: Center for Applied Linguistics (CAL).
- Diebold, A. R. (1964). Incipient bilingualism. In D. Hymes (Ed.), *Language in culture and society* (pp. 495-508). New York: Harper & Row.
- Fasold, R. (1987). *The sociolinguistics of society: Introduction to sociolinguistics volume 1*. Malden, Massachusetts: Blackwell Publisher.
- Fishman, J. A. (1972). Domains and the relationship between micro- and macrosociolinguistics. In J. J. Gumperz & D. Hymes (Eds.), *Directions in sociolinguistics: The ethnography of communication* (pp. 435-453). New York: Holt, Rinehart and Winston Inc.
- Fishman, J. A. (1991/1997). *Reversing Language Shift*. UK: Multilingual Matters Ltd.
- Frendo, E. (2005). *How to teach business English*. England: Pearson Education Limited.
- Fry, G. W. (2012, May 14). Preparing for the AEC Era. The Nation. Retrieved October 18, 2013, from <http://www.nationmultimedia.com/opinion/Preparing-for-the-AEC-Era-30181887.html>
- Genesee, F. (1998). A case study of multilingual education in Canada. In J. Cenoz & F. Genesee (Eds.), *Beyond bilingualism: Multilingualism and multilingual education* (pp. 243-258). Clevedon: Multilingual Matters.
- Grosjean, F. (1982). *Life with two languages: An introduction to bilingualism*. Cambridge, Massachusetts: Harvard University Press.
- Huffman, F. E. (1973). Thai and Cambodian – A case study of syntactic borrowing? *Journal of the American Oriental Society, 93*(4), October – December, 488-509.
- Jaturongkachoke, K. & Chanseawrassamee, S. (2013a). Powerful impact of YouTube upon presentation skill development of MBA students. *Journal of Modern Education Review*, Volume 3 (1), January, (pp. 30-47). Its preliminary version was also posted in the *Book of Proceedings of the Fourth Asian Conference on Education (ACE 2012)*. Osaka, Japan, October 24-28, pp. 905-926.

- Jaturongkachoke, K. & Chanseawrassamee, S. (2013b). How to Teach Academic Reading More Effectively: Learners' Remarks. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 10(4, May. – June), pp. 23-35. e-ISSN: 2279-0837, p-ISSN: 2279-0845. www.Iosrjournals.Org www.iosrjournals.org.
- Krashen, S. (1998). Heritage language development: Some practical arguments. In S. Krashen, L. Tse & J. Mcquillan (Eds.), *Heritage language development* (pp. 3-13). Culver City, CA: Language Education Associates.
- Lefrancois, G. R. (1988). *Psychology for teaching*. California: Wadsworth Publishing Company.
- Leong, L.M. & Koh, C.L. (2012). Quality of online courses from the perspective of academic staff. *Proceedings of the Fourth Asian Conference on Education (ACE 2012)*. Osaka, Japan, October 24-28.
- Li, W. (1998). The 'why' and 'how' questions in the analysis of conversational code-switching. In P. Auer (Ed.), *Code-switching in conversation: Language, interaction, and identity* (pp. 156-176). London: Routledge.
- Li, W. (2000). Dimensions of bilingualism. In W. Li (Ed.), *The bilingualism reader* (pp. 3-25). New York: Routledge.
- Lohsiwanont, K. (2001). *Cultural adaptation of international students: Describing the learning experiences of the two groups of Thai students at a U.S. university*. Unpublished doctoral dissertation, Oklahoma University.
- Lund, K., & Pedersen, M. S. (2001). What is good language teaching?. *Sprogforum*, 19, 62-65.
- Mackenzie, I. (2010). *English for Business Studies: A Course for Business Studies and Economics Students*, third edition. Cambridge: Cambridge University Press.
- Mackey, W. F. (2000). The description of bilingualism. In W. Li (Ed.), *The bilingualism reader* (pp. 26-54). New York: Routledge.
- Milroy, L., & Muysken, P. (1995). *One speaker, two languages: Cross-disciplinary perspectives on code-switching*. Cambridge: Cambridge University Press.
- Nunan, D. (1999). *Second language teaching & learning*. Massachusetts: Heinle & Heinle Publishers.
- O'Reilly, M. R. (1993). *The peaceable classroom, English Department, University of St. Thomas University*. Minnesota: Boynton/Cook.
- Office of the Education Council, Ministry of Education, Kingdom of Thailand. (2004). *Education in Thailand 2004*. Bangkok: Amarin Printing and Publishing.
- Office of the Educational Council, Ministry of Education, Kingdom of Thailand. (2011). *Strategy in production and developing workforce of the nation in the second decade of education reform B.E. 2009-2018*. Bangkok: Office of the Educational Council.
- Office of the National Economic and Social Development Board. (2013). *The Eleventh National Economic and Social Development Plan (2012-2016)*. Bangkok: Office of the Prime Minister.
- Paulsen, M. B., & Feldman, K. A. (1995). Taking teaching seriously: Meeting the challenge of instructional improvement. *ASHE-ERIC higher education report No. 2, graduate school of education and human development*. Washington D.C.: The George Washington University.
- Pufahl, I., Rhodes, N.C., & Christian, D. (2001, September). What we can learn from foreign language teaching in other countries. *ERIC Digest*: EDO-FL-01-06.
- Ramirez, J. D. (1992). Executive summary. *Bilingual Research Journal*, 16(1&2), 1-62.

Richards, J. C., & Rodgers, T. S. (2001). *Approaches and methods in language teaching* (2nd ed.). Cambridge: Cambridge University Press.

Romaine, S. (1995). *Bilingualism* (2<sup>nd</sup> ed.). Oxford, UK: Blackwell.

Shin, S. J. (2003, January). The reflective L2 writing teacher. *ELT Journal*, 57(1), 3-10.

Shin, S. J. (2005). *Developing in two languages: Korean children in America*. Clevedon, UK: Multilingual Matters Ltd.

Shin, S.J. (2012). *Bilingualism in Schools and Society: Language, Identity, and Policy*. New York and London: Routledge.

Tarone, E. & Parrish, B. Task-related variation in interlanguage: The case of articles. In H. D. Brown & S. T. Gonzo (Eds.), *Readings on second language acquisition* (pp. 283-305). NJ: Prentice Hall Regents. (Reprinted from *Language Learning*, Vol. 38, pp. 21-44, 1988).

Tucker, G. R. (1998). A global perspective on multilingualism and multilingual education. In J. Cenoz & F. Genesee (Eds.), *Beyond bilingualism: Multilingualism and multilingual education* (pp. 3-15). Clevedon: Multilingual Matters.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The text is enclosed within a large, faint, light blue circular arc that is partially visible at the bottom and sides of the page. There are also some faint, overlapping red and blue curved lines in the background.

*A Case Study in Complexity and Accuracy Development in ESL Academic Writing: A Dynamic Perspective*

Rosmawati

The University of Sydney, Australia

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Abstract

This paper reports on a case study on the development of complexity and accuracy in an advanced English learner's academic writing over one academic semester. Studies on complexity and accuracy measures in second language (L2) development have shown diversified results. While some studies confirmed the Trade-off hypothesis prediction on the trade-off relationship between complexity and accuracy (Skehan and Foster, 1999, Skehan, 2009, Skehan and Foster, 2007), other studies demonstrated a joint-rise in both measures (Robinson, 2001, Robinson, 2003) due to cognitive demands of the task, hence advocating the Cognition hypothesis. Some other studies found no significant interactions between the two measures (Gunnarson, 2012, Levkina and Gilabert, 2012) and doubted the previous two hypotheses. Given the divergent results, there is a need to look into the nature of interactions between these two measures and unveil their developmental process to offer more insights into L2 writing development.

This study addresses this gap by exploring the dynamic unfolding of complexity and accuracy development in an advanced L2 learner's academic writing during her postgraduate study in Australia. The results suggested that complexity and accuracy measures displayed the characteristics of a dynamic system and their development was highly variable and non-linear. A moderate negative association was detected in the interaction between complexity and accuracy though not to a statistically significant level. The findings suggested that the developmental patterns of both the measures and the learner are highly dynamic and idiosyncratic. However, more longitudinal data are needed to explore the nature of interactions between complexity and accuracy in L2 development.

**Keywords:** complexity, accuracy, L2 academic writing, dynamic development, interaction

## Introduction

In the attempt to gain insights into language acquisition and its subsequent development, researchers have been devising tools and measures to tap into learners' progress and gauge their development. The need for such means was first voiced out in the early 70s. Along with the expanding interest in the vast growing developmental studies, the search for an index to work as a standard yardstick to evaluate second language (L2) learners' progress was attempted (Wolfe-Quintero et al., 1998). In the early stage, length-based measures were borrowed from the field of first language (L1) acquisition to meet this demand and have since been widely adopted in the Second Language Acquisition (SLA) research enterprise, the most common ones being the mean length of particular structures (Norris and Ortega, 2009). Although these length-based measures are useful to some extent, they are not free of problems. Beginner L2 learners, for example, rely much on rote-learned formulaic chunks (Myles, 2012); therefore, perceived longer production of such structures results in an increase in length-based measures and gives false impressions of progress. Therefore, as a remedy, Larsen-Freeman (1976, 1978, Larsen-Freeman, 1977) proposed an Index of Development and this index was further operationalized as measures of Complexity, Accuracy, and Fluency (CAF).

*Complexity* measures “the extent to which the language produced in performing at task is elaborate and varied” (Ellis, 2003), while *accuracy* measures “the degree of conformity to certain norms” (Pallotti, 2009) and reflects “the conformity of second language knowledge to the target language norms” (Wolfe-Quintero et al., 1998). *Fluency*, on the other hand, gauges “how comfortable the second language [learner] is with producing [the target] language” (Wolfe-Quintero et al., 1998). Therefore, complexity taps into the learners' language knowledge while accuracy measures the appropriateness of language use and fluency the automaticity of language use. These three measures, as a triad, gauge learners' development.

## Literature Review

One way of understanding how the L2 development unfolds is by tracking the development of CAF traits in the L2 learners' production (Skehan, 2009, Pallotti, 2009, Vyatkina, 2012). It is suggested that the development of these measures, along with their interactions, comprehensively captures the multidimensional facets of L2 development and is hence a measure of progress in language learning (Housen and Kuiken, 2009, Housen et al., 2012).

Researchers within the SLA enterprise have long taken interest in unveiling the nature of relationships among these three measures. Hypotheses have been put forward to explain and, to a certain degree, predict the interactions in the CAF triad. Among them, there are two relatively more influential hypotheses; they are: *Trade-Off Hypothesis* and *Cognition Hypothesis*.

As the name suggests, *Trade-off hypothesis* proposes trade-off relations among the CAF components due to the limited attentional capacity and working memory (Skehan, 2009, Skehan and Foster, 2012, Skehan and Foster, 1999, Skehan and Foster, 2007). That is to say that an increase of performance in one area, say complexity for example, is at the expense of the others, that is accuracy and/or fluency. In other words, directing attention to one aspect of performance may lead to an increase in that particular area but, at the same time, results in a lower performance in other aspects; hence the trade-off. As the result of such relationships, a rise of all the three components at the same time is not feasible although a joint rise of two is possible at the expense of another (Skehan and Foster, 2012).

On the other hand, *Cognition hypothesis* argues that given the possible simultaneous access to several attentional resources, higher task complexity may lead to concurrent rise in both complexity and accuracy. The argument was conceived by Robinson (2001) and one of the basic tenets in his hypothesis is that manipulating task difficulty will increase the cognitive demands on the learners and result in elevated performance in both complexity and accuracy (Robinson, 2003).

Both hypotheses propose different explanations to account for the nature of the interactions among the components of the CAF triad; the main difference being the underpinning reason to explain the perceived joint rise of complexity and accuracy. While Robinson maintains that the simultaneous increase of both measures corresponds to task difficulty level, Skehan (2009) argues against this proposition and asserts that the observed elevated performance in the two measures reflects the selective effects of task characteristics (Housen and Kuiken, 2009, Skehan and Foster, 2012). Both hypotheses defend their own ground and refute the other party's stance.

This debate on the exact nature of the interactions in the CAF triad carries on into and is reflected in empirical studies. Since the 70's, research has been designed and studies attempted not only to observe but also to tease out these interactions. Given the scope of this paper, only the more recent studies are discussed here. For a synthesis of previous empirical findings, see Norris and Ortega (2009), Wolfe-Quintero et al. (1998), Ortega (2003).

Ferrari's (2012) study found traces of trade-off effects between complexity and accuracy in a certain time period in her participants' longitudinal development. Such interactions were also confirmed in Myles (2012), not only among the CAF dimensions but also between the triad and the learners' communicative adequacy. Both studies provided empirical evidence to support the Trade-off hypothesis to a certain extent. Skehan and Foster (2012) added that the hypothesis, coupled with the selective effect of task characteristics, was sufficient to explain the interactions between complexity and accuracy measures, independent of task difficulty as purported by Robinson's Cognition hypothesis. Kuiken and Vedder's (2012) study further augmented this stance and concluded that no evidence was found in their study

to show the effects of task cognitive difficulty on syntactic and lexical complexity although an increase in accuracy was detected. Further examination on the data showed that the rise of accuracy level reflected the fact that the learners were directing their attention to forms and hence fewer lexical errors.

Gunnarson (2012), on the other hand, found no competition between complexity and accuracy and pointed out that there was also no significant interactions detected between syntactic complexity and fluency in her study. The results of her study challenged the propositions advocated by the Trade-off hypothesis. More doubts were put forward by Levkina and Gilabert (2012) and their study showed the combined effect of task complexity and planning time on fluency (negative effect) and lexical complexity (positive effect) but no significant change was detected in both syntactical complexity and accuracy. This study questioned both the Trade-off hypothesis and the Cognition hypothesis as none of them “can satisfactorily explain” their findings (Levkina and Gilabert, 2012).

Given the multidimensional facets of L2 development, it is not surprising to find such divergent results. In fact, linear relationships among the CAF components and their simple correspondence to a given condition/task are not to be expected from such a multi-componential and dynamical system (Housen et al., 2012). With regard to this, Norris and Ortega (2009) raised an ontological issue concerning the way CAF triad is perceived and operationalized. Pointing at the contemporary practice, they suggested that there is “a lack of attention to CAF as a dynamic and interrelated set of constantly changing subsystems” (Norris and Ortega, 2009) and called for more longitudinal observations if the nature of the CAF development and interactions were to be explored. Similar concern was voiced by Larsen-Freeman (2009) and Dynamic Systems Theory was proposed as a suitable, and possibly the most potentially fruitful, framework within which CAF studies could be attempted and CAF components treated as dynamic (sub)systems.

In its essence, Dynamic Systems Theory (DST) is a theory about how dynamic system changes and develops over time and how complexity emerges out of such behaviour (de Bot, 2008, de Bot et al., 2007, Larsen-Freeman, 2002, van Geert, 2008, de Bot et al., 2005b). Originated in the field of natural sciences, DST was originally developed to find explanation to account for systems that “seem to be chaotic and self-organising” (de Bot et al., 2005a). Though in its early development DST was a purely mathematical approach, its later stages offer practical tools and perspectives into researching the process of *change* (de Bot, 2008). Its current application includes a great diversity of fields ranging from meteorology for weather forecast to ornithology for explaining the bird flock flight patterns, and also across disciplines like economics and laws (Kellert, 2008).

The integration of DST into the SLA research enterprise introduces novel perspectives into the field. Instead of the popular way of looking for causal

relationships between affective factors and learning outcomes and establishing a neat pattern to account for the acquisition process in general, DST suggests a more coherent view on the developmental process itself. Development is viewed a dynamic and non-linear process, coloured by both progress and regress, and its trajectory displays a great amount of variability (Larsen-Freeman, 1997, Verspoor and Behrens, 2011). Language acquisition is one such developmental process in which the dynamic interactions among its variables result in the complexity of the system's behaviour.

Given the dynamic nature of the system and all its highly interconnected components, the outcome of their interactions is bound to be non-linear too, i.e., they change over time. The divergent results evidenced so far are in fact snapshots of separate moments along the development and hence the diversity. Such discrete pictures of different time junctures, however, are not sufficient to capture the dynamism. In order to gain more insights into the nature of the systems and its development, it is essential to attempt more longitudinal observations (van Dijk et al., 2011, Larsen-Freeman and Cameron, 2008, Norris and Ortega, 2009).

Following this line of suggestions, some studies have been endeavoured within the DST framework and the most recent ones are discussed here. Verspoor et al. (2008) did a longitudinal study on an advanced learner of English for a period of 3 years and collected 18 academic writing samples from this participants. They then proceeded to look for the relationship between two measures of complexity, i.e. vocabulary and sentence complexity measures. The findings of this study confirmed that the two measures are supporting each other in their development: they are, in dynamic parlance, *connected growers*.

Another longitudinal study of equal observation period length is Spoelman and Verspoor's (2010) study which looked into the interaction between accuracy rates and complexity measures in a Dutch student learning Finnish via academic setting for a period of 3 years. They concluded that accuracy rates fluctuated considerably in early stages but soon settled down as the system relaxed. However, they also pointed out that interaction between accuracy and complexity measures changed over time, confirming the DST proposition about the system's behaviour.

Larsen-Freeman's (2006) study also supported the DST claim about high intra- and inter- individual variability as she found that each participant in her study showed different developmental trajectories although the overall group average of CAF measures showed a general increasing trend over time. However, this study was designed as a repeated-task experiment and used the same task over the six-month observation period. Therefore, one may doubt whether the progress at the end of the study resulted from familiarity with the task through repetition or reflected genuine development.

Similar results were also found in Vyatkina (2012) in which a general upward trend in the development of complexity measures in L2 writing was detected along with significant variability between individual and cross-sectional data. Using developmental profiling techniques, she pursued further to demonstrate how each participant followed different developmental paths and displayed different developmental patterns (Vyatkina, 2013).

Polat and Kim (2013) expanded the discussion to include two out of the three components in the CAF triad, tracing the dynamics of complexity and accuracy development of an immigrant in the USA. In this study, it was found that syntactic complexity and lexical diversity developed well in untutored situation which was the context of this study while accuracy seemed very constrained. They concluded that the participant's interlanguage was highly variable but was perhaps nested within a stable state. Polat and Kim's study was, in fact as claimed, one of the first to attempt a longitudinal observation on naturalistic learning. More such studies were called for in order to unveil the nature of L2 development, and more specifically, CAF development and interactions.

This current study addresses this need. Designed as a case study, the current study explores the dynamic unfolding of complexity and accuracy development in an advanced English learner's academic writing over one academic semester during her postgraduate study in Australia. Along with the rapid growth of global education and the corresponding demand on English academic writing skill, there is an urgent need to look into and gain more understanding of how L2 academic writing develops. This study looks for developmental transitions and identifies interactional pattern(s) between the two measures (complexity and accuracy) over time by applying variability analyses within DST framework (van Dijk and van Geert, 2007). This paper then contributes towards unveiling the dynamic relationship between these two measures and advancing our understanding of L2 writing development.

### **Research Questions**

This study was designed to answer the following two research questions:

1. What is the nature of the development of complexity and accuracy measures in L2 academic writing?
2. How do the two measures interact over time during the one academic semester observation period?

### **Research Design**

This paper is a single-case quantitative study based on longitudinal observation of a participant's written production over one academic semester. Although the most

common association of a case study label is to qualitative studies, this paper is in fact a quantitative approach.

### **Participant and Setting**

The participant in this study is Mai (pseudonym), a 32 year-old female Japanese student who came to Australia for the first time to study at a postgraduate level in an Australian university. Prior to her arrival in Australia, she had been studying English for about 15 years. As required for program admission, she took a standardized English test (i.e. IELTS) prior to commencing her study and achieved a score that was equivalent to B2 level on a CEFR scale, hence an advanced learner.

### **Data**

This study adopted a *time-series* approach to follow the development of complexity and accuracy in the written output (academic essays) of the participant over one academic semester. These essays were the assignments for the courses she was enrolled in. These assignments abided by the guidelines set up by the faculty and the course coordinator. Following their submission, the copies of those assignments were sent to the researcher and served as the data for this study.

The data for this study were, therefore, the academic assignments Mai wrote and submitted for the courses she was enrolled in during the first semester. The rationale for choosing to collect the data from the very first semester was underpinned by the assumption within DST framework that sudden proliferation of both input and use may set the whole (learning) system into chaos and hence resulting in high degree of variability which benchmarks the onset of transitional stages that eventually lead to development. DST maintains that any dynamic system has the potentials to fall into chaos and then restructures; therefore, contrary to the common belief, “even for an advanced learner, the system can be far from stable” (Verspoor et al., 2008). Therefore, high degree of variability was expected in this study as it would then offer the key information to unveil the nature of development (van Dijk et al., 2011, de Bot and Larsen-Freeman, 2011).

### **Sampling and Coding**

The data were then coded for complexity and accuracy. However, as some complexity measures, including those adopted in this study, are very sensitive to text length and correlate negatively with word count (Wolfe-Quintero et al., 1998, Spoelman and Verspoor, 2010), the text length in this study was controlled. A purposive sampling of approximately 200 words ( $\pm 10\%$  of the original text) was conducted to filter out paragraphs with dense paraphrases and quotations as these may give a false impression of the learner’s performance. As the result of this purposive sampling, a total of 10 pieces of sample texts were obtained. These sample texts were then submitted to two coders for coding.

Firstly, the data were coded for sentence types: simple (Si), compound (Co), complex (Cx) and compound-complex (CoCx) sentences. The results were then tallied. Then, instead of employing the commonly used indices like MLT (Mean Length of T-units) or MLS (Mean Length of Sentences) and DepC (Dependent Clause for subordination amount) to measure complexity, this study adopted another type of measure. As Verspoor et al. (2008) pointed out, separate indices do not capture the entire degree of complexity because “they do not bring to light additional complex construction such as longer NPs or non-finite constructions” especially in the case of advanced learners. Following their suggestion, this study employed **W/FV** (word per finite verb) ratio to calculate the overall degree of sentence complexity. Higher indices mean the more complex the sentences are.

To calculate accuracy, however, the errors detected in the sample texts were coded as global (GE: errors at grammar and style levels), local (LE: errors at word, lexical, and lexico-grammatical levels), and mechanical errors (ME: errors at form/spelling and punctuation level). Their occurrences were then tallied. Following that, the number of error free clauses (EFC) were counted and then compared to the total number of clauses (C) to obtain the **EFC/C** ratio. Such a proportion index of accurate production is highly recommended as it tells “the true story in measuring the accuracy of the learners’ written production” (Jiang, 2013).

### **Inter-coder Reliability**

As mentioned in the previous section, the sample texts were submitted to two coders (the author as coder 1, and an English teacher with more than 8 years of teaching experience as coder 2 and was given training sessions prior to doing the coding). To ensure inter-coder reliability, a positive overlap ratio (POR) was calculated instead of the more commonly used Pearson’s correlation R value. The decision to employ POR was statistically motivated. What Pearson’s R value measures is whether or not the total number of confirmed cases in each sample picked by coder 1 increases (or decreases) in the same fashion as the total number picked by coder 2. It gives in a high value as long as the fashion of increase (or decrease) confirms each other although the two coders may actually pick totally different cases. Hence, it is not a genuine reflection of agreement or reliability. To measure reliability, this study therefore adopted an overlap index which reflects the percentage of overlapping positive cases confirmed by both coders (van Geert and van Dijk, 2003). It is a relatively better measure of reliability as it shows how many cases were actually picked and confirmed by both coders.

In this study, the POR value reached 95% for complexity measure and 78% for accuracy measure. As accuracy measures appropriateness of language use and is hence a relatively more ambiguous concept in its nature, a lower percentage had been expected. In fact, for such ambiguous phenomena, “high agreement would be an indicator of low quality rating, for instance based on common errors and shared biases” (van Geert and van Dijk, 2003). Justification of the quality of coding can be attempted

through explicitly stated procedures; the results are then considered valid and trustworthy (van Geert and van Dijk, 2003). In this study, disagreement between coders was resolved by a discussion, typically deferring to the first coder who designed both the study and the coding scheme.

### **Statistical Procedures**

The coded data were then submitted to two stages of analyses: descriptive and correlation analyses; each stage corresponded to each research question respectively. At the descriptive stage, the data were plotted into a developmental graph and a distributional bar chart was also presented to show the portion of each type of sentences in the sample texts. This stage of analysis explored the nature of the development and hence answered the first research question. Then, a correlation analysis was conducted to explore the association between the two measures. The results of this analysis answered the second research question regarding the relationship between the two variables.

### **Results and Discussions**

Over the one academic semester, the development of complexity and accuracy measures in Mai's writing showed a great deal of variability. The data series collected from her academic writing were analysed and the results were presented below.

#### **Result 1: The nature of development of complexity and accuracy**

Figure 1 presents the developmental graph of the complexity measures in Mai's academic writing throughout one academic semester. As shown by the fluctuation in the graph, the development of complexity measure was non-linear and very dynamic, coloured by a high degree of variability along the trajectory. The changes over time showed that Mai's writing became relatively more complex in measurement point no. 3 but then ebbed and flowed until a point (no. 9) in which the measure dropped to a level that almost equalled the start of the semester. On the surface, it seemed that Mai had regressed (in contrary to progress); however, in DST perspective, such seemingly regressing trend is also a trend in development (de Bot et al., 2005a, de Bot, 2008, van Dijk et al., 2011).

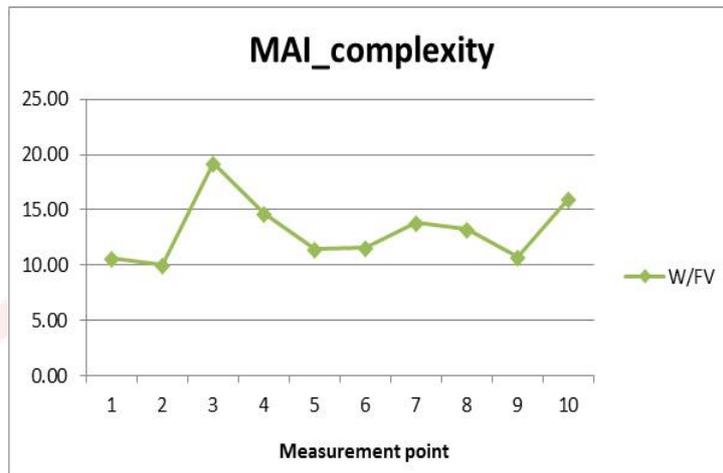


Figure 1. Complexity development over one semester

Figure 2 gives a better description of how complex the sentences were in the texts, as it shows the distribution of sentence types in each text. As can be seen in Figure 2, it was found that Mai produced only simple sentences and complex sentences in these 10 sample texts (with one exception: one occurrence of compound-complex sentence was evidenced in text number 3).

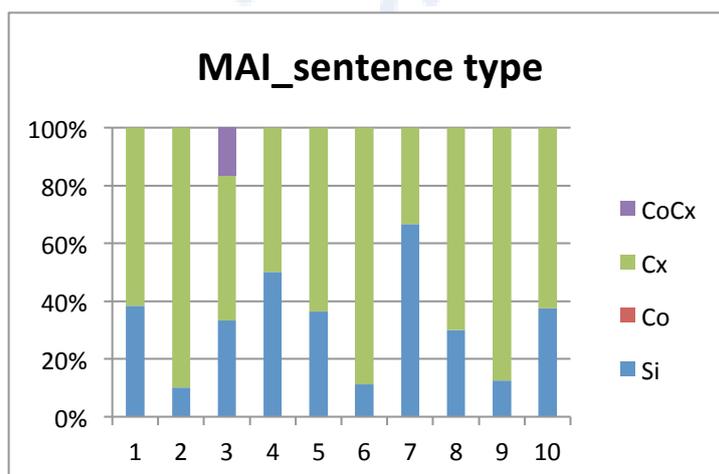


Figure 2. Sentence type distribution

There are two implications of this finding. First, the fact that the graph in Figure 1 showed a peak in measurement point no. 3 overlapped with this occasion. In a sense, it validates the measurement employed in this study (W/FV) as a sensitive, and hence suitable, measure to gauge complexity. Second, the fact that the occurrence of compound sentences was not evidenced in these sample texts does not necessarily mean that she does not produce compound sentences at all in her writings. A further examination into the rest of the texts is needed to complement this.

In terms of accuracy development, Mai's writing shows that a great degree of variability with more visible fluctuations as shown in Figure 3. It can be seen in the graph that Mai's accuracy level dropped much in measurement point 3 and raised to a perceived peak at measurement point 9. It is very interesting to see that the two occasions matched with the development of complexity measure though in an opposite direction. Whether or not a negative association can be inferred is subject to further analysis on the correlation between the two variables throughout all the measurement points instead of just two most visible occasions.

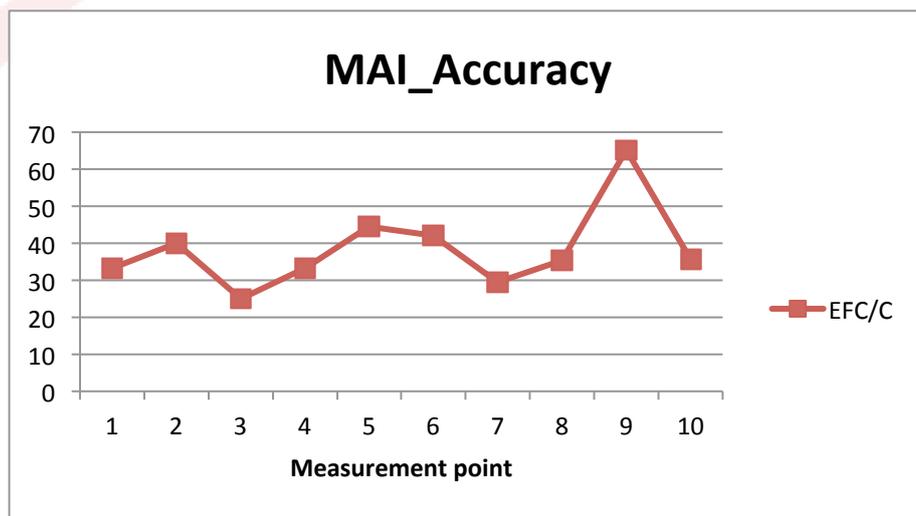


Figure 3. Accuracy development over one semester

To gain more insights into the types of errors Mai made in her writing, each error occurrence was coded and calculated and the result was mapped into a distributional bar chart. Figure 4 shows the distribution of error types in the sample texts in percentage. Evidently, Mai made many grammatical errors with the highest portion reaching 70% of the total errors in measurement point 7. As for local level of errors (including word, lexical and lexico-grammatical errors), the occurrence of such errors was also evidenced in every sample text with the highest portion of 70% of the total errors in measurement point 8. Interestingly, mechanical errors were also detected in the sample texts. The fact that the participant was an advanced learner and that the assignments were actually written with a word processor would have given the impression that spelling and punctuation errors were not to occur at all. However, the occurrence of such errors was still evidenced in 70% of the sample texts (in 7 out of the 10 samples).

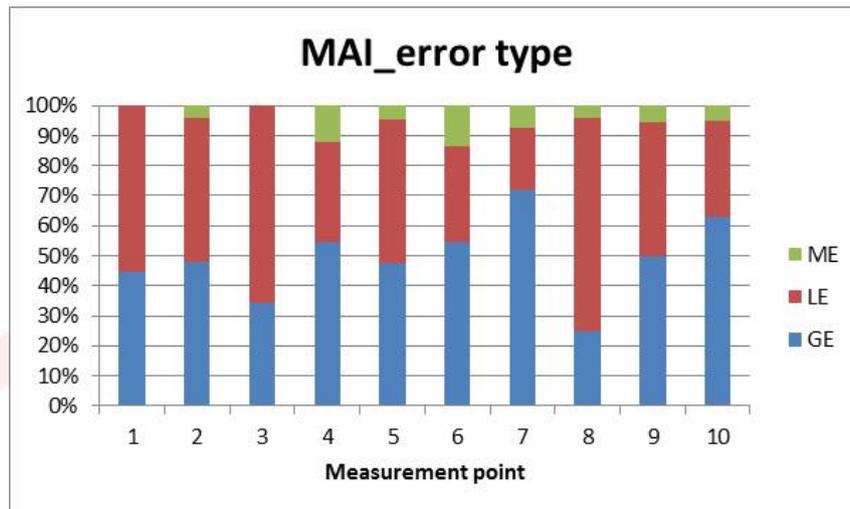


Figure 4. Error type distribution

These findings show that both complexity and accuracy development reflects the behaviour of a dynamic system, i.e. non-linear, dynamic, and displaying a high degree of variability along its trajectories. There is no single direction of development and therefore simple terms of general trend are not sufficient to do justice in describing such a dynamic process. Each measure shows its own pattern of development and is hence idiosyncratic. In fact, this micro level idiosyncrasy reflects what is going on at macro level, i.e. each learner is idiosyncratic in terms of his/her development.

### Result 2: The interaction between complexity and accuracy

To explore the interactions between complexity and accuracy in the sample texts, a correlation analysis was performed. In addition, a regression line was also added to the data to visually show the association between the two measures. To accommodate the fact that both measures are dynamic and non-linear, a third degree polynomial regression was conducted as a linear regression was highly unlikely to fit such a non-linear set of data. The result is shown in Figure 5.

The plotted raw data points show that the two lines are moving in an opposite direction, i.e. when complexity increases, accuracy decreases, although not to the same extent. The superimposed polynomial trend lines confirm the trend of such behaviour in the interactions among these two variables in a more pronounced way. In fact, the result of correlation analysis adds to support the existence of negative association between complexity and accuracy in this set of data though not to a statistically significant level ( $r = -.616, p > .05$ ).

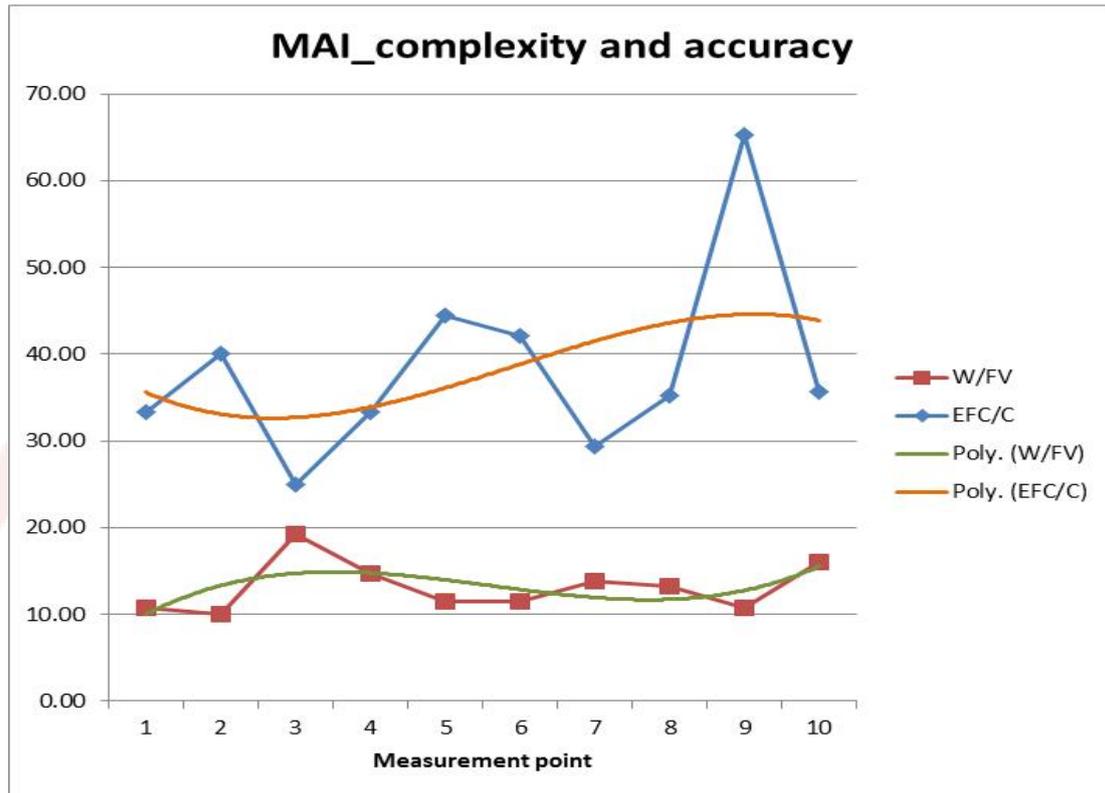


Figure 5. The interaction between complexity and accuracy

What this result suggests is that within these ten sample texts, a moderate negative association was detected between complexity and accuracy measures but the association was not statistically significant. Whether or not it translates into a trade-off relation, however, needs further examination both into specific levels of complexity and accuracy measures as well as into the rest of the texts. There are also possibilities of other factors being at play, like fluency measure, task characteristics or difficulty, etc., which affect and shape the interactions between the two variables under observation. This, too, has to be taken into consideration before any conclusion can be made.

Nonetheless, the results of this study support the DST proposition regarding the non-linearity of development and high degree of variability along development. The two variables measured in this study both displayed very different patterns. This augmented the findings in Vyatkina (2012), Vyatkina (2013) and advocated the claim that every development is idiosyncratic in its nature. The existence of variability throughout the developmental process also confirmed the DST hypotheses about the behaviour of a dynamic system. Such high intra-individual variability was also detected in Spoelman and Verspoor (2010) and hence the evidence found this study lends further support to DST proposition about its central role in shaping development.

## Conclusions

This study has demonstrated that complexity and accuracy measures are highly dynamic and their development shows characteristics of a dynamic system, hence non-linear and highly variable. The two measures develop through different patterns and there is no single comprehensive term to name such pattern other than *dynamic*. Not only the measures are dynamic and idiosyncratic, but also the learner, being the macro level of development, is idiosyncratic. No two learners are going through the same average/typical development as there is no such existence as a typical/average learner.

## Limitations and Future Directions

This study is very limited by the small number of samples and the length of observation period being only one academic semester. Not only did the data come from just one single participant, the data were also sampled through a process of purposive sampling to obtain a set of sample texts. Hence, this study is limited in both the number of participant and the amount of data analysed. Any findings, including the negative association between the two measures (complexity and accuracy) evidenced in this study can therefore only be interpreted within the context of the sample texts; no claim beyond the scope of this study and beyond this set of data can be made. Whether or not the association will continue to exist, or change into another manifestation in the future will need more data points for further examinations.

Potential remedies to the limitations in this study include attempting a more in-depth study with more participants and in a longer observation period. Ideally, the whole texts are to be analysed instead of sample texts. Expanding the measures to include both global and specific measures of each construct will have the potentials to unveil the dynamism underpinning the behaviour of the constructs. Lastly, a touch of qualitative analysis on the quality of the writing to complement the quantitative findings will offer more insights into the development of second language academic writing.

## References

- DE BOT, K. 2008. Introduction: Second language development as a dynamic process. *The Modern Language Journal*, 92, 166-178.
- DE BOT, K. & LARSEN-FREEMAN, D. 2011. Researching second language development from a dynamic systems theory perspective. In: VERSPOOR, M. H., DE BOT, K. & LOWIE, W. (eds.) *A dynamic systems approach to second language development*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- DE BOT, K., LOWIE, W. & VERSPOOR, M. H. 2005a. *Second language acquisition: An advanced resource book*, Oxon, Routledge.
- DE BOT, K., LOWIE, W. & VERSPOOR, M. H. 2007. A dynamic systems theory approach to second language acquisition. *Bilingualism: Language and Cognition*, 10, 7-21.
- DE BOT, K., VERSPOOR, M. H. & LOWIE, W. 2005b. Dynamic systems theory and applied linguistics: The ultimate "so what"? *International Journal of Applied Linguistics*, 15, 116-118.
- ELLIS, R. 2003. *Task-based language learning and teaching*, Oxford, Oxford University Press.
- FERRARI, S. 2012. A longitudinal study of complexity, accuracy, and fluency variation in second language development. In: HOUSEN, A., KUIKEN, F. & VEDDER, I. (eds.) *Dimensions of L2 performance and proficiency: Complexity, accuracy and fluency in SLA*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- GUNNARSON, C. 2012. The development of complexity, accuracy and fluency in the written production of L2 French. In: HOUSEN, A., KUIKEN, F. & VEDDER, I. (eds.) *Dimensions of L2 performance and proficiency: Complexity, accuracy and fluency in SLA*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- HOUSEN, A. & KUIKEN, F. 2009. Complexity, accuracy, and fluency in second language acquisition. *Applied Linguistics*, 30, 461-473.
- HOUSEN, A., KUIKEN, F. & VEDDER, I. 2012. Complexity, accuracy, and fluency: Definitions, measurement and research. In: HOUSEN, A., KUIKEN, F. & VEDDER, I. (eds.) *Dimensions of L2 performance and proficiency: Complexity, accuracy and fluency in SLA*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- JIANG, W. 2013. Measurements of development in L2 written production: The case of L2 Chinese. *Applied Linguistics*, 34, 1-24.
- KELLERT, S. H. 2008. *Borrowed knowledge: Chaos theory and the challenge of learning across disciplines*, Chicago, The University of Chicago Press.
- KUIKEN, F. & VEDDER, I. 2012. Syntactic complexity, lexical variation and accuracy as a function of task complexity and proficiency level in L2 writing and speaking. In: HOUSEN, A., KUIKEN, F. & VEDDER, I. (eds.)

*Dimensions of L2 Performance and Proficiency: Complexity, accuracy and fluency in SLA.* Amsterdam/Philadelphia: John Benjamins Publishing Company.

- LARSEN-FREEMAN, D. 1976. Evidence of the need for a second language acquisition index of development. In: RITCHIE, W. (ed.) *Second language acquisition research: Issues and implications*. New York: Academic Press, Inc.
- LARSEN-FREEMAN, D. 1977. The construction of a second language acquisition index of development. *Language Learning*, 27, 123.
- LARSEN-FREEMAN, D. 1978. An ESL index of development. *TESOL Quarterly*, 12, 439-448.
- LARSEN-FREEMAN, D. 1997. Chaos/complexity science and second language acquisition. *Applied Linguistics*, 18, 141-165.
- LARSEN-FREEMAN, D. 2002. Language acquisition and language use from a Chaos/Complexity theory perspective. In: KRAMSCH, C. (ed.) *Language acquisition and language socialization*. London: Continuum.
- LARSEN-FREEMAN, D. 2006. The emergence of complexity, fluency, and accuracy in the oral and written production of five Chinese learners of English. *Applied Linguistics*, 27, 590-619.
- LARSEN-FREEMAN, D. 2009. Adjusting expectations: The study of complexity, accuracy and fluency in second language acquisition. *Applied Linguistics*, 30, 579-589.
- LARSEN-FREEMAN, D. & CAMERON, L. 2008. Research methodology on language development from a complex systems perspective. *The Modern Language Journal*, 92, 200-213.
- LEVKINA, M. & GILABERT, R. 2012. The effects of cognitive task complexity on L2 oral production. In: HOUSEN, A., KUIKEN, F. & VEDDER, I. (eds.) *Dimensions of L2 performance and proficiency: Complexity, accuracy and fluency in SLA.* Amsterdam/Philadelphia: John Benjamins Publishing Company.
- MYLES, F. 2012. Complexity, accuracy, and fluency: The role played by formulaic sequences in early interlanguage development. In: HOUSEN, A., KUIKEN, F. & VEDDER, I. (eds.) *Dimensions of L2 performance and proficiency: Complexity, accuracy and fluency in SLA.* Amsterdam/Philadelphia: John Benjamins Publishing Company.
- NORRIS, J. M. & ORTEGA, L. 2009. Towards an organic approach to investigating CAF in instructed SLA: The case of complexity. *Applied Linguistics*, 30, 555-578.
- ORTEGA, L. 2003. Syntactic complexity measures and their relationship to L2 proficiency: A research synthesis of college-level L2 writing. *Applied Linguistics*, 24, 492-518.
- PALLOTTI, G. 2009. CAF: Defining, refining and differentiating constructs. *Applied Linguistics*, 30, 590-601.

- POLAT, B. & KIM, Y. 2013. Dynamics of complexity and accuracy: A longitudinal case study of advanced untutored development. *Applied Linguistics*, 1-25.
- ROBINSON, P. 2001. Task complexity, cognitive resources, and syllabus design: A triadic framework for examining task influences on SLA. In: ROBINSON, P. (ed.) *Cognition and second language instruction*. Cambridge: Cambridge University Press.
- ROBINSON, P. 2003. Attention and memory during SLA. In: DOUGHTY, C. & LONG, M. H. (eds.) *The handbook of second language acquisition*. Malden, Ma: Blackwell.
- SKEHAN, P. 2009. Modeling second language development: Integrating complexity, accuracy, fluency, and lexis. *Applied Linguistics*, 30, 510-532.
- SKEHAN, P. & FOSTER, P. 1999. The influence of task structure and processing conditions on narrative retellings. *Language Learning*, 49, 93-120.
- SKEHAN, P. & FOSTER, P. 2007. Complexity, accuracy, fluency and lexis in task-based performances: A meta-analysis of the Ealing research. In: DAELE, S. V., HOUSEN, A., KUIKEN, F., PIERRARD, M. & VEDDER, I. (eds.) *Complexity, accuracy and fluency in second language use, learning and teaching*. Brussels: Contactforum.
- SKEHAN, P. & FOSTER, P. 2012. Complexity, accuracy, fluency and lexis in task-based performance: A synthesis of the Ealing research. In: HOUSEN, A., KUIKEN, F. & VEDDER, I. (eds.) *Dimensions of L2 performance and proficiency: Complexity, accuracy, and fluency in SLA*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- SPOELMAN, M. & VERSPOOR, M. 2010. Dynamic patterns in development of accuracy and complexity: A longitudinal case study in the acquisition of Finnish. *Applied Linguistics*, 31, 1-22.
- VAN DIJK, M. & VAN GEERT, P. 2007. Wobbles, humps and sudden jumps: A case study of continuity, discontinuity and variability in early language development. *Infant and Child Development*, 16, 7-33.
- VAN DIJK, M., VERSPOOR, M. H. & LOWIE, W. 2011. Variability and DST. In: VERSPOOR, M. H., DE BOT, K. & LOWIE, W. (eds.) *A dynamic approach to second language development: Methods and techniques*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- VAN GEERT, P. 2008. The dynamic systems approach in the study of L1 and L2 acquisition: An introduction. *The Modern Language Journal*, 92, 179-199.
- VAN GEERT, P. & VAN DIJK, M. 2003. Ambiguity in child language: The problem of inter-observer reliability in ambiguous observation data. *First Language*, 23, 259-284.
- VERSPoor, M. H. & BEHRENS, H. 2011. Dynamic systems theory and a usage-based approach to second language development. In: VERSPOOR, M. H., DE BOT, K. & LOWIE, W. (eds.) *A dynamic approach to second language*

*development: Methods and techniques.* Amsterdam/Philadelphia: John Benjamins Publishing Company.

VERSPOOR, M. H., LOWIE, W. & VAN DIJK, M. 2008. Variability in second language development from a dynamic systems perspective. *The Modern Language Journal*, 92, 214-231.

VYATKINA, N. 2012. The development of second language writing complexity in groups and individuals: A longitudinal learner corpus study. *The Modern Language Journal*, 96, 576-598.

VYATKINA, N. 2013. Specific syntactic complexity: Developmental profiling of individuals based on an annotated learner corpus. *The Modern Language Journal*, 97, 11-30.

WOLFE-QUINTERO, K., INAGAKI, S. & KIM, H.-Y. 1998. *Second language development in writing: Measures of fluency, accuracy, and complexity*, Manoa, Second Language Teaching and Curriculum Center, University of Hawai'i.

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*Creating Interdisciplinary Collaborations in a Learner-centered Global Environment*

Karen M. Videtic

Virginia Commonwealth University, USA

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The Asian Conference on Education 2013

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Abstract

Strategic initiatives for major US research universities include the increased emphasis on a global education that crosses the boundaries and confinement of structural departmental requirements. These cross discipline courses are emphasized but often difficult to implement for schools and departments who operate with less time, less money, fewer full time faculty and more university general education requirements. Students are anxious to study abroad but the constraints of additional tuition and expenses, transferability of credits earned, and lack of advising direction leave students pursuing for a more definitive and challenging experience. Through several years of strategic development and the emerging relationship with an on-site campus in Florence, Italy, the VCU Arts Design faculty developed a model for a cross-discipline, study abroad summer program (one month). Based on learning simulation and loosely on action learning principles, students from interior design, graphic design, fashion design and merchandising curriculums explored the inter-relationship of their fields of study. Students earned six credits in their major and three of which were the basis of their joint project. One course was team taught by the same VCU faculty members allowing students to explore Florence and its design history from three different perspectives: interior design and architecture, graphic design and fashion. Faculty rotated to a different discipline weekly so that all students viewed their environment with a “fresh” perspective. This paper will explore the strategic goals and program development of this cross discipline undergraduate experience, and address the student learning from co-curricular projects, and the opportunity to live and study abroad.

## Introduction

For the past twenty plus years, higher education has attempted to globalize the undergraduate experience by establishing study abroad programs, creating off site campuses and partnering with universities around the world. Internationalizing or globalizing the university has also included more course work with a global perspective from “*international business*” or “*global religions of the world*” to the creation of degrees such as international economics or international business. In 2007 over 240,000 US students studied abroad which was a 150% increase in a ten year period. (Paige, Cohen, & Shively) In 2012, 274,000 US students studied abroad representing a 14% increase in just five years according to the Institute of International Education. At the same time the pressure to globalize academic programs increased, there has been equal pressure for program curriculum to become more cross disciplinary or trans- disciplinary. Described by Nowotny in 2003, “*transdisciplinary*” refers to the activity that transgresses disciplinary boundaries and transcends these boundaries in the integration and synthesis of content, theory and methodology from a number of disciplines in the new knowledge production (Russell, 2005).

In the summer of 2011, the design programs at Virginia Commonwealth University’s School of the Arts in Richmond, Virginia created a cross disciplinary set of courses to be taught over a one month period in Florence, Italy on the campus of Santa Reparata International School of Art. The students were enrolled in two three- credit courses: one providing required course content in their area of major study plus an elective course that explored the principles of design from different academic perspectives: interior, graphic and fashion design and fashion merchandising. The development of this program brought the design tracks in line with the university’s new strategic plan, *Quest for Distinction*, that emphasizes the “overarching goal to graduate students who are prepared to engage in a 21<sup>st</sup> century global environment”( <http://www.global.vcu.edu/strategies/>)

### Adaption of Fashion Course for Italian Program

The fashion program took an established class, FASH 380 Fashion Branding as its core required course for fashion merchandising students (an elective for fashion design students) to be offered during the one month semester in Italy. The syllabus was adapted to accommodate a longer class period but a shorter semester. Content was compacted into a four week schedule meeting Monday through Thursday for three hours, 9:00 am to 12 noon. Theory and principles of fashion branding were covered but they emphasized the luxury market and Italian brands.

#### Course Description for Study Abroad:

**FASH 380 Fashion Branding:** This course is designed to introduce the student to the concept of fashion branding and the processes needed to successfully develop or re-develop a fashion brand in conjunction with Interior Design and Graphic Design students (morning class).

Field trips were planned into the day including a “scavenger hunt” the first day of class to get students into the city center and to explore the retail environment of Florence. Students were also assigned a small project to determine the top three Italian brands (from their perspective) including actual visits to these stores and

organizational information about each brand. Students had to defend their choice of the “best” brands. Group PowerPoint presentations on day three not only gave students a better sense of the city but required team building and critical thinking as well as set the foundation for their final group projects.

The culminating group research project (30% of the final grade) was the creation of a luxury brand extension for an Italian fashion label. Fashion design and merchandising students had to research fashion brands and determine an opportunity for a new line or extension of that brand based on the luxury marketplace demographics and buying behaviors. This took place by the end of week two of class meetings and when groups were assigned: two graphic design students and two interior design students to visualize and create this new brand extension that was developed by the fashion students. Graphic designers created an image or logo, hand tags, labels, store signage and other visual images. Interior design students were assigned a “space” by the interior design professor which they were to reflect the image and mood of the new brand extension. A written project and a presentation were assigned to be completed by the final class meeting and was evaluated by all three design track faculty.

All students were also enrolled in a second course call the “*Culture of Italian Design and Craft.*”

Course description for Study Abroad:

**FASH 391 Culture of Italian Design and Craft:** This course explores Italian fashion design, interior design, architecture and graphic design. Includes museums, guest speakers and local field trips. (afternoon class) Taught by all professors from each track. This is an elective for both tracks.

Graphic, fashion and interior design students spent the first week of this class visiting the great museums of Florence including the Uffizi, Bargello, Palazzo Pitti and learning their way around the city. Group dinners and evening walks for gelato were part of the bonding process ensuring that all students from the different departments got to know each other.

During the second week of class, fashion students developed a presentation for their peers in graphic and interior design so they could better understand the curriculum, knowledge and skills of fashion design and merchandising students. This presentation was edited by the fashion faculty and presented in the following weeks to the other students as the faculty circulated to the design fields. Qualifying and quantifying their knowledge and skills was an excellent experience for the fashion students as they also began to understand what designers and merchandisers actually were suppose to know. This second week was also deeply involved in visiting the fashion industry and historical fashion elements of the Florence museum scene. First students attended a private tour of the Ferragamo museum followed by a private tour of the Gucci Museum. Accompanied by an Italian fashion design professor from Santa Reparata International School of Art (SRISA), students visited the costume collection at the Pitti Palace. And finally, students visited the Santa Croce leather school for an extensive tour of the school and its facilities including an in-depth lecture about leather and accessory construction by the owner of the school.

Each Wednesday starting in week two, we combined all three departments for a guest speaker about each of the areas of study. The lecture was for one hour and was conducted by a practicing professional from each area: fashion, graphic and interior design. SRISA was gracious in making these professional contacts but also providing a translator when necessary. They also assisted in making appointments at the offices of graphic design and interior design firms in Florence. These guest speakers helped to ensure the Italian perspective while educating non-majors about the industry. For example, the interior design guest speaker had just renovated the offices of the Pucci fashion design firm.

During week three, the fashion faculty member presented the background information on the fashion industry and fashion design and merchandising skills to the graphic design students. They learned about how fashion “mirrors the times” and the importance of branding to the fashion luxury market. Armed with this new knowledge, they visited the fashion museums but through the eyes of graphic designers in their new world of fashion. The questions were different and reactions stronger as the world of fashion changed the graphic design student’s perceptions.

During week four, the process was repeated but for the interior design students. Each of the faculty members had created a similar experience as they “traded” students for the week. Fashion students saw Florence through the eyes of an interior designer/architect, and also through the perspective of a graphic designer.

Students were evaluated through attendance and a daily learning journal as well as an exam on the last day of class that required them to address their personal learning about: 1.) Fashion branding and the luxury Italian market, 2.) Italy and its culture and 3.) Themselves and how study abroad had impacted them.

### **Considerations and preplanning**

Planning for summer study abroad began about 12 months prior to departure. First the relationship with SRISA had to be enhanced to accommodate the growth from a 10-15 student program to a 45 student program (15 students from each track) that would run simultaneously. Once the space (three classrooms) was confirmed and the price was determined, study abroad had to work with each individual program director to ensure that university policy was adhered to, programs were priced and that marketing brochures and website was in place.

Marketing was the single most important aspect of ensuring that the minimum of ten students was met so the fees would cover the cost of the faculty expenses. Several initial “interest” meetings were held beginning in early October discussing the costs, the advantages, and expectations. Student emails were collected and more meetings were scheduled for those students who were committed to the summer program. Each meeting included someone from the VCU Study Abroad office that could answer questions about fees, tuition, and the more general questions. Student financial aid was probably the most asked question, and because of the six credits earned in this summer program, students were eligible for the aid. In fact, out-of-state students who enrolled in the summer program actually saw a 40% savings because of the off campus rate for tuition.

Other considerations in determining who was eligible to study in Florence included a review of student grades, recommendation of a faculty member in their major, and

whether students had any evidence of infractions of university rules. For example, if a student was on academic warning for low grades or they had a letter stating an honor code violation or a drug/alcohol violation, they would not be considered for the program. Each program director reviewed applications and could deny a student the opportunity to study in summer if the faculty member/director felt it wasn't in the best interest of the student or the program.

Addressing the costs of the program for students, faculty and the university was a combined effort of the faculty directors, the study abroad finance director and SRISA. The experience of the Study Abroad office was the most important aspect that ensured the success of the program. They addressed the money component of the program including faculty costs, currency fluctuations, faculty housing, and faculty travel. Study Abroad was pivotal in all aspects of travel including medical emergencies, evacuation, expulsion of students, reimbursement of expenses and much more. Faculty directors took several courses on how to handle emergencies and what were the proper procedures to ensure the safety of students and faculty.

### **Obstacles**

Preplanning for the logistics and the course assignments, and lack of local knowledge were the biggest obstacles to delivering a successful overseas program. The faculty directors had to rely on SRISA, as the host school, to provide appropriate housing for students and faculty. They also assisted with logistics such as field trips, guest speakers, providing classrooms and technology. SRISA had an orientation presentation addressing Italian cultural customs and personal safety in Florence. As with any large group, dynamics were sometimes a problem including interpersonal conflict amongst students but they were at a minimum.

Because all of the faculty directors had visited Florence prior to the summer session, there was a basic knowledge of the city and familiarity with international travel. The international experience of the faculty was significant and important to the success of the summer program. Students were often overwhelmed and sometimes homesick. Faculty did not have the luxury but to "hit the ground running" as everyday was filled with obstacles which were opportunities to learn about travel, culture and oneself.

### **Outcomes**

The outcomes for the two fashion courses and this study experience can be summarized below:

- Students will understand the roots of the twentieth century language of form, function and style with an Italian perspective
- Students will recognize the significance of vital ideas and forms, emphasizing their global value for future reference and innovation
- Students will gain insights into the patterns and implications of the temporary design environment found in Italy
- Students will understand the history and background of branding in the US and globally.
- Students will demonstrate the value and importance of branding and its impact globally
- Students will understand the characteristics of brands and their types both domestically and internationally

- Students will explore the strategies of brand growth and development on a global scale
- Students will understand the relationship between brands and the media, communications and marketing principles.

These objectives were course work based but emphasized so much more than what is listed on each syllabus. First and foremost, the courses deliberately encouraged a “reflective” component in each evaluation opportunity. Students were asked to keep a daily journal for FASH 391 that encompassed not only academic learning but cultural and personal knowledge and growth. Some students chose to make a daily blog to share with friends and family while others bound their journal in print format for later additional reflection. The journal had to include at least 20 images either drawn or photographed. They were to include field trips, classroom learning and social events. The journal could be very personal and students could mark some aspects “personal” and they would not be read by the evaluating faculty member.

A final exam in the FASH 380 Fashion Branding course had three questions and students had to write a minimum of 2 pages for each questions in the 60 minute exam. The three questions were:

1. What did you learn about Fashion Branding?
2. What did you learn about Italy and the Italian culture?
3. What did you learn about yourself during the last month?

According to Ryan and Brough ((Ryan & Brough, 2012 Vol 5); “Academic reflection, where students reveal their thinking about key ideas of a professional discipline is both highly desirable yet elusive disposition for university teachers to cultivate.” The framework for the branding project underscored the real world experience where diverse teams work together to develop presentations and professional outcomes across disciplines. The branding team outcomes were exceptional based on the short time span and the learning curve. For example, one team developed a bridal brand extension for the *Marni* label that was professional and on point. Their presentation included how this new brand extension would fill a void in the marketplace and how they visualized the brand from three different perspective: interior store with visuals and explanations, graphics for every aspect of the brand and the logic and images of the brand from a fashion perspective.

The other major goal of this summer program was to provide a cross discipline approach to teaching a core subject for each track including the creation of a unifying project that would require students to work across their discipline and comfort zone. As discussed above, the branding project was a cross discipline project that was meant to develop professional skills and application of new knowledge while facing the challenges of an unfamiliar environment and subject matter. The FASH 391 course that was replicated under the same number GDES 391 and IDES 391 provided students with the basic knowledge of a new field that they could build upon while using their core subject matter knowledge to complete a multi-disciplinary outcome.

## Conclusions

The 2012 summer program in Florence, Italy was very successful based on student evaluations and the faculty director’s responses. In the following year, the faculty directors found that the recruitment for 2013 session was made easier by the previous

year's participants. All programs were at full capacity and will run again in summer 2014. Faculty have embraced this holistic approach and have expanded outside of the School of the Arts to include the School of Business's Marketing department and other departments within the school such as the Communication Arts department.

Minor changes have been made to the course content and the projects based on student and faculty input for 2014. For example, the branding project will only allow brand extensions and not be involved with rebranding of dated Italian brands as was allowed the first session. Student presentations will be made to faculty and outside professionals from the industry.

Overall, the faculty directors, Study Abroad and SRISA hope to continue a long and mutually beneficial relationship/partnership that will endure the changes in faculty, programs, and the university's vision. The Fashion in Florence program hopes to prepare students for a global fashion economy and to "*internationalize*" the fashion curriculum to align with the VCU's Quest for Distinction.

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## **Bibliography**

<http://www.global.vcu.edu/strategies/>

Ingraham, , E. C., & Peterson, D. L. (2004). Assessing the impact of study abroad on student learning at Michigan State University. *Frontiers: The interdisciplinary Journal of Study Abroad*, 83-100.

King, C. J. (2010). The Multidisciplinary Imperative in High Education. *Center for Studies in Higher Education, Research 7 Occasional Paper Series*.

Lovejoy, W. S., & Srinivasan, V. (2002). PERSPECTIVE: Ten Years Of Experience Teaching A Multi-Disciplinary Product Development Course. *The Journal of Product Innovation Management*, 32-45.

Paige, R. M., Cohen, A. D., & Shively, R. L. (n.d.). Assessing the Impact of a Strategies-Based Curriculum on Language and Culture Learning Abroad. *Frontiers: The Interdisciplinary Journal of Study Abroad*, 253.

Phillion, J., Malewski, E. L., Sharma, S., & Wang, Y. (2010). Reimagining the Curriculum: Future Teachers and Study Abroad. *The Interdisciplinary Journal of Study Abroad*, 323339.

Russell, A. W. (2005). No academic borders. *Australian Universityies Review* , 35.

Ryan, M., & Brough, D. (2012 Vol 5). Reflections around artefacts: Using a deliberative approach to teaching reflective practices in fashion studies. *Journal of Learning Design*, 2.

Teichler, U., & Steube, W. (1991). The logics of study abroad programmes and their impacts. *Higher Education*, 21 (3), 325-349.

Virginia Commonwealth University. (2013). Study Abroad Mission Statement.

*Methodology of Play Translator's Score Developing Within the Cross-Cultural Theatre Making Educational Project*

Larissa A. Akhmylovskaya\*<sup>1</sup>, Andriana Yu. Barysh\*<sup>2</sup>

\*<sup>1</sup>Far Eastern Federal University, Russia, \*<sup>2</sup>Freelance Translator, Russia

0059

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Abstract

The present article is devoted to the translation score developing in the cross-cultural communication as a special form of Connectedness and Alienation. The examples presented by the authors illustrate the universal character of translation score developing methods under analysis. Personal experience in the international theatre-making projects, opera laboratories, cross-cultural master-classes give more opportunities to single out the conditions, forms, means and principles of translation score developing as well as the translator/interpreter's functions as cultural liaison for multiethnic collaboration.

**Keywords:** methodology of translation score developing, pre-production, analysis, production, post-production, ethnic scene theory, theatre anthropology, laboratory, master-class, educational project, academic project, participant observation, super-objective .

The Program of the 9<sup>th</sup> International Dance & Theatre Festival at Theatre X, Tokyo, Japan (June'1 – July'4) included about 120 performances based on Chekov works, everyday round-table discussions and two conferences. The first one (June'6, 10) was devoted to ethical questions; the second (June'29-30) gathered theatre translators.

Among them: Noriko Adachi (translator of Chekov, author of books about Russian art), Michiko Anzai (translated Mikhalkov and Dragunski, now working on the play "And Sakura blooms in Siberia"), Masako Innami (works for The Brecht Theatre, translates and comments on Brecht's plays), Ayako Funakawa (researcher of trilingual children Theatre projects); interpreters of Gogol, Dostoyevsky etc. The Conference was initiated by professor Nobuyuki Nakamoto (translator of Stanislavski & Chekhov, Laureate of Pushkin Medal).

The Archives of the Theatre X were added with the audio, video and other materials: "Drama" (DVD and text in Russian, English and Japanese), Poema-Theatre photo review, "Magic flute" Opera laboratory in Vladivostok (2009), and Information on Byzantine music adaptation (2010).

Among the questions discussed there were projects of translation [1] and theatre productions: "Migawari", [2] "All powers necessary and convenient", [3] "Drama" [4].

The participants shared their visions on the theoretical aspects as follows:

- the methodology of translator's score developing within cross-cultural project; [5]
- the value of dramaturgy University training; [6]
- the foundation of The International Theatre Translators Association (ITTA).

The idea of play translation within the international theatre-making was totally supported by all the participants, whose professional experience proves that theatre translators are supposed to have special psychological education and theatre training. The position and status of the theatre translator imply the wider range of activities and functions of many other theatre practitioners.

The multiethnic group of theatre practitioners normally have only three-four weeks to rehearse for a large production. They run this or that scene again and again, or just “push through”. The participants communicate through the translator (translators). When actors rehearse a scene, the director watches, and often asks the translator to show the lines in the text. Translator simultaneously makes so called field notes, which can be put to use to better understand the rehearsal work of professional performers, directors and production teams.

Theatre translator’s daily practice implies to be involved in discussing scenes, shaping bits of dialogue and action, and arranging costume fittings. The practice of participant observation, and the period of analysis and writing that follows, constitute intense work with field notes, interview material, and half-formed commentaries, which become a part of the play translator’s score. [5]

I am a theatre translator, who has become a theatre studies scholar. For about two decades I have been studying the play translation process within cross-cultural theatre-making. As the coordinator for international projects, as well as the dramaturge, producer, and impresario, I develop participant-observation method to study and write about multilingual theatre practices. [7]

Theatre Translation Studies positions itself somewhere between "theatre" and "anthropology", with special interest in ideas of extra linguistic aspect of drama translation process.

Inspired mostly by Performance Studies a discipline that emerged out of the USA in the 1960s, Theatre Translation Studies concerns itself in part with the broad spectrum of performance, from highly framed performance events (opera, Kyogen Noh Theatre, dance) through to everyday performances (Drama Theatre, Puppet Theatre, Literary Theatre etc).

Our recent research, for example, studies the ways in which actors of Asian Pacific Region (APR) communicate with the actors of Europe and the USA within the cross-cultural Performance or Opera laboratory, Festival, Museum, Exhibition or Fair project, and how they come to enact a "re-living" in their verbal and non-verbal behavior.

Nowadays Theatre Translation Studies is profoundly interdisciplinary, drawing on thinking from areas such as Sociolinguistics, Psycholinguistics, Ethno Psychology and Cultural Psychiatry,<sup>1</sup> through to Physiology, History of Costume etc.

This article, however, focuses on a relatively small and emerging sub-discipline of Theatre translation studies – multiethnic rehearsal studies –and, specifically, what might be involved in conducting *analysis in action*, and developing the *play translator's score* in this area. [8]

Theatre translators fulfill all functions of dramaturges, adopting a *participant-observation approach* to study rehearsals, taking notes about what representatives of the international company say and do, conducting interviews, and collecting supporting material (scripts, audio&video-records, photographs, reviews, set-design-drafts and company histories – material that make up the theatre *translator's commentary* for the play under analysis). [9]

Depending on the scale and type of production – opera, dance, one-actor shows – the rehearsal process involves directors, producers, actors, playwrights, stage managers, designers (set, costume, lighting, sound), composers and instrumentalists, dramaturges, choreographers, puppeteers, voice coaches, and technicians. Practitioners now replace the term "rehearse", with the term "workshop" or "performance-preparation" meaning the practice as opposed to the rehearsing of a pre-existing play script. [10].

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<sup>1</sup> Cross-cultural psychiatry is a branch of psychiatry concerned with the cultural and ethnic context of mental disorders and psychiatric services. It emerged as a coherent field from several strands of work, including surveys of the prevalence and form of disorders in different cultures or countries; the study of migrant populations and ethnic diversity within countries; and analysis of psychiatry itself as a cultural product. The early literature was associated with colonialism and with observations by asylum psychiatrists or anthropologists who tended to assume the universal applicability of Western psychiatric diagnostic categories. A seminal paper by Arthur Kleinman in 1977 followed by a renewed dialogue between anthropology and psychiatry, is seen as having heralded a "new cross-cultural psychiatry". However, Kleinman later pointed out that culture often became incorporated in only superficial ways, and that for example 90% of DSM-IV categories are culture-bound to North America and Western Europe, and yet the "culture-bound syndrome" label is only applied to "exotic" conditions outside Euro-American society.

It is argued that a cultural perspective can help psychiatrists become aware of the hidden assumptions and limitations of current psychiatric theory and practice and can identify new approaches appropriate for treating the increasingly diverse populations seen in psychiatric services around the world.

The field has, ironically, increasingly had to address the process of globalization. It is said every city has a different culture and that the urban environment, and how people adapt or struggle to adapt to it, can play a crucial role in the onset or worsening of mental illness. Cross-cultural psychiatry looks at whether psychiatric classifications of disorders are appropriate to different cultures or ethnic groups.

Intuitive approaches for the Theatre translation studies applied by Osanai Kaoru (in 1900s) and Shiro Mikhara (in 1980-s) proved that the documentation and analysis of a rehearsal process has much in common with the work of the field ethnographer in terms of the model of participant observation. Yet, it is necessary to point out that, unlike ethnographers in the field, theatre translators are let to see not only what is thought appropriate to show an outsider. I explore what the theatre anthropology (to be more accurate, actor anthropology) approach offers theatre translator's studies and how a theatre translator can do the research to develop the *commentary* for the play and the *play translator's score*. My use of the term "actor anthropology research" and "fieldwork" is meant to be analogous. Theatre translator spends normally from three weeks to three months within the multilingual rehearsal process which implies developing a meta-lingual and meta-cultural space. [11] There are shorter and more intensive examples: recent Maud Mitchell's master-class for the Far East State Academy of Arts took only a week (2-9 October, 2010).

While the theatre translator is a newcomer to theatre rehearsal (s)he works hard to perceive new practice, ways of being, and ethics. The flow and the stoppages of rehearsal make actors and director irritable and frustrated. That is why theatre translator is sometimes called *Safari-manager*. What knowledge about theatre translator's activities and functions can be generated by conducting the cross-cultural theatre-making investigation? The methodology and methods of the *play translator's score developing* in the cross-cultural theatre-making is based on the usage of the Stanislavski System as the meta-language of the multilingual theatre communication.

The production team members suggest their visions of the play script and of the future production, including not only stories, but also music, sounds, set-design, costume etc. Each communicant's commentary becomes the material for the play translator's score. Participant observation has a unique capacity as it guarantees more adequate, objective and sequential analysis and translation, then the translator could perform at the writing table. [12]

Besides the Stanislavski system as the basic creative method, directors and actors whom I translate and consult (and who are my consultants in play translation process), refer to approaches of Jerzy Grotowski, Eugenio Barba, Peter Brook, Joseph

Chaikin, Bertolt Brecht, Vsevolod Meyerhold, Antonin Artaud, Shiro Mikhara, Mutsumi Morii. This fact is taken into consideration as well as many other *given circumstances*: If I am familiar with the play, or not; the performance genre they work in: naturalism or physical theatre or post-dramatic theatre; the country, the city or town we are in; the kind of building and room we are in; the look, the mood, and smell of the space; time of the day when we start; each communicant's native language, country, nationality, age, preferences, ideas, emotions, states, behavior, etc. Whenever I translate or just observe the rehearsal, the performers treat me subconsciously or consciously both as a part of the production team and as a spectator for the production. [13] Dramatuge's jottings of the Theatre translator involve on-the-fly notes, with the time written next to them, bits of dialogues, sketches of the space, blocking, and translation versions. These data and details support the analysis and interpretation, and become a theatre history. [14]

The play translator's score is developing during the whole project time, that includes Pre-production (preparation), Linguistic Analysis, Production, Post-production phases. Questions of each previous period provide a platform for further questions, which makes the cross-cultural communication more effective; on the one hand promotes the translation process, and on the other hand positively influences the production.

## CONCLUSION

To sum up the materials presented, it is necessary to underline that the unity of translators and artists' supertask (super-objective) implies their stable collaboration on the text interpretation within the project developing according to the methodology suggested.

## REFERENCES

- [1] Ariyoshi T. 1989. *Migawari*. Kabushiki Gaishya, Tokyo. (有吉玉青・身がわり、母・有吉佐和子との日日).
- [2] Barysh A. Yu., Akhmylovskaya L.A. 2010. Pre-production analysis of “Migawari” by Tamao Ariyoshi (Book It Theatre novel approach). The Humanities and Social Studies in the Far East. FESTU. Khabarovsk.
- [3] Jenkins M.F. 2000. *All powers necessary and convenient*. University Press, London.
- [4] Akhmylovskaya L.A. 2009. *Art in progress*. FENTU, Vladivostok.
- [5] Akhmylovskaya L.A. 2010. *Methodology of translator's score developing within cross-cultural project*. FENTU, Vladivostok.
- [6] Akhmylovskaya L.A. 2008. *American Literature at the boundary of XX-XXI centuries: Docudrama*. FENTU, Vladivostok.
- [7] International Stanislavski Academy in Yuda. 2001
- [8] Barysh A., Funakava A. 2010. *Theatre translators: Functions and specificity of professional training*. FENTU, Vladivostok.
- [9] 12 Chuncheon International Theatre Festival 2010. – Chuncheon.
- [10] DS Rachtamiblatnik Praha (Zus Taussigova) / DS Rachtamiblatnik Praha (Zus Taussigova) . – [www.rachtamiblatnik.cz](http://www.rachtamiblatnik.cz)
- [11] La Mama Theatre / La Mama Theatre. – [www.lamama.org](http://www.lamama.org).
- [12] Seoul Factory for the Performing Arts. – Seoul, 2010. – 10 p.
- [13] TEATR JEDNEGO WIERSZA | THEATRE OF ONE POEM / TEATR JEDNEGO WIERSZA | THEATRE OF ONE POEM. – [www.tjw.art.pl/en.html](http://www.tjw.art.pl/en.html)
- [14] Jim Jaret Sanford Meizner – a teacher. 1998. Video. – Hawaii.

### *UNIVERSAL METHODOLOGY OF THANSLATOR'S SCORE DEVELOPING IN THE CROSS-CULTURAL (THEATREMAKING) PROCESS*

*By Larissa A. Akhmylovskaya, Andriana Yu. Barysh*

#### *BASIC IDEA*

*Translation of the play is to be translated within theatremaking project*

#### OBJECTIVE

Adequate translation of the play & Optimization of the production

#### METHODOLOGICAL BASIS

Hermeneutics Professional activities Ethnopsycology Ethnoscenology

**MATERIAL**

Shakespeare, Williams, Beckett, Turgenev, Chekhov, Gorky, O'Neil, Blum, Shimizu, Ariyoshi, Jenkins, Jackson, Kater, Kadio (about 40 projects since 1992)

**METHODS**

Observation Stylistic analysis Comparative analysis Analysis in Action  
Brainstorm Analogy (based on associations) Heuristics (based on experience)

**COMPONENTS OF THE TRANSLATOR'S SCORE DEVELOPING PROCESS**

Organization & Technology Creativity Evaluation & Correction Research

**ELEMENTS OF TRANSLATOR'S SCORE**

Play+Author's BIO+History of productions+Critics+Video/Audio-archives  
+Commentaries of multiethnic cast members  
+Translator's Commentaries+Synopsis

**FASES**

Preparation                  Analysis                  Production                  Post-production

**PRIOR CONDITIONS**

Common terminology as the meta-language of the project (Stanislavski)  
 Constructive dialogue of translator/interpreter with every participant

**TRANSLATOR'S ADDITIONAL FUNCTIONS**

Manager	Analytic	Co-director	Critic
Producer	Archivist	Consultant	Impresario

**CRITERIA OF TRANSLATOR'S SCORE ACCURACY**

History (ethno-psychology) Group (ethno-scenology) Personality (bios, psyche, logos)

**PRODUCTS**

Academic (methodological)      Artistic      Social      Political      Economical

**PRACTICAL VALUE**

Methodological base for: MULTICULTURAL DRAMA (Shakespeare, Williams, Beckett, Kadio), OPERA (Don Juan, Magic Flute), PUPPET (Wilde, Zweig, Korean Fairy tales), BALLET and Non-verbal Theatre (Poema), MUSEUM (E. L. Pray), FAIR, EXHIBITION (M. V. Eydus), LITERARY THEATRE (My Antonia, Migavari, Drama) EDUCATIONAL PROJECTS (Mayakovski, Jenkins, Pushkin)

*The Effects of Interaction: A Diary Study of an Adult Learning a Second Language*

Chiu-Yin Wong

Monmouth University, USA

0067

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Abstract

The present study investigated what happens during interaction that contributes second language learning. Specifically, the study looked into the role of input and output in the process of second language acquisition (SLA). The participant was the researcher who was learning Korean as a second language and recorded her journey in regards to her language experience daily during her stay in Korea. Data revealed how input was received in various ways in regard to the participant's proficiency levels and how output served as a significant learning tool. The situations in which the participant received comprehensible input and produced pushed output inform language teachers to select and create teaching strategies that may facilitate their students' second language learning process.

## Background

Previous studies have shown the importance of comprehensible input and output in second language learning. However, very few studies have looked closely into how input and output affect language learning. Gass and Mackay (2007) bring up a question “how does interaction bring learning” (p.181). In other words, how do learners acquire a target language through interaction? Comprehensible input being an important element in second language acquisition is not new. Krashen & Terrell (1983) emphasize that the only way learners acquire a language is through comprehensible input and that such input alone is adequate for second language learning. However, how does comprehensible input occur to learners? Some researchers began to investigate how comprehensible input is received, mostly during interaction. Long (1983b) states that using interactional modification strategies to avoid communication break down is more vital for learners to acquire a second language than input alone. Similarly, Gass & Varonis (1985) point out that a way for Non-Native Speakers (NNSs) to obtain comprehensible input is through negotiation of meaning which, they suggest is very important in second language acquisition. The more widely strategies used for NNSs to comprehend a new language are repetition, simplification (Tsui, 1985), elaboration, slowing down, and asking questions to the NNSs (Varonis & Gass, 1985).

Swain (1985) argues that comprehensible output is as equally significant as comprehensible input in language development. She supports her argument by stating that immersion students understand the input they receive very well, but they still cannot acquire the target language completely after many years of receiving input. Some scholars (e.g. Doughty & Pica, 1986) also look into output in the second language learning process and conclude that input modifications as a result of interaction are important in SLA.

Some researchers also investigated if these conditions promoted acquisition. Loshky (1994) conducted a study regarding the relationship between comprehensible input and SLA, and found that premodified input was not the best way to provide comprehensible input. In Loshky’s study, she investigated different input conditions using Japanese as the target language. In addition to the premodified input and interactional modified input conditions in the study of Pica et al., an unmodified input with interaction was also investigated in this study. The subjects had to perform an information gap task. Their comprehension of the input and the acquisition of the vocabulary and forms were compared. The results showed that the interaction group outperformed the two other groups in comprehension, but there was no difference in the acquisition of vocabulary and forms among these three groups on the pretest and posttest. However, another study conducted by Ellis, Tanaka, & Yamazaki (1994) found that interactional modified input facilitated both comprehension and vocabulary acquisition. Therefore, Ellis et al. concluded that input modification during interaction promotes SLA.

Although comprehensible input is necessary in the process of language learning, research studies showed that modified input alone is not enough to reach a high level of second language proficiency. Learners may not understand the forms and vocabulary even though meaning of the message is achieved (Long, 1996). Learners not only need to understand the meaning of the messages, but they also need to focus on the grammar from the input they receive in order for acquisition to take place.

Output helps learners go beyond comprehension because they pay attention to different aspects of the target language (Laufer, 2005). Output directing learners to focus of the target language features was confirmed by the study of Toth (2006). Toth compared the effects of processing instruction and output, and concluded that output facilitated SLA because learners switched their attention to the details of the language when producing it. Long (1996) reasserts that the interaction hypothesis enhances SLA because a learner “connects input, internal learner capacities, particular selective attention, and output in productive ways” (p. 451). Based on the interactional hypothesis, Ellis & He (1999) conducted an experimental study to compare the effects of premodified input, interactional modified input, and modified output on the understanding of the input and vocabulary acquisition of 50 intermediate level ESL students. They were all given pictures of an apartment and furniture. The input groups were asked to listen to a direction of where to place the furniture, whereas the output group was to give a direction of where to place the furniture in the apartment. The results showed that the modified output group outperformed both of the input groups on comprehension and vocabulary acquisition. Ellis & He explained that the subjects in the modified output condition showed greater acquisition because they had a chance to process and choose the new vocabulary, whereas the input groups’ vocabulary was chosen by the teacher. However, there was no significant difference between the two input groups which contradicted the results provided by Ellis et al. (1994) in which the interactional input group outperformed the premodified input group on both comprehension and vocabulary acquisition.

Interaction plays an important role in SLA because learners can receive feedback from their output (Mackey, Oliver, & Leeman, 2003). In addition, output provides learners opportunities to test hypotheses about the target language when they receive feedback from the listeners (Gass & Mackey, 2007). Besides, Gass and Mackey also list two more functions of output. One is forcing learners to produce more native like output, originated from the study of McDonough (2005). Gass & Mackey explain “after producing an initially problematic utterance and receiving feedback about its lack of comprehensibility in the form of a clarification request, the NNS...appears to realize that his utterance was not understood. Pushed to reformulate his initial utterance in order to facilitate NS understanding, he modifies his linguistic output by reformulating the utterance in a more target-like way” (p. 179-180).

Another function point out by Gass and Mackey is promoting automaticity for which they explained “[t]he first time may require more effort and more concentration...continued use of language moves learners to more fluent automatic production.” (p. 181). Thus, output promotes learners’ second language learning process by allowing them to pay attention to the target forms which they may not notice from the input alone. Also, it provides learners opportunities to concentrate on their own language because they have to speak it in an appropriate way to achieve understanding by the listeners. Repeating this process assists learners in gaining fluency in the language.

However, when explaining the role of output, VanPatten and Williams (2007) state in one of their SLA observations that there is not a significant relationship between output and second language acquisition. “Although it may seem like common sense that ‘practice makes perfect,’ this adage is not entirely true when it comes to

SLA...whatever role learner production plays in acquisition, there are constraints on the role” (p. 12). They stress that input is necessary for language learning, and it leads to a large amount of learning, especially when learners’ focus is on meaning. However, Gass & Mackey explain that learners’ pay attention to their language that they may have problems with, and they may learn new language items during interaction.

Research on how meaningful interaction contributes to language acquisition is limited and that it is rather difficult to obtain data that record all input and negotiation learners obtain and encounter (Gass, 1997). As such, the purpose of this study was to look into details of how input was received and how output affected and contributed to an adult learner’s learning process during interaction through diary writing. Two questions guided the present study:

Research Questions:

- 1) How is comprehensible input received?
- 2) How does pushed output serve as an evidence of the learner’s language development?

## **Method**

### *Subject*

The subject of this study is the researcher herself. She referred to as “SUE” throughout the paper. SUE had training in language teaching for seven years prior to going to Korea. She also has experience in teaching English as a second language, and Mandarin Chinese as a foreign language in both formal and informal situations. SUE’s first language is Cantonese and her second languages are English and Mandarin. SUE also knows approximately 100 Japanese words and 30 Korean words before her trip to Korea.

### *Data Collection*

Data was collected through the use of diary writing. Diary was chosen to be the data collection method because one of the advantages of diary studies related to the field of second language teaching and learning is that a diary study is data of first-hand experiences recorded by the diarist; such experiences and processes are, otherwise, unobservable by others (Bailey & Ochsner, 1983; McDonough & McDonough; 1997). SUE recorded her language experience daily for two months in Korea based on the research questions. The diary was written in English.

### *Procedure*

The diary was written based on four pre-specified categories which were developed according to the research questions. For the purpose of this study, two categories were analyzed. The categories were 1) how did input become understandable? 2) how did output facilitate the learning process?

## **Finding and Discussion**

Results provided evidence to suggest that comprehensible input occurred to SUE in a series of steps. In the beginning stage of learning, SUE relied heavily on direct translation. She also tried to comprehend the language through different contextual cues, but she could barely understand what was said to her. Contextual cues only helped her understand a few vocabulary words. Thus, SUE had to rely on translation,

but the people around her did not speak English or Chinese, and her knowledge in Korean was limited. SUE also wrote that she was afraid to communicate with Korean speakers because she did not understand anything that was said to her.

*“She kept saying ‘dda la hae yo’, ‘dda la hae yo’ but I still couldn’t figure out what she was asking me to do. She started to feel frustrated and said ‘dda la hae yo’ one more time. Then she just walked away and went back to her room.”*

It is important to note that translation became crucial in SUE’s SLA journey; especially it served as a main tool to drive her motivation in learning the language again. For example, she wrote,

*“I later became motivated again when someone finally translated things to me in English!”*

*“Today, I learned a lot more Korean than the first few days because I met a lady who spoke fluent Mandarin. Because of this, I asked her to say words that I had wanted to say!”*

SUE’s experience suggests that translation plays an important role in SLA process, especially in the beginning stage. Thus, using learners’ first language can facilitate their learning (Brown, 2007).

As SUE understood more of the language, she did not have to rely solely on translation. Comprehensible input was also received through context. Later, she could understand the language through context and familiar words. Towards the end of her journey, SUE exchanged conversations with native speakers through context and negotiation of meaning in Korean. In other words, the amount of direct translation reduced as her Korean proficiency level increased. She wrote,

*“I was looking at a shirt and checking to see if the shirt was see through. Then the salesperson said ‘an pi chon yo’. I knew that she was telling me ‘it isn’t see through’. I didn’t need any translation because of the situation and the word ‘an’ which means ‘not’”.*

However, context by itself may not be always helpful. Students need more guidance to achieve higher level of learning (Egbert & Ernst-Slavit, 2010; Herrera, Cabral, & Murry, 2010; Horwitz, 2013; Lantolf, 2000; Vygotsky, 1978). It is worth noting that using drills was effective in helping SUE understand language items that were very difficult for SUE to acquire. For instance, conjugation was very difficult for SUE because it does not exist in the languages that she is fluent in. As such, examples and drills that her friend provided helped her a great deal in knowing how to conjugate verbs. In one occasion, she wrote,

*“My friend’s husband didn’t speak English well. He wanted to tell me that I could go to their home anytime. I understood ‘on jae’ (when) but didn’t know what he was saying after that. My friend then said “on jae deun ji” meant (anytime). Then she said “wh + deun ji” means something ever. Then she gave me an example “mo+deun ji” means whatever; “odi deun ji” means whenever.”*

Output played a significant role in SUE’s SLA process. SUE felt that she could receive feedback, such as if she was right or wrong from the people she talked to when she produced the language. Thus, she was more motivated to try using the language. Her knowledge of syntax in Korean also increased as a result of producing

the language because other people would tell her how to say things correctly. For example, she wrote,

*“I wanted to see if I understood how ‘chop chog sa go’ (accident) was used in a sentence, so I tried to say ‘chop chog sa go yo’, but my host family said ‘chop chog sa go na so yo’ (an accident happened)”*.

Besides learning new language items from feedback as a result of producing the language, learners can confirm if the existing knowledge of the target language is correct or what linguistic areas, such as vocabulary, grammar items, and pronunciation to work on if output is not comprehensible. For example,

*“After I learned ‘cho gi da’ (it’s there), I wanted to see if ‘da’ was the informal form of ‘iso yo’ (here/there). When I talked to the children of my host family, I wanted to ask ‘where is your mom’, so I said ‘on ma odi da’ instead of ‘on ma iso yo.’ They pointed at their mom to me immediately, so I could confirm that my guess was correct.*

In addition, SUE reported that producing the language during interaction allowed her to learn more Korean. She explained in the diary that she wanted to use the restroom. She said to the little girl of her host family *“huajan sil, huajan si”* (restroom, restroom). Then after a few minutes, the girl went to her room and said *“ma li ryeo wo yo?”* while pointing at the restroom and looking at her with an urgent expression. Later on, she wanted to inform the host mother that she had to run to the restroom and said *“ma li ryeo wo yo.”* But the host mother laughed and said the phrase was for children and it was shameful to say that in public. She told SUE to say *‘huajan sil geu pae yo’* instead.

### **Conclusion**

The analysis of SUE’s learning experience of Korean provides evidence to suggest that interaction plays an important part in SLA. The data indicated that most of the comprehensible input occurred through direct translation. Other comprehensible input included gestures and contexts. As far as how output facilitated the participant’s learning, it not only helped her learn more new words through conversing with other people, but also how to say things in a correct way. Because some people that she encountered with would repeat what she said in a correct way or simply tell her how to say things right. The participant also produced output to confirm her knowledge of the language.

### **Implications**

The findings of the study are important because they assist second/foreign language teachers and curriculum designers in lesson plans and program development. The situations in which the participant received comprehensible input and produced pushed output provide teachers with teaching ideas of how to facilitate their students’ second language learning process.

Also, the results of the study can assist classroom teachers in developing teaching strategies that will provide learners with opportunities to receive comprehensible input and produce output similar to those that they would encounter in the target language environment.

### **Limitations**

There are three limitations of the present study. First, this study only looked at one learner’s learning experience. The observations may not be applicable to other

learners due to different learning styles and levels of proficiency. Second, the subject stayed in the target language environment for only two months without having a great deal of knowledge in the target language prior to going there. Therefore, the implications of this study focuses more on beginning learners rather than those in the higher levels. Third, the subject was the researcher who had formal training and experience in language teaching. Thus, she might have recorded her experience with her beliefs in how languages are learned and taught, albeit she tried to record the fact only. For future research suggestions, more subjects need to be researched in order to provide more data in regards to how comprehensible input occurs and how output facilitates the learning process. Also, more learners of different levels of proficiency need to be investigated to find out how input and output facilitate their learning.

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## References

- Bailey, K. M. (1983). Competitiveness and anxiety in adult second language learning: looking at and through the diary studies. In H. Seliger, & M. Long (Eds.), *Classroom-oriented research in second language acquisition*. Rowley, Mass: Newbury House.
- Bailey, K. M., & Ochsner, R. (1983). A methodological review of the diary studies. In Bailey, K. M., Long, M.H., & Peck, S. (Eds.), *Second language acquisition studies*. Rowley, Mass: Newbury House.
- Bailey, K. M. (1990). The use of diary studies in teacher education programs. In J. C. Richards & D. Nunan (Eds.), *Second language teacher education* (pp. 215-240). Cambridge, UK: Cambridge University Press.
- Bailey, K. M. (1991). Daily studies of classroom language learning: The doubting game and the believing game. In E Sadtono (Ed). *Language acquisition and the second/foreign language classroom* (pp. 60-120). Singapore: SEAMEO Regional Language Center.
- Brown, H.D. (2007). *Teaching by principles: An interactive approach to language pedagogy (3<sup>rd</sup> Edition)*. Englewood Cliffs, NJ: Prentice Hall Regents.
- Doughty, C., & Pica, T. (1986). "Information gap" tasks: Do they facilitate second language acquisition? *TESOL Quarterly*, 20 (2), 305-325.
- Egbert, J. L., & Ernst-Slavit, G. (2010). *Access to academics*. Boston, MA: Pearson Education.
- Ellis, R., Tanaka, Y., & Yamazaki, A. (1994). Classroom interaction, comprehension, and the acquisition of L2 word meanings. *Language Learning*, 44 (3), 449-491.
- Ellis, R., & He, X. (1999). The roles of modified input and output in the incidental acquisition of word meanings. *Studies of Second Language Acquisition*, 21, 285-301.
- Elliott, J. 1991. *Action research for educational change*. Milton Keynes and Philadelphia: Open University Press.
- Gass, S.M. (1997). Input, interaction, and the second language learner. Mahwah, NJ: Erlbaum.
- Gass, S. M., & Varonis, E. M. (1984). The effect of familiarity on the comprehensibility of non-native speech. *Language Learning*, 34 (1), 65-90.
- Gass, S. M., & Varonis, E. M. (1985) Variation in native speaker speech modification to non-native speakers. *Studies in Second Language Acquisition*, 7, 37-58.
- Gass, S. M., & Mackey, A. (2007). Input, interaction, and output in second language acquisition. In B. VanPatten & J. Williams (Eds.), *Theories in Second Language Acquisition: An introduction* (pp. 175-199). Mahwah, NJ: Lawrence Erlbaum Associates.
- Herrera, S. G., Cabral, R. M., & Murry, K. G. (2010). *Assessment Accommodations for Classroom Teachers of Culturally and Linguistically Diverse Students*. Boston, MA: Pearson Education, Inc.
- Horwitz, E. K. (2013). *Becoming a language teacher*. Upper Saddle River, NJ: Pearson.
- Jones, F. (1994). The lone language learner: A diary study. *System*, 22 (4), 441-454.
- Krashen, S. D., & Terrell, T.D. (1983). *The natural approach: Language acquisition in the classroom*. San Francisco, CA: Alemany Press.

- Krashen, S. D. (1985). *The input hypothesis: Issues and implications*. London: Logman.
- Lantolf, J. P. (2000). *Sociocultural theory and second language learning*. Oxford: Oxford University press.
- Lapierre, P. (1994). *Language output in a cooperative learning setting: Determining its effects on second learning*. M.A. Thesis. Toronto: University of Toronto (OISE).
- Laufer, B. (2005). Focus on Form in Second Language Vocabulary Learning. *EUROSL Yearbook*, 5, 223-250.
- Long, M. (1980). *Input, interaction, and second language acquisition*. Unpublished doctoral dissertation, University of California, Los Angeles.
- Long, M. (1983a). Linguistic and conversational adjustments to nonnative speakers. *Studies in Second Language Acquisition*, 5, 177-193.
- Long, M. (1983b). Native speaker/nonnative speaker conversation and the negotiation of comprehensible input. *Applied Linguistics*, 4, 126-141.
- Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie, & T.K. Bhatia (Eds.), *Handbook of language acquisition: Vol. 2. Second language acquisition* (pp.413-468). San Diego, CA: Academic Press.
- Loschky, L. (1994). Comprehensible input and second language acquisition: What is the relationship? *Studies in Second Language Acquisition*, 16, 303-323.
- Mackey, A., Gass, S., & McDonough, K. (2000). How do learners perceive interactional feedback? *Studies in Second Language Acquisition*, 22, 471-497.
- Mackey, A., & Abbuhl, R. (2005) Input and interaction. In C. Sanz (Ed.), *Mind & context in adult second language acquisition* (pp. 207-233). Washington, DC: Georgetown University Press.
- McDonough, J., & McDonough, S. (1997). *Research methods for English language teachers: Diaries and diary studies*. New York, NY: Arnold.
- McDonough, K. (2005). Identifying the impact of negative feedback and learners' responses on ESL question development. *Studies in Second Language Acquisition*, 27, 79-103.
- Nobuyoshi, J., & Ellis, R. (1993). Focused communication tasks and second language acquisition. *English Language Teaching*, 47, 203-210.
- Pica, T, Young, R, & Doughty, C. (1987). The impact of interaction on comprehension. *TESOL Quarterly*, 21 (4), 737-758.
- McKay, S. L. (2002). *Researching second language classrooms*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Mackey, A., Oliver, R., & Leeman, J. (2003). Interactional input and the incorporation of feedback: An exploration of NS-NNS and NNS-NNS adult and child dyads. *Language Learning*, 53:1, 35-66.
- Ritchie & T. Bhatia (Eds.) *Handbook of second language acquisition* (pp. 413-468). San Diego: Academic Press.
- Schmidt, R. W., & Frota, S. N. (1986). Developing basic conversational ability in a second language: A case study of an adult learner of Portuguese. In R. R. Day (Ed.), *Talking to learn: Conversation in second language acquisition* (pp. 237-326). Rowley, MA: Newbury House.
- Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. Mass & C. Madden (Eds.), *Input in second language acquisition* (235-253). Rowley, Massachusetts: Newbury House Publishers.

- Swain, M. (1995). Three function of output in second learning. In G. Cook & B. Seidlhofer (Eds). *Principle and practice in applied linguistics: Studies in honour of H. G. Widdowson* (pp. 125-144). Oxford, UK: Oxford University Press.
- Toth, P. D., (2006). Processing instruction and a role for output in second language acquisition. *Language Learning*, 56:2, 319-385.
- Tsui, B. A. (1985). Analyzing input and interaction in second language classroom. *RELC Journal*, 16 (1), 8-30.
- Van den Branden, K. (1997). Effect of negotiation on language learners' output. *Language Learning*, 47(4), 589-636.
- VanPatten, B. (2003). *From input to output*. New York: McGraw-Hill.
- VanPatten, B., & Williams, J. (2007). *Theories in second language acquisition: An introduction*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Varonis, E., & Gass, S. (1982). The comprehensibility of non-native speech. *Studies in Second Language Acquisition*, 4 (2), 114-36.
- Varonis, E., & Gass, S. (1985) Non-native/non-native conversations: A model for negotiation of meaning. *Applied Linguistics*, 6 (1), 71-90.
- Vygotsky, L. (1978). Interaction between Learning and Development (pp. 79-91). In *Mind in Society*. (Trans. M. Cole). Cambridge, MA: Harvard University Press.

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*The Relevance of Mahatma Gandhi's Vision of Educational Leadership*

Philip Joseph

University of Goroka, Papua New Guinea

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Abstract

This paper is an attempt to look at Mahatma Gandhi's leadership in the domain of education through the conceptual lens of 'Building a Vision for Your Organization', a recent article in Harvard Business Review which analyzed the vision and mission statements of organizations that have survived for many decades in the marketplace. This paper will endeavor to explore whether Gandhi's intuitive understanding of the dynamics of leadership implicitly incorporated the elements articulated in this article, as indispensable for the survival of organizations.

**Keywords:** Ahimsa (non-violence), ashrams (residential schools), BHAG, core ideology, core purpose, core values, envisioned future, satyagraha(acquiring truth), transformational leadership, vivid explanations, yang principle, yin principle

## Introduction

Mahatma Gandhi (1869-1948), revered as the father of the nation by the people of India but described by the then British rulers of India as a ‘Cunning Asiatic’, won India’s political independence through a non-violent revolution. Gandhi has been presented by his biographers in various images, for example as a powerful political leader, a philosopher and a saint. Gandhi himself said that he gave many things to the nation and in his own estimation his scheme for education was the best among them. Volumes have been written about Gandhi’s contributions to education, but little has been written on Gandhi as the Institution Builder: He founded ashrams [residential communities] in South Africa and India. They were successive and cumulative experiments in transforming human nature through an ashram which adopted an alternative lifestyle towards unwavering commitment to the values of *sathya* [truth] and *ahimsa* [non-violence]. In this alternative lifestyle, living and learning were concurrent and reciprocally transformative processes (Joseph 2011).

Gandhi’s leadership and management of the *ashrams*, and transformative institutions, were based on a well-articulated vision which was rigorously translated into practice, although he did not formulate any theory in this regard in an explicit academic fashion. The ‘Ashram Model’ of Gandhi is a revolutionary, pioneering experiment unprecedented in the history of educational enterprises around the globe. Gandhi conceived, built and successfully managed his successive ashrams at four locations namely: Phoenix and Tolstoy in South Africa and Sabarmati and Sevagram in India (Joseph 2011). As educational establishments, these Ashrams are unparalleled for their well-articulated vision, their core values that are robust and a purpose that is pristine and practical. With non-violence as the central motif of his educational philosophy, Gandhi was a paradigm case of transformational leadership. The salient feature of Gandhi’s approach is his primary commitment to raise the level of moral consciousness in all human endeavors (Joseph 2012).

As an effective transformational leader, Gandhi catalyzed the moral core of the residents of his Ashrams. He was very successful in achieving this task by his *in situ* direct interactive teaching enhanced by unique and powerful modes of communication. He further demonstrated through his own personal model the expectations of his educational establishments. His views inspired, empowered and elevated the level of human conscience and human performance in the inmates of his ashrams. His transformational leadership was so powerful that it was not only charismatic, but also contagious in causing evolution of true leaders from his followers (Bryman 1992).

### The genesis of Gandhi’s vision of educational leadership

Gandhi’s ashrams enjoyed enduring success with core values and a core purpose that remained fixed while its organizational strategies and practices endlessly adapted to a changing world (James & Jerry 1996). Gandhi’s educational theory and the outcome of his experiments through his four ashrams had a clear social orientation (Joseph 2011). He envisaged the education of the whole man through craft (Varkey 1939). Gandhi considered the introduction of craft his unique contribution to education for he believed that it would at once transform education, society in general and the personality of youth. In his ashrams he had adopted and tested a sound educational theory which aimed at character building, was craft-centered and self supporting

(Joseph 2011). In the democratic society of Gandhi's vision, the spirit of non-violence and truth were the guiding forces (Bose 1953). An overall development of the individual to be of the highest value could only be realized in a society where individual freedom was limited by the freedom and welfare of others. Gandhi's individualism derived from the ancient Hindu concept of *dharma* (natural duty) and *yanja* (selfless sacrifice) (Thomson1993). The Ashrams established by Gandhi understood the difference between what should never be changed and what should be opened for change, between what is genuinely sacred and what is not (James & Jerry 1996). Gandhi had the rare ability to manage continuity and change, a consciously practised discipline which was closely linked to the ability to develop a vision for his Ashrams (Joseph 2011). The vision provided guidance about what core to be preserved and what stimulated future progress. Gandhi meticulously documented all the details pertaining to the founding and management of his ashrams which were residential institutions where, as we presently see, learning and living were designed to be concurrent and integrative processes. Gandhi managed his ashrams very successfully with sound vision and inspiring academic leadership (Joseph 2011).

A well conceived vision of Gandhian educational leadership consists of two major components: *core ideology* and *envisioned future* of Gandhian ashrams (James & Jerry 1996). As the leader of the ashrams, Gandhi succeeded in generating a vision and communicating it to all successfully. Communicating a vision to followers is the most important act of the transformational leader (Bryman1992). Core ideology, the *yin* principle in Gandhi's ashrams, defines what the Ashrams stand for and why the Ashrams exist. *Yin* is unchanging and complements the *yang* principle, the envisioned future (James & Jerry 1996). The envisioned future was what Gandhi aspired for the ashram to achieve and to create that required significant change and progress in and through his ashrams (James & Jerry 1996).

### **Core ideology of Gandhi's ashrams**

Core ideology defines the enduring character of Gandhi's Ashrams giving a consistent identity that transcends the life cycles, technological breakthroughs, management fads and individual leaders (James & Jerry1996). In fact the most significant contribution of Gandhi who built his visionary ashrams is the core ideology. The Core ideology of Gandhi's ashrams endured as a source of guidance and inspiration. Core ideology provided the glue that held his Ashrams together as it grew, decentralized, diversified, and expanded in South Africa and later in India (Joseph 2011). What urged Gandhi to place his theory on a national scale was an abhorrence of the British system as impractical and destructive of Indian imagination. Gandhi called it an "unmitigated evil". He thought it ignored everything India had discovered in the evolution of its educational thinking, such as children integrated with the environment, strong pupil-teacher relationships, identification with one's people and appreciation of Indian culture (Thomson1993). The purpose of Gandhian education is to raise man to a higher moral and spiritual plane through the full development of the individual and the evolution of a new man (Iyer 1973). Non-violence and truth are the two principles entering into every aspect of Gandhi's thought and activity (Varkey1939). Character building was the fundamental enterprise in the ashrams he envisioned. Gandhi believed and practised that the individual who orders his life upon an unshakable faith in duty, sacrifice, truth and non-violence remains morally autonomous from collective agencies and is an unconquerable agent of social progress (Thomson, 1993). *Satyagraha* (acquiring truth) was conceived by Gandhi as the only effective sanction

against wrong-doing available to such an individual (Gandhi 1955). Any effective leadership vision must embody the core ideology of the organization which in turn consists of two distinct parts: core values; a system of guiding principles and tenets; and the core purpose; the organization's most fundamental reason for existence (James & Jerry 1996, p.67).

### **Core values of Gandhi's ashrams**

Core values are the essential and enduring unique tenets of Gandhian ashrams. His ashrams had a set of timeless guiding principles, without any external justification. They have intrinsic value and importance to those inside the ashrams. As usual his ashrams had only a few core values, usually between three and five (James & Jerry 1996). Gandhi gave the first place to the culture of the heart, the building of character. He regarded character building as the proper foundation for the education and was confident that if the foundation was properly laid, pupils could learn all other things by themselves with the assistance of friends (Varkey 1939). Gandhi regarded righteousness or good life as an essential part of character (Andrews 1929). He did not want education without character and character without personal purity. Character building comes from pupils' lives and from within themselves. The second core value was practising the doctrine of truth and non-violence (Varkey 1939). The third core value was educating the pupils through the medium of a self supporting craft that is learning by doing and earning while learning (Varkey 1939). Gandhi as a transformational leader recognized and harnessed the needs and demands of followers to higher purposes (Joseph 2012, p.6). Gandhi did this through a vital teaching role which shaped, altered and elevated the values and goals of his ashram inmates to a higher level through empowerment and inspiration.

Gandhian values can be truly *core*, that is so fundamental and deeply held that they will change seldom, if ever. Gandhian core values always stood for the test of time. As sound institutions, none of Gandhi's ashrams changed its core values in response to market change; rather it sought to change the market, if necessary, to remain true to its core values (James & Jerry 1996, p.67). Gandhi selected highly credible followers who were willing to do a superb job articulating the core values precisely because his followers were exemplars of those values- a representative slice of the genetic code of Gandhi's ashrams (Balwantsinha 1962). Gandhi's ashrams were composed of people from widely diverse religious faiths who identified a set of shared core values (Thomson 1993). The secret was to work from the individual to the ashrams. Followers involved in articulating the core values in his ashrams needed to answer three questions: What would the followers tell their children about the core values that they held in the ashrams with a hope that they will hold when they become adults? If the followers awoke in the morning with enough wealth and money to retire for the rest of their lives, would the followers continue to live those core values? If the followers were to start a new ashram tomorrow in a different line of work, what core values would they build into the new ashram regardless of its industry? Those three questions made the crucial distinction between enduring core values that should not change and practices and strategies that should be changing all the time (James & Jerry 1996).

### **Core purpose of Gandhi's ashrams**

Core purpose, the second part of core ideology is the *raison d'être* of Gandhian ashrams. The effective purpose of Gandhi's ashrams reflects the idealistic motivations for doing the ashrams works. The purpose of Gandhian education is to raise men to a higher moral and spiritual order through the full development of the individual and the evolution of a new man (Joseph 2012, p.5). The ashrams Gandhi established served as laboratories where he and his ashram inmates tested and retested with truth and non-violence as an alternative way of life (Joseph 2011). In these small monastic communities of men and women living according to absolute vows he sought to lay the groundwork for an egalitarian social organization and economy and to develop an education system that reflected the Indian genius. The ashram provided economic and moral support as well as fostering the discipline and awareness necessary for their members to sustain grass root ideals (Patel 1953). For this, he trained his ashram inmates to be self disciplined by practicing and observing vows such as truth, love, chastity, control of the palate, non-stealing, non-possession of property, physical labour, swadeshi outlook, fearlessness, removal of untouchability and tolerance (Gandhi1955). It doesn't just describe the ashrams output or target the public; it captures the soul of the ashrams. The core purpose of Gandhi's ashrams inspired changes (Balvantsinha 1962). Core purpose is a guiding star on the horizon of Gandhian ashrams. The primary role of the core purpose of Gandhian ashrams is to guide and inspire the followers. Gandhi's compelling visions provided his ashram inmates with a sense of purpose and encouraged commitments (James & Jerry 1996). He encouraged creativity, fostered open communications, demonstrated forward thinking, shared responsibilities and exhibited commitments which helped ashram inmates to meet the challenges of the future (Joseph 2012, p.7). Gandhi constructed a realistic vision and inspired his followers in his ashrams to put greater effort to achieve the goals which attracted more commitments and energized his followers. Gandhi's visions created a real meaning for his ashram inmates in establishing a standard of excellence (James & Jerry 1996).

### **Discovering the core ideology of Gandhi's educational leadership**

Gandhi did not create or set core ideology. There is no need of deducing it by looking at the external environment of Gandhi's ashrams. The core ideology of Gandhian leadership is succinct and authentic. We can discover the core ideology by directly looking inside the Gandhi's ashrams. Discovering core ideology is not an intellectual exercise (James & Jerry1996, p.71). The core ideology of Gandhi's educational leadership was to guide and inspire, not to differentiate. The core ideology of Gandhi's educational leadership was meaningful and inspirational to the inmates of his ashrams because it was the inmates who committed themselves to the ideology over a long period of time. The core ideology of Gandhi's educational leadership played a role in determining who is inside and who is not (Balawantsinha1962).Gandhi's clear and well-articulated ideology attracted the ashram candidates whose personal values are compatible with the ashrams core values; conversely it repelled those personal values incompatible with the ashrams. Gandhi never imposed new core values or purposes on the ashram inmates. The followers shared the core ideology. The followers who were predisposed to share the core values and purposes were attracted and retained in his ashrams. Those who do not share the core values were allowed to leave his ashrams (Gandhi1955). Indeed, the very process of articulating the core ideology caused some followers to leave

when they realized that they cannot personally be compatible with the ashram's core. Identifying core values and purposes was not an exercise in semantic sword play for Gandhi. Gandhi focused on getting the content right on capturing the essence of core values and purposes. Gandhi had a strong and deep understanding of his ashrams core values and purposes which he expressed in a multitude of ways. Gandhi never confused core ideology of his ashrams with the concept of core competence. Core competence was a strategic concept that defined the capabilities that the ashram and its inmates were particularly good at, whereas core ideology of his ashrams was what it stood for and the reason why it existed (Jerry & James 1996, p.72).

### **The future of the ashrams as Gandhi envisioned through his educational leadership**

Gandhi developed the second primary component of his vision framework of his ashrams through his educational leadership. Setting the envisioned future is a creative process. It consisted of two parts: a 10 to 30 year audacious goal plus vivid descriptions to achieve the goals (James & Jerry 1996, p.73). Once we scan the periods from the Phoenix Ashram (1904) in South Africa to the Sevagram Ashram (1932) in India, Gandhi had a clear 28 years span of Big Hairy Audacious Goals (BHAG) for setting the envisioned future of his ashrams. During the twenty one years in South Africa Gandhi transformed himself from a prosperous anglophile lawyer leading peaceful agitations through legal channels to a non-violent activist living a simple communitarian life in his ashrams with his ashram inmates and prepared to sacrifice his life for the causes he believed in. Between 1904 and 1908 he gave concrete shape to his doctrine of *Satyagraha* which sought freedom for mankind to live in harmony and dignity (Thomson 1993). Gandhi's envisioned future component was somewhat paradoxical. On the one hand, it conveyed concreteness; something visible, vivid and real. On the other hand it involved a time track stretching ahead with as yet unrealized dreams, hopes and aspirations. As a visionary leader Gandhi used BHAG as a powerful way to stimulate progress (James & Jerry 1996, p.74). Gandhi's BHAG was clear and compelling, serving as a unifying focal point of effort and acted as a catalyst for team spirit among the resident of his ashrams. Gandhi had a very clear finish line so his ashrams could know when it had to be achieved and the goals had to be arrived at (Gandhi 1955). Gandhi's BHAG engaged his residents to reach out and grab them. It was tangible, energized and highly focused. Gandhi's followers got them at the right way which took no explanations. Gandhi set the BHAG that far into the future, requiring thinking beyond the current capabilities of his ashrams and its environment (James & Jerry 1996).

### **Vivid descriptions of Gandhi's ashrams through his educational leadership**

In addition to clear and substantial content, an envisioned future needs vivid description that is a vibrant, engaging and specific description of what it will be like to achieve the goal stated. It is translating the "vision" from words into pictures, of creating an image that people can carry around in their heads. It is a question of painting a picture with your words. Picture painting is essential for making the 10-to-30 year BHAG reach across and stay in people's minds. Passion, emotion and conviction are essential parts of the vivid description (James & Jerry 1996, p.74). Gandhi possessed them. Gandhi painted a picture that ashram life would foster an active asceticism, and, while self-realization remained the ultimate goal of the inmates, active service to the society was the means to that end. Further in his painted

picture, religious values could be channeled through positive action to reform the individual and society. When the Sabarmati ashram was established in 1915, Gandhi conveyed both the goal and method of service to his inmates: "Our creed was devotion to truth, and our business was the search for and insistence of truth. I wanted to acquaint India with the method I had tried in South Africa, and I desired to test in India the extent to which its application might be possible" (Gandhi 1966, p.330). As a transformational leader, Gandhi was passionately committed to his works (Burns 1978). Gandhi loved his job and had a great deal of affection for the inmates of his ashram (Balwantsinha 1962). This passion and personal enthusiasm motivated his followers to perform to their highest levels as well. Gandhi transmitted his passion by words and deeds to his ashrams and their inmates and catalyzed the noblest side of their human nature. Gandhi held up before his ashram inmates a vision that he communicated through open discussions and dialogues to bring about at once individual and social change. Thus Gandhi was able to unearth the needs of others and understood the nature of the followers' reality (Richardson & Thayer 1993).

### **Conclusion**

Identifying core ideology is a discovery process whereas setting the envisioned future is a creative process. To create an effective envisioned future requires a certain level of unreasonable confidence and commitment which Gandhi possessed. The successes of Gandhi's visionary ashrams lie in building the strength of his ashrams as their primary way of creating the future. The basic dynamic of visionary organizations is to preserve the core and stimulate progress, not the vision or mission statements. That dynamic was the primary engine which enabled Gandhi's ashrams to endure. Vision simply provides the context for bringing this dynamic to life. The geomancy for building an effective organization requires 1% vision and 99 % alignment. Creating a superb alignment by recasting the vision and mission into an effective context for building a visionary organization is the most important and challenging work which Gandhi has demonstrated.

Gandhi was no armchair visionary. He did accomplish the insuperable task of setting an institution on a visionary task, sharing the vision with the inmates of his ashrams, inspiring them to strive towards the vision and elevating them *en route* onto the moral plane. While sharing the catholicity of the inner thoughts of Gandhi's building of vision with the modern trends in global educational organizations, to uphold core values could be a short cut solution to many of the global problems we are facing today. Gandhi proved through his unique talismanic leadership in the ashrams that truth can be achieved only through non-violence and it is through his effective ashram leadership and management he has proved himself as a transformational leader. Gandhi's vision of educational leadership once again conforms to his basic philosophy of integration of vision and action, means and ends, truth and non-violence. Gandhi gave an organizational design for education that constantly aligns the individual and the social unit by concurrent and reciprocal transformation of both.

## References

- Andrews, CF 1929, *Mahatma Gandhi's ideas*, Allen & Unwin, London.
- Balvantsinha, S 1962, *Under the shelter of Bapu*, Navajivan Publishing House, Ahmedabad.
- Bose, NK 1953, *My days with Gandhi*, Nishana, Calcutta.
- Bryman, A 1992, *Charisma and leadership in organizations*, Sage, London.
- Burns, JM 1978, *Leadership*, Harper & Row, New York.
- Gandhi, MK 1966, *An autobiography. The story of my experiments with truth*, Jonathan Cape, London.
- Gandhi, MK 1955, *Ashram observances in action*, Navajivan Publishing House, Ahmedabad.
- Iyer, RN 1973, *The moral and political thought of Mahatma Gandhi*, Oxford University Press, New York.
- James, CC & Jerry, IP 1996, Building your company's vision, *Harvard Business Review*, reprint no.96501, pp.65-77.
- Joseph, P 2012, Mahatma Gandhi's concept of educational leadership, *Experiments in Education*, vol.30, no.1, pp.3-8.
- Joseph, P 2011, *Management of education: John Dewey and Mahatma Gandhi*, VDM International Publishing House, Saarbrücken.
- Patel, MS 1953, *The educational philosophy of Mahatma Gandhi*, Navajivan Publishing House, Ahmedabad.
- Richardson, RJ & Thayer, SK 1993, *The charisma factor*, Printice-Hall, New Jersey.
- Thomson, M 1993, *Gandhi and his ashrams*, Popular Prakashan, Bombay.
- Varkey, CJ 1939, *The Wardha scheme of education*, Oxford University Press, London.

*Promoting Alternative Higher Education in Sub-Saharan Africa: A General Survey*

Gbolagade Adekanmbi

Independent Researcher, Botswana

0098

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## Introduction

The search for alternatives in education is often tied to an observed lack of adequate educational resources, the need for different forms of content, methods or media, and a related need to promote democracy in education. Some calls for alternatives have resulted from a probing into the role of the school, and sometimes, the criticism of what it aims to be able to achieve, against what it is considered capable of doing. For some critics, such as the deschoolers, alternative approaches to education would enable students to utilise various networks and peers, (Illich, 1970; Reimer, 1971), and lead to a more authentic education. At UNESCO, some of the alternatives proposed over the years have been Non-Formal Education (NFE) championed mostly by Coombs and others, and the recurrent lifelong education proposals. Deschooling may have emerged as one of the most radical challenges to the educational status quo, represented by the formal educational system (Ireland, 1978). Related to these, adult educators such as Knowles (1970; 1980), Freire (1970), have pointed to the need to make changes to the familiar formal educational dresses and gowns which many adults have been forced to wear.

Beyond its adult education platform, alternative education has been a subject of discourse, experimentation and practice in the context of children. Such ideas as home schooling, project based learning, peer teaching, and community teaching and learning programmes are aimed at exploring alternatives. The growth of national qualifications frameworks has also been contributory, in many respects.

The promotion of alternative higher education in Sub-Saharan Africa has had its roots in the attempt to address problems of inadequate educational provisions. Major needs for reconstruction of society; of the need to correct past anomalies, such as the inequalities created by apartheid in South Africa; and to address other inconsistencies, have contributed to the growth of alternative education. The promotional platforms have included government agencies, the private sector, non-governmental organizations, universities and private institutions

This paper explores the nature of alternative education, its sub-Saharan African context and the various developments being observed. Some challenges in the provisions are also highlighted. The paper recognises that alternative routes to higher education in sub-Saharan Africa represent a major bridge to enhancing access and promoting a learning society.

## The context

Overall, Africa has a fifth of the world's surface area (Mandryk, 2010). Sub-Saharan Africa, home to 46 countries, with an overall population of over 745 million people in 2008 [UNESCO Institute for Statistics, 2008], occupies two thirds of that area. The average life expectancy at birth was 54.4 years and expected years of schooling averaged 9.2 years in 2011 (Human Development Report 2011). About 75% of the world's poorest live on the sub-continent, and citing a World Bank estimate, about 40% of the people lived on less than one US dollar a day in 2009 (Aitchison and Alidou, 2009). *Operation World*, a Christian missions-oriented publication is described as a 'definitive prayer guide to every nation' (Mandryk 2010, cover page). If this assertion is true, the challenges raised about Africa in that publication,

highlighted as matters of prayer, are worth noting. Although it has the world's highest growth rate, (2.3% a year in comparison to the world's 1.6% a year), this growth is gradually 'slowing rapidly through reduced birthrates, emigration and the effects of disease' (Mandryk 2010, p. 31). Beyond this, other challenges are also included: low investment in agriculture, high foreign debt, poorly handled foreign aid; the lack of adequate infrastructure; a wide gap between the rich and poor; a continuing emigration of professionals, given at 20000 educated university professionals every year; the loss of about 25% of the continent's combined national income (about 150 billion dollars each year; a high prevalence of malaria, which 'kills as many people as AIDS and TB combined' (p. 31); and the high level of displacement of many due to military conflict (Mandryk, 2010). There are also corruption and governance problems. In closing the piece on the continent's economy, the book notes: 'Of the 33 lowest-ranking nations on the UN Human Development Index, 32 are in Africa.' (Mandryk 2010, p.31).

In spite of the picture just painted, there are a number of positive developments in economic growth which have been observed in Sub-Saharan Africa (UNESCO, 2012). For example, more than one third of the countries in the region have 'achieved growth rates of at least 6%' (UNESCO 2012, p.18). This development, as part of a wider observation, has been aptly described by the Human Development Report 2013 as 'a rise of the South'. For example, it was noted that the South 'as a whole produces about half of world economic output, up from a third in 1990' (HDR, 2013, p.13). Part of this development hangs on what has been seen as a growing massive expansion of the middle class in the South, pragmatic development policies, and an unprecedented connectedness in terms of ICT growth. The World Bank's Global Monitoring Report of 2007 notes that the Millenium Development Goals (MDG) targets 'have helped stimulate more rapid expansion of basic health and education services' (p. 4) in developing countries, of which Africa is a part. Riding on the back of this new wave, Sub-Saharan Africa appears to be showing glimpses of growth. However, various writers have suggested that such development, if it is to represent the kind of growth experienced in some of the Asian tiger countries, would depend on the nature of further government investments in education and skills training, and how such training is linked to labour market demands and needs (UNESCO 2012, p. 18).

While these are positive stories, attempts by nations in sub-Saharan African to meet up with developments in other parts of the world are still fraught with challenges. Various statistics indicate that the gross enrolment ratio in tertiary education in 2007 was 6%, against an enrolment ratio of 26% globally, 18% for developing countries and 67% for developed countries (UNESCO, 2010). Notably, less than a decade earlier, just 3.5% of the expected age group reached the tertiary level of education. However, the assertion by Chung (1999) while citing UNESCO World Education Report of 1998, that Africa's enrolments are generally the lowest in the world, is still true today.

All these have implications for the creation of alternative routes for those who need tertiary qualifications. We shall now examine the forms of alternative higher education.

## **Forms of alternative higher education**

As a term, alternative higher education refers to all forms of higher education, which are often different in their provisional formats from the conventional form of education, but which nonetheless lead, in many cases, to the award of certificates and various other qualifications. Generally, they take place in out-of-school contexts but often utilize existing educational structures and syllabi, and in many cases, are adaptations of formal programmes geared toward meeting a variety of needs. Such provisions include, but are not limited to adult and continuing education, distance education, workers' education, extra-mural programmes, web based learning, public education, and a host of others. In the USA Californian system, an alternative route to teacher certification exists through which many Californian teachers become professionally qualified (Mitchell and Romero, 2010). This was also the subject of the article in which they highlight the growing demands for alternative teaching and learning approaches in the USA (Chandler, Freiberg, Stinson and Nelson, 2002). Kennen and Lopez (2005) also write on alternative career paths for non-traditional students.

Many students preferring alternative routes to higher education may be seeking something cheaper and are sometimes in full time employment. Alternative higher education programmes serve as avenue for generating third income revenues for formal institutions. Writing on the major drivers for continuing education, Gehre (2003) identifies the growing need for specialization, the exponential growth in scientific knowledge; the recognition that many graduates now find themselves in multi-disciplinary contexts; and the requirement for most professionals to continue to upgrade their skills.

Another dimension to alternative higher education is seen in the use of Open Educational Resources to acquire knowledge and sit for examinations. When the University of London was established in 1836, the strict adherence to tuition by most universities was jettisoned and outsiders were able to write its examinations and awarded degrees. The availability of open educational resources is leading to a resurgence of the London University phenomenon in that the dispensing with the requirement for tuition, already seen in some aspects of alternative education will be further enhanced.

Adult and continuing education, as an umbrella term, possibly represents the widest range of alternative educational provisions available globally. Although many alternative routes do not use the term 'adult education' in describing what they offer, the content, programme, method, and often media of delivery used in adult and continuing education provisions are usually reflected in such programmes. As such, in this next description of alternative education, the semblance to adult education is deliberate. Many alternative educational programmes aim to equip individuals with work-oriented and life skills. They may also come in form of workshops and refresher courses, involve 'brick and mortar' learning organizations, but may also be run virtually. They may come as sandwich programmes, post literacy and evening classes, part-time credit based programmes, and others.

The pursuit of distance learning route by many is based on the recognition that learners do not need to be present where their teachers or institutions are, and that the fear of an income forgone for working clients is removed. Developments in the use of

new technologies are also further enhancing the growth of distance learning. Also, transnational is utilising distance learning methodologies in its promotion.

### **The place of adult and continuing education**

The development and growth of adult education at the university level in Africa has been as a result of colonial interventions, local initiatives, international involvement, and the active inter-university collaboration. In observing the tradition of premier universities established in former British Colonies in Africa, many universities, upon founding, immediately set up Divisions of Extra-Mural Studies. The goal was to provide a window on the wall of the university for those outside of it. Such units were set up in Ibadan, Makerere, Botswana and many other commonwealth universities. These units generally started out on a liberal note but with time, and based on identified needs, became involved in more utilitarian interventions. Departments of extra-mural studies were established, and later became full academic departments of adult education. Many later took on the dual role of providing education and training for adult education personnel, and also of organizing outreach programmes. The Universities of Ibadan and Botswana provide distinct examples of modes of adult education transformations within their campuses. While Ibadan went on to embrace literacy outreach, workshop organisation, community development work and later distance education, Botswana, Lesotho, Namibia and Makerere Universities did relatively the same although with varying degrees of emphasis. On personnel development, as part of strengthening adult education work, (Oduaran (2000) has noted the significant work of universities in Uganda, Egypt, Algeria, Benin, Togo, Cameroon, Mozambique, and Mauritius. In addition, university departments of adult education in Nigeria have also done a lot in this regard.

Government provided overarching policies while the universities, in addition to training, participated in advocacy, also a feature of many non-governmental organisations. UNESCO leads in advocacy, policy initiatives formulation and supporting training on adult education, literacy and documentation. In addition, the activities of UNICEF, the UNDP, the German Adult Education Association, and the Commonwealth of Learning have been noted. Also foundations such as Kellogg, Rockefeller, the International Foundation for Education and Self Help (IFESH) have played significant roles in supporting adult education growth through funded researches, exchange of scholars, publications and other outreach activities. The Commonwealth of Learning, based in Vancouver Canada assists many African nations with promoting partnerships in distance education training and documentation, research and collaboration liaisons. The British Council, Department of International Development (DFID), Economic Commission for Africa and the United States Agency for International Development are greatly involved. The German Adult Education Association, CIDA Canada, and SIDA Sweden, and the Laubach Literacy International of the United States provide one form of technical support or the other to providers of adult education in Africa. The International

Labour organisation also promotes work and labour relations through relevant educational programmes. The Commonwealth Secretariat is promotes various educational programmes in commonwealth countries, with the Diploma in Youth in Development Work being a good example.

Oduaran (2000, p.40) lists the range of universities involved in this provision of support thus:

- University of Georgia at Athens
- University of Wisconsin
- University of Alaska
- Florida State University
- Pennsylvania State University
- Ontario Institute for Studies in Education, Canada
- University of British Columbia
- University of Manchester
- University of Warwick
- University of Nottingham
- University of Hull
- University of London
- University of Leeds
- University of Reading

As an alternative route to promoting higher education, the African adult education scene has been quite successful. Many distance education activities began through the adult education departments, and some have become autonomous or semi autonomous units, carrying out their functions through separate centres. This is true of Ibadan, the University of Lagos, University of Botswana and the University of Namibia. The adult education academic involvement of universities was also the subject of the case studies discussed in the book edited by Indabawa, Oduaran, Afrik and Walters, (2000) in which various authors described practices in Botswana, Cameroon, Democratic Republic of Congo, Kenya, Lesotho, Madagascar, Namibia, Nigeria, Senegal, South Africa, Zambia and Zimbabwe.

On the African universities offering adult education and adult education programmes, Table 1, from Oduaran (2000, p.39) highlights aspects of the provision of formal training to those promoting alternative education in various ways.

Table 1: Selected list of African Universities offering adult and continuing education programme

Universities		Selected programmes						
S/No	-	Ph.D.	M.Ed.	B.Ed	Dip.	Cert.	Distance ed.	Continuing ed.
1.	Nairobi				X			X
2.	Tanzania			X	X			X
3.	Swaziland			X	X		X	X
4.	Lesotho			X	X	X	X	X
5.	Zimbabwe			X	X		X	X
6.	Zambia			X	X		X	X
7.	Botswana	X	X	X	X	X	X	X
8.	Namibia	X	X	X	X		X	X
9.	Republic of South Africa	X	X	X	X	X	X	X
10.	Cape Town R S A				X		X	X
11.	Ghana			X	X	X	X	X
12.	Ibadan, Nigeria	X	X	X	X	X	X	X
13.	Benin, Nigeria		X	X	X			
14.	Nigeria, Nsukka	X	X	X	X	X	X	X
15.	Bayero, Kano, Nigeria			X	X	X		X
16.	Ahmadu Bello Zaria, Nigeria			X		X	X	X
17.	University of Maiduguri, Nigeria			X	X	X	X	X
18.	Uthman dan Fodio Sokoto, Nigeria				X	X	X	X
19.	Obafemi Awolowo, Ile Ife, Nigeria	X	X					X
20.	Port Harcourt, Nigeria		X	X	X	X	X	X

Legend: X= Indicator of the availability of the programmes

**Source:** Oduaran, A. (2000) Research and scholarship in adult and continuing education provision in Africa. In Indabawa, S. et al. *The State of Adult and Continuing Education in Africa*, p. 39.

## The growth of distance education

The initial motivation for the establishment of distance education institutions ranged from attempts to do something innovative, to purely humanitarian concerns. However, pecuniary benefits, especially for individual entrepreneurs also emerged as motivation. In spite of its initial rejection due to perceived inferiority, distance education has been fully accepted as an alternative and complimentary one to conventional education. Individuals, organisations, governments now make use of it to meet the educational needs of millions all over the world. Africa's reasons for using distance education include geographical and socio-economic circumstances, educational imbalance, the emergence of adult education departments in African Universities, the coming of communication systems. The diffusion of colonial practices and the tenacity of many distance education protagonists, have served as major factors for its acceptance (Adekanmbi, 2004).

Saints (1999) observes that tertiary distance education in Africa is the world's fastest growing educational sector. Many programmes at independence were secondary level education equivalents, civil service training and some level of tertiary education, with mostly foreign content. However, the emergence of local universities gradually changed this. In terms of early focus, teacher education was prevalent, and the liberal arts were common. The organisational model was generally integrated, and it was easier for the universities to offer some of their conventional courses. Roberts and Associates (1998) have noted that in Anglophone countries, university departments and faculties have been more involved, followed by private institutions and government departments in that order. In francophone countries, multilateral corporations have been more involved than university and government departments. At the time of the study, university students formed just about 10% of all the students attending from any of the three language group countries. Anglophone countries record as much as 38% in terms of those in vocational training while lusophone countries use distance education more for general public education and in-school programmes (Roberts and Associates, 1998). More Internet communication is recorded in the Francophone countries. The lusophone countries, more than any other group, are more engaged in the use of individual telephone contact and audio/video conferring. Education and business studies form the core of the general subject areas in sub-Saharan countries, followed by general science. Print was seen as the major form of instruction.

A few examples of some country specific distance education institutions include:

- The Namibian College of Open Learning, established to upgrade the educational levels of adults and out-of-school youths through open learning
- University of Namibia Centre for External Studies which runs degree programmes via the distance learning mode
- University of Botswana's Distance Education Department within its Centre for Continuing Education
- The Namibian Polytechnic, which in addition to its conventional programmes, also offers various certificate and diploma programmes by distance education.
- UNISA (University of South Africa)
- University of Pretoria's Distance Education Department
- University of Ibadan Centre for External Studies

- University of Lagos Correspondence and Open Studies Institute
- Lesotho's Institute for Extra Mural Studies
- Botswana College of Distance and Open Learning
- Open University of Tanzania
- Open University of Sudan
- Open University of Nigeria
- Zimbabwe Open University

In using new technologies to enhance distance education delivery, a publication on *Implementing an E-Learning Strategy: A Guide for Southern African Institutions* was published by NAMCOL, UNESCO and the South African Institute for Distance Education (SAIDE) in 2005. It details the how and why of pursuing e-learning as a major strategy for promoting teaching and learning in distance education, not only in Namibia but also in Africa. As far back as 1997, the Association for the Development of Education in Africa (ADEA) Working Group on Higher Education (ADEA, 1997), has noted the following trend in the growth of the use of technology in distance education in Africa. They include:

- The establishment of an Internet-accessible, bilingual database on African higher education at the African Association of African Universities
- The use by the University of Antannarivo in Madagascar of audio visual materials to complement written ones for distance learners, including radio usage
- The creation of Internet sites in Djibouti to link teachers by e-mail with their advisers in French universities with related linkages with the African Virtual University
- The starting of a TELESON programme in Cameroun with multi media teaching possibilities and with five European universities involved with the University of Yaoundé
- The piloting by the University of Benin of the RESAFAD programme involving six francophone countries and a focus on Internet support to help design learning materials
- The starting of a Law degree in Burkina Faso at the University of Ouagadougou supported by an Internet site in 1998, while serving as a pilot site for African Virtual University distance learning programme
- The launching of the African Virtual University (AVU) programmes from 1997 which has to date utilized Internet based technologies at such places as Addis Ababa University, Kenyatta University, Makerere, Open University of Tanzania, University of Zimbabwe, Cape Coast, Dar es Salaam, Legon, and Kumasi Ghana, among others.
- Of the AVU, the installation of satellite terminals was done by the World Bank; courses were broadcast from various parts of the world; video-taped and live lectures were beamed, supplemented by class notes and textbooks, while a digital library programme was also introduced.
- The related establishment of the Francophone Virtual University comprising of French speaking higher education networks and utilizing video discs, compact discs, databases with courses in law, health and bio-technology taught.

There have also been reports by Adekanmbi (2006) and others on further developments in the region, among which are the following:

- The drive by staff of distance education institutions to obtain the International Computer Drivers' Licence
- The setting up of free toll lines by distance education organizations for students, a practice being utilised by NAMCOL for its students.
- Computer-aided programmes at UNISA
- UNISA's use of distributed messages to its students
- Other developments in South Africa, especially the Technology Enhanced Learning Initiative of South Africa (TELISA)
- [Former] Technikon South Africa's programme to enable learners to obtain courseware on-line
- UNESCO support for Internet/e-mail facility at the Institute of Distance Education, University of Swaziland
- University of Botswana's utilization of the video conferencing facility to reach its students.

Farrell and Isaacs (2007) have also reported on a number of developments in the use of ICTs in education in many African countries including in particular, the Commonwealth of Learning's on-going development of a Virtual University for Small States of the Commonwealth (VUSSC).

### **Open Educational Resources**

McGreal, Kinuthia and Marshall (2013) recently edited a comprehensive book on Open Education Resources (OER). Described as 'important learning materials with the potential to facilitate the expansion of learning worldwide' (McGreal 2013, p. xv.), open educational materials cut across print and electronic materials, are generally flexible and their content is openly licensed for free use. A variety of devices can be used to platform the resources and one key principle guiding their use is accessibility. McGreal (2013) further notes that OERs are not confined to e-learning or distance education. Currently, there are numerous platforms on the Internet where OERs are available for use.

Through the use of OERs, opportunities are created for individuals to access materials on line for formal education and self directed learning ventures. SAIDE has a website dedicated to promoting the use of such resources. Known as *OER Africa*, the site hosts a wide range of resources both explaining the nature of OERs in Africa and extending reader's links to actual existing educational portals, activities and projects. Some of the projects listed include the ACEMATHS project, the AGSHARE Planning and Pilot Project, the Health OER Inter-Institutional Project, the Health Informatics Building Blocks (HIBBs), the IADC-SADC Digital Resources Project, the PHEA Educational Technology Initiative, the Skills for a Changing World Project. A recent search of the website shows at least 25 vital links for web users. These include links to the Australian Flexible Learning Framework-Learning Object Repository Network (LORN), the Book-bot which has over 14000 books ready for downloading; Connexions, which is made of small knowledge chunk useful for developing books and courses; Development Gateway which allows for discussions on various issues and makes resources available; Internet Archive, Education, which

has hundreds of free courses; JORUM (JISC) which aids the use and re-use of resources; LectureFox which hosts high quality classes globally for teachers and lecturers' use; The Bazaar, described as a community portal for those who wish to exchange open resources. These are just a few of such open sources listed. These can be accessed at [Http://www.oerafrica.org/oeraction/OERinAction/tabid227/Default.aspx](http://www.oerafrica.org/oeraction/OERinAction/tabid227/Default.aspx).

Various universities are involved in promoting the use of OERs for their staff and students in Africa. However, various individuals make the use of the OERs on their own for a variety of tasks they want to perform.

### **National Qualifications Frameworks**

One major development which has enhanced the discussion on alternative higher education in sub-Saharan Africa is the National Qualifications Frameworks (NQFs). These frameworks are geared, towards ensuring the recognition of prior skills, promoting comparability of qualifications across countries, enhancing competition among different examination contexts and promoting educational quality. They give recognition to the qualifications gotten through alternative education routes. As a general organizing standard for various forms of education, it 'enables people with low levels of basic education to gain validation of what basic learning they have' (Aitchison and Alidou 2009, p.36). Among other gains expected is the creation of articulation pathways and credits transfer across institutions and national systems.

Citing the Global Distribution of Qualifications Frameworks Survey of September 2008, Chakane (2010) reports that as of then, there were over 107 countries worldwide involved in qualifications frameworks, out of which 16 had frameworks established while 83 were still working on theirs. While Australia, South Africa, United Kingdom, New Zealand and Scotland have advanced systems, many African countries are still at a development stage in its implementation and usage. Among the sub-Saharan African countries just starting out were Angola, Egypt, Ghana, Kenya, Lesotho, Malawi, Mozambique, Swaziland, Uganda, and Zambia. The reasons for starting the NQF's vary from one country to the other. In South Africa, its origin was linked to the need to correct the imbalances caused by apartheid. In Botswana, as in Australia, it was linked to promoting the kind of labour-related training needed in the vocational education sector (Chakane, 2010).

In linking alternative higher education with lifelong learning, the development of the NQF in South Africa incorporates early childhood development, general education and training, adult basic education and training, further education and training and higher education and training (Aitchison and Alidou 2010, p. 36). A body is required to manage the system and to establish policies. Harmonisation of qualifications was a major reason for NQF development in Kenya while quality assurance was one of the purposes in the Seychelles (Aitchison and Alidou, 2010).

### **Challenges in the pursuit of alternative higher education**

Historically, alternative education has never found early easy acceptance and often, challenges have been faced by early learners going through such routes. Among the challenges observed in the promotion of qualifications frameworks, in the context of

adult learning, Aitchison and Alidou (2010) have observed the following of South Africa, as summarized below:

- the complication seen how level descriptors, unit standards, specific outcomes and assessment criteria are used, which are ‘often mystifying’ (p.37) and which tend to require much training;
- the resource-intensive nature of the development of standards, courses and qualifications, with many operating in non-formal education sectors being unable to have as much resources as they need as opposed to the formal education sectors;
- the over ambitious nature of many unit standards which create further learning obstacles; the difficulty of integration of academic and vocational qualifications;
- the fact that some adult learners actually do not want accreditation;
- the cumbersome nature of implementation; and the formalisation by the NQF of all training provisions and providers with ‘consequences for genuine non-formal education and its providers’ (p. 37).

Ng’ethe, Subotzky and Afeti (2008) carried out a study as a collaborative venture between ADEA, the Association of African Universities and the African Region Human Development Department of the World Bank. They examined Differentiation and Articulation in Tertiary Education Systems in Twelve African countries. The countries included Cameroon, Ghana, Kenya, Malawi, Mozambique, Nigeria, Rwanda, Senegal, South Africa, Tanzania, Uganda and Zambia. They observed difficulties in articulation across universities and other higher institutions. They found the systems to be very diverse, mobility generally a problem, students having great difficulty in having pathways; universities not having regulations that enhance the recognition of polytechnic students in their midst; articulation between private and public universities is very difficult; the credit transfer system creates what they describe as major barriers; and in short, the articulation system on the continent is very much at its infancy (Ng’ethe, Subotzky and Afeti, 2008). With this scenario, alternative higher education suffers greatly.

In the area of open education resources, and writing on the challenges of open online courses, Siemens (2013) has observed a range of challenges. They include the problems of cheating and plagiarism, de-skilling of the professoriate, the unsustainability of the model and the poor completion rates observed. Citing an OPAL Report (2011) “Beyond OER: Shifting Focus to Open Educational Practices,” Vladimir, Aguilar and Montoya (2013) have noted five barriers that need to be overcome for educational institutions to encourage use of OER. They include:

- Lack of institutional support
- Lack of technological tools
- Lack of skills and time of users
- Lack of quality or fitness of OER
- Personal issues (lack of trust and time)

In the area of distance education, it is mostly in the application of new technologies and the need to ensure quality. Considering the historical origins and nature of formal

educational provisions in many African countries, the problems highlighted may be similar to what they also experience. There is therefore the need to address these challenges.

### **Conclusion**

While the challenges are obvious, the pursuit of alternative higher education in the sub-continent will benefit from the growth of qualification frameworks, the widening use of open educational resources, and the related development of technology-oriented education. With a growth in collaborative ventures between international and African institutions in adult education, the future of alternative higher education will be further enhanced. In one of its publications, the Organisation for Economic Cooperation and Development (OECD) sees qualification systems as a bridge to lifelong learning (OECD, 2007). In this regard, the growth of National Qualifications Frameworks will further define the future of higher education, and the growth of a learning society in the sub-continent.

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## References

ADEA (Association for the Development of Education in Africa) 1997. Tertiary Distance Learning in Africa. ADEA Working Group on Distance Education Report, October 20-22, Saint Louis, Senegal.

Adekanmbi, G. (2006). Promoting Quality in Distance Education Programmes in Africa. 22<sup>nd</sup> ICDE [International Conference on Distance Education] World Conference on Distance Education, 3-6 September, CD-ROM.

Adekanmbi, G. (2004). Towards the Globalisation of Tertiary Distance Education in Africa. In P. T. Zeleza and A. Olukoshi (Eds.) *African Universities in the Twenty-First Century*. Pretoria: University of South Africa, pp.218-233.

Aitchison, J. and Alidou, H. (2009). *The state and development of adult learning and education in Sub-Saharan Africa: A regional synthesis*. Hamburg: UNESCO Institute for Lifelong Learning.

Chakane, M. (2010). Understanding qualifications frameworks: international perspectives and lessons for Botswana. Botswana National Qualifications Framework Workshop, Ministry of Education, Mokolodi Game Reserve, Botswana, 30 November.

Chandler, W, Freiberg, M, Stinson, A. & Nelson, M. (2002). Alternative teaching/alternative learning: preparing in-service teachers for alternative education settings. *American Secondary Education*, 30 (2) Spring 2002, pp.1-16.

Chung, F.(1999). African educational response to the challenges of globalisation. Pan Commonwealth Forum on Open Learning, Brunei-Darusaalam. 1-5 March.

Draper, J. (1998). *Africa adult education: Chronologies in Commonwealth countries*. Cape Town: CACE.

Freire, P. (1970). *Pedagogy of the oppressed*. New York: Seabury Press; London: Penguin.

Farrell, G. and Isaacs, S. (2007). Survey of ICT and Education in Africa: A summary report Based on 53 Country Surveys. Washington D.C. Info Dev./World Bank.

Indabawa, S.A., Oduaran A., Afrik, T. and Walters, S. (Eds.) (2000). *The state of adult and continuing education in Africa*. Windhoek: Department of Adult and Non-Formal Education, University of Namibia.

Illich, I, (1970). *Deschooling society*. London: Penguin.

Kennen, E. and Estela Lopez, E. (2005). Finding alternate degree paths for non-traditional, NOW-Traditional Students. The Hispanic outlook in higher education, 15

(February 14, 2005) 21-22. Published at 210 Route 4 East, Suite 310, Paramus, NJ 07652, 1-6.

Mitchell, D. E. and Romero L. S. (2010). The politics and practice of teacher alternative education. *Educational Administration Quarterly* 46(3) 363–394.

McGreal, R. (2013). Introduction: The need for Open Education Resources. McGreal, R., Kinuthia, W. and Marshall, S. (Eds.) (2013). *Open educational resources: Innovation, research and practice*. Vancouver: Commonwealth of Learning, pp. xv-xxiii.

Mpofu, S. and Amin, M. (2003). *A survey of perceptions, delivery systems and funding of adult learning in Namibia 2003*. Windhoek: Ministry of Basic Education, Sport and Culture.

Ng'ethe, N, Subotzky, G. and Afeti, G. (2008). *Differentiation and articulation in tertiary education systems: a study of twelve African countries*. Washington D.C: World Bank.

Oduaran, A. (2000). Research and scholarship in adult and continuing education in Africa. Oduarn, A. B. Afrik, T., & Walters, S. (Eds) (2000). *The state of adult and continuing education in Africa*. Windhoek: Department of Adult and Non-Formal Education, University of Namibia, pp. 19-30.

Oduaran, A. B. Afrik, T., & Walters, S. (Eds) (2000). *The state of adult and continuing education in Africa*. Windhoek: Department of Adult and Non-Formal Education, University of Namibia.

Oduaran, A. and Bhola, H.S. (2006). *Widening access to education as social justice: essays in honour of Michael Abiola Omolewa*. Dordrecht: Springer Books.

OECD (2007) *Qualification Systems: bridges to lifelong learning*. Paris: OECD.

Online Portal for Advanced Learning (OPAL) (2011). "Beyond OER: shifting focus to Open Educational Practices." The Open Educational Quality Initiative. Retrieved 23 February 2011 from: <http://oer-quality.org/> Accessed by Vladimir J., Aguilar B., and Montoya, M. S. R.

Perry, W. (1976). *Open University*. Milton Keynes: Open University Press.

Reimer, E. (1971). *School is dead: an essay on alternatives in education*. Harmondsworth, Middlesex: Penguin.

Roberts and Associates (1998) *Tertiary Distance Learning in Sub-Saharan Africa. Overview and Programmes*. Toronto: Roberts and Associates.

Saint, W. (1999) *Tertiary Distance Education and Technology in Sub-Saharan Africa*. Washington D.C.: The World Bank.

Siemens, G. (2013). Massive open online courses: innovation in education? In McGreal, R., Kinuthia, W. and Marshall, S. (Eds.) (2013). *Open educational resources: Innovation, research and practice*. Vancouver: Commonwealth of Learning, pp. 5-15.

UNESCO (2010). *Reaching the marginalized. EFA Global Monitoring Report*. Paris: UNESCO.

UNESCO (2011). *Education for All (EFA) Global Monitoring Report*. Paris: UNESCO

UNESCO (2012). *Education for All (EFA) Global Monitoring Report*. Paris: UNESCO.

Vladimir J., Aguilar B., and Montoya, M. S. R. (2013). *Academic Knowledge Mobilisation to Promote Cultural Change Towards Openness in Education. Open educational resources: Innovation, research and practice*. Vancouver: Commonwealth of Learning, pp. 17-32.

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*Teachers as Actors: Lecturing Theory Classes for Students in Vocational Education  
and Training Institutes*

Ricky, Yuk-kwan Ng, Cecilia, Po-san Leung, Gloria, Kit-man Chung,  
Annie, lai-fong Lau

Vocational Training Council, Hong Kong

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Abstract

This study aims at investigating whether theatre and acting techniques will enhance lectures and study as to engage, inspire and articulate students' critical thinking and problem-solving skills in theory classes. An empirical study was carried out in a consecutive of two academic years, i.e. 2010/11 and 2011/12 by two researchers which were teachers of a higher diploma programme in one of the Hong Kong's vocational education and training institutes. Questionnaires were used to collect student views and feedback, with findings revealing considerations in terms of the incorporation of acting techniques in theory classes for four cultural studies classes of design students. Using a participatory approach, the two teachers adopted acting techniques such as voice and tone, bodily gestures and questioning techniques to interact with the students during theory classes. Results of this study implicate that teacher's facilitation skills are important while appropriate applications of acting techniques in lectures would facilitate students' critical thinking and problem-solving skills in theory classes. This study highlights that using simple, straight forward language and contextualised examples to explain complex theories are most preferable to students. An extended contrastive study that includes students from different disciplines is proposed. Findings from this study will be useful for teachers when they are planning their instructions in lectures.

**Keywords:** acting, facilitation, lecturing, communication, theory classes

## **Introduction**

When Confucius and Socrates taught, they had one thing in common: they lectured. Using vocal control, body languages and questioning techniques, they performed, improvised and interacted with their disciples. Apparently, their direct and primitive presentations were able to draw their audience's attentions, articulate higher order thinking and reflections for the understandings of their philosophical concepts. Resemblance of drama and performance, the beauty of lecturing lies in the adoption of theatre techniques. Tone, rhythm, pacing of the speech and the bodily gestures are just several of the essential elements for good performances. Using acting techniques in teaching have been suggested by a number of researchers (Eisner, 1968; Tauber, Mester and Buckwald, 1993; Sarason, 1999; Griggs, 2001). Eisner asserts that "teachers, like actors, attempt to communicate to groups of people in an audience-like situation, and while the ends of comedy and instruction differ markedly, both the teachers and actors employ qualities to enhance communication; both must come through to the people with whom they work" (Eisner, 1968, p.362). However, the once prevailing lectures seem subsided and overwhelmed by the overly emphasised learning and teaching activities, audiovisuals, multimedia and the technological enabled learning resources. Various forms of such "edutainment" are encouraged to be incorporated in teaching to facilitate students to learn. The term "edutainment" has been described in many ways. It is defined as "entertainment (as by games, films, or shows) that is designed to be educational" in Merriam-Webster online dictionary. The term was originally used in 1973 and defined by pioneers in the field as entertainment with an educational twist (Jasinski, 2004). In order to engage and inspire the participants while simultaneously transmitting knowledge to the audience or participants, wide-ranging forms of edutainment are incorporated in educational settings. Educators may incorporate two types of forms of edutainment, i.e. intended or unintended to bring about educational purposes, but both of them are useful and appropriate to be elements of teaching materials. It aims at widening and deepening students' learning experience in a more engaging and motivated way so that students could construct their own meaning with peers when they learn. Vygotsky (1934) believes that others play an important role in mediating learning. He states that a student can learn on his/her own to certain extent or, with the help of other s/he can learn more. However, for constructivism, the essence of learning rests on how to learn better instead of a quantitative measurement. To follow a constructivist view of learning whereby students construct their own meaning as they learn, Piaget (cited in Moore, 2000) describes humans as meaning makers, constructing knowledge rather than merely receiving it. He posits that the learner while assimilating new information and accommodating it into the prior knowledge

constructs his/her own knowledge. As such, teachers are urged to design learning and teaching activities to facilitate students to learn, particularly in theory classes. In view of the above, the question remains, will theatre and acting techniques enhance lectures so as to engage, inspire and articulate students' critical thinking and problem-solving skills in theory classes? Whether the class is focused and successful or not, it may be dependent on the strong and vital connections between the teacher and students. An empirical study was carried out for four classes of design students in a consecutive of two academic years between 2010/11 and 2011/12 in one of the Hong Kong's vocational education and training institutes.

#### *Acting and facilitation skills*

Adjusting his/her emotion, tone and rhythm of dialogue with a combination of bodily gestures and story-telling techniques, the actor/actress creates tensions to inform, inspire, entertain and persuade the audience to reflect. In a similar way, facilitation skills are close to acting techniques, the use of prompts, questioning techniques and interaction skills to maintain a dynamic learning environment so as to guide and encourage students for critical thinking are similar to the skills being used in theatre. Burrows asserts that effective facilitation generates mutual respect, partnership in learning, dynamic goal-orientated process and most importantly, critical reflection (Burrows, 1997). Harvey, Loftus-Hills, Rycroft- Malone et al., express their view that "facilitators are individuals with the appropriate roles, skills and knowledge to help individual teams and organizations" and "consequently, the facilitator's role is concerned with enabling the development of reflective learning by helping to identify learner needs, guide group process, encourage critical thinking, and access the achievement of learning goals" (Harvey, Loftus-Hills, Rycroft- Malone et al., 2002, p.579, p.581). Interestingly, in an earlier study conducted in the 1970s, Dr. Fox, a professional actor with knowledge supplied from a Reader's Digest article, played the role of a medical professor, was hugely success in several US university medical faculties. With high student rating, Dr. Fox was praised as an inspiring teacher and a master in his subject matter (Habeshaw and Gibbs, 1992). Reflections from Dr. Fox's case revealed that 1) very few teachers are professional actors or have any training in public speaking, 2) majority of academics do not have personal gifts or rhetorical skills to able to perform on stage, inspiring students day after day, 3) a clever presentation can make real deficiencies in substance and 4) lecturers may motivate, and even inspire students. Dr. Fox's performance demonstrated a perfect merge of acting and facilitation skills and his study indicated that with appropriate theatrical elements applied in teaching, students would be inspired.

In order to re-examine Dr. Fox's experiment in contemporary classroom, the purpose of this study is to investigate whether theatre and acting techniques will enhance lectures so as to engage, inspire and articulate students' critical thinking and problem-solving skills in theory classes. To this, the qualities of a teacher performer are addressed in the study: (1) own knowledge, sensitivity to student's needs and lives; and (3) awareness of the classroom environments.

### **Research method**

To take a closer look into the question, an empirical study using a quantitative approach was carried out in a consecutive of two academic years between 2010/11 and 2011/12 in one of the Hong Kong's vocational education and training institutes. Quantitative data were collected to provide a better understanding of the incorporation of acting techniques in theory classes, as well as reflecting upon and improving teaching effectiveness accordingly.

### **Participants**

In order to examine and assess their practices, two teachers who respectively taught the modules Cultural Studies 2 (CS2) and Cultural Studies 4 (CS4) of a Higher Diploma Programme in Design participated in this study as it involves "the kind of issues and problems, concerns and needs that arose as a routine part of activity in the real world" (Denscombe, 2007, p.122). Each of the study lasted for one semester, and each module consisted of ten classes while each class comprised three hours of class contact. The respondents of this study came from a total number of 87 students, with eleven students studied in CS2 of academic year 2010/11; 25 students studied in CS2 of academic year 2011/12; 29 students studied in CS4 of academic year 2010/11; and 22 students studied in CS4 of academic year 2011/12.

### **Data collection and procedure**

A questionnaire (Appendix I) with 20 close-ended questions in a Likert scale of 6 was used to address class interactions, facilitation skills, acting techniques and perceptions of the theory classes before and after the modules. An additional open-ended question was used to collect students' overall views on the modules. The questions are listed as follows:

- Question 1 Before attending this course, I have bad perceptions of theory classes.
- Question 2 I enjoyed participating in learning activities such as group discussions, presentations, video screening and role plays, etc. when attending

theory classes.

- Question 3 Learning activities often promoted interactions, mutual help and peer supports among the teacher and students.
- Question 4 Most of the learning activities were catering for my learning styles, needs and abilities.
- Question 5 The teacher was able to build rapport with students and create a warm and caring learning environment.
- Question 6 Acting skills of a teacher are important when he/she is teaching lecturing classes.
- Question 7 I prefer interacting with the teacher if he/she uses effective questioning/prompting techniques.
- Question 8 I prefer the teacher explaining culture theories using real life examples.
- Question 9 I prefer the teacher using simple, explicit, down-to-earth language rather than theoretical jargons.
- Question 10 I believe the teacher will develop my critical thinking and problem-solving skills.
- Question 11 The teacher was able to cater for my learning styles and needs.
- Question 12 I was engaged by the teacher in class most of the time.
- Question 13 I prefer inspiring lectures rather than learning activities.
- Question 14 I have a good understanding of the theories of this course and able to apply them in real-life contexts.
- Question 15 I enjoyed attending the lectures as if I were watching a show.
- Question 16 A good lecture is resemblance to a good show.
- Question 17 The teacher used dramatic elements such as sounds, gestures and costumes to generate emotion and encourage engagement.
- Question 18 The ad hoc acts and responses between the teacher and students are important in theory classes.
- Question 19 The presentation skill of the teacher was good and he/she engaged and inspired me.
- Question 20 After this course, I have good perception to theory classes.

The questionnaires were distributed to the students by the two teachers at the last class of the respective modules. The questionnaires were then collected right after the students finished the questionnaires to ensure return rate. Other than regular design studies modules emphasised on hands-on design techniques, the cultural studies modules are considered as the liberal studies in design discipline; they cover topics of social, psychological and cultural theories of which the majority of design students are reluctant to learn. It was interesting to find out students' perceptions on the

incorporation of acting techniques in theory classes, and whether these techniques could engage, inspire and articulate students' critical thinking and problem-solving skills in theory classes. With an aim to achieve the intended learning outcomes, preparations were done discreetly before each class. The two teachers discussed the lesson plans, forms of edutainment such as TV programmes, documentaries and films, etc., teaching contents and materials and agreed on what strategies of presentations and acting techniques to be used in each class. In addition to the presentations of the contents using visuals and contextualised materials, acting techniques such as voice and tone, bodily gestures and questioning techniques were being used to facilitate and interact with the students during the classes. It was observed that the interactions between teachers and students were exceptionally well during the classes. The students' eagerness to respond to questions and their willingness to participate in the discussions indicated that acting and facilitation skills to a large extent contributed to the class dynamics.

### **Findings**

The average ratings for all of the questions are on the upper scales (all over 70%) except question one resulted with a low average rating of 46.6%. The assumption of students' negative perceptions of theory classes was found simply not true. The high ratings of questions five and eight revealed that students would like to build rapport with teachers and learn under a warm and caring environment. Over 80% of the students agreed that teaching skills of a teacher are important when teaching theory classes and preferred the teacher using simple, explicit, down-to-earth language and contextualised examples to explain culture theories. 76% of the students believed teachers would be able to develop their critical thinking and problem-solving skills in theory classes. It is also learnt that more than 81.4% of the students enjoyed good lectures as if they were watching good performances and they regarded a good lecture to resemble a good show. Findings further indicated that a large number of the students (more than 80%) agreed that their engagements were results of teachers' good presentation skills. Responses to question 20 showed that 74.2% of the students had significantly changed their perceptions to theory classes after they finished the modules. A summary of the responses to the close-ended questions is listed in table 1.

*Table 1: Summary of the responses to the close-ended questions*

Question	CS2 AY10/11	CS2 AY11/12	CS4 AY10/11	CS4 AY11/12	Average	Average (%)
1.	2.64	3.00	2.72	2.82	2.80	46.6
2.	4.09	4.40	4.90	4.73	4.53	75.5
3.	3.73	4.52	5.00	4.41	4.42	73.6
4.	3.73	4.52	4.69	4.18	4.28	71.3
5.	5.09	4.64	4.86	4.64	4.81	80.1
6.	4.73	4.84	4.86	4.86	4.82	80.4
7.	3.82	4.60	4.93	4.55	4.48	74.6
8.	4.73	4.76	5.14	5.05	4.92	82.0
9.	5.73	5.40	5.39	5.18	5.43	90.4
10.	4.00	4.64	5.00	4.59	4.56	76.0
11.	3.36	4.52	4.93	4.32	4.28	71.4
12.	3.36	4.56	4.62	4.14	4.17	69.5
13.	4.18	4.68	5.00	4.77	4.66	77.6
14.	3.09	4.60	4.72	4.36	4.19	69.9
15.	4.82	4.48	4.76	5.23	4.82	80.4
16.	4.55	5.00	5.03	4.95	4.88	81.4
17.	4.18	4.60	2.76	4.82	4.09	68.2
18.	3.73	4.60	4.83	3.82	4.25	70.8
19.	4.91	4.64	5.00	4.91	4.87	81.1
20.	3.64	4.72	4.90	4.55	4.45	74.2

Comments from the open-ended question indicated that students praised the interactions between teachers and students and they particularly preferred the real-life examples for reflections. Other than the acting and facilitation skills, students expressed that they were impressed by the teachers' expertise and their extensive subject knowledge. A noteworthy point showed that students also appreciated the teachers' understanding of youth culture so as to raise interesting examples for better understanding of the cultural theories. Regarding the in-class learning and teaching activities, students on one hand preferred multimedia such as video screening and online resources but on the other would like to know the aims, objectives and meanings of the resources before the activities for better reflections.

## Discussion

To answer the research question “To what extent will theatre and acting techniques enhance lecture so as to engage, inspire and articulate students’ critical thinking and problem-solving skills in theory classes?”, the findings revealed that students in general enjoyed a good lecture as if they were watching a good performance. This suggests the importance of using acting and facilitation skills in theory classes to inform, inspire, and convey ideas to students in order to arouse interest and engagement. An essential element that contributes to good lectures is to educate while entertaining using forms of edutainment. This is comparable to actors who use persuasive presentations and performance to inspire and draw the audience’s reflections. This finding also coincides with the reflections from Dr. Fox’s study that using rhetorical skills, teachers are able to engage, motivate and inspire students so as to develop their critical thinking and problem-solving skills. It is not surprisingly to realise that students like teachers to use simple, explicit, down-to-earth language and contextualised examples to explain theories of culture studies. Contextualisation and jargon-free language have long been adopted for ease of understanding of complex and philosophical concepts. Knowledge has to be applied to real life to make it into practice; the saying of “theory is a theory until it has been tested in the real world” seems to be a perpetual truth. A value-added point lays in the teachers’ understanding of youth culture. Students were impressive with it. The extensive knowledge of teachers in youth culture serves a powerful tool for rapport building. Contradicting to one of the reflections from Dr. Fox’s study, instead of a clever presentation can make real deficiencies in substance, students expressed that they were impressed by the teachers’ expertise and their extensive subject knowledge. This in turn confirmed that a good lecture needs the best of the two worlds, a good performance and a well-structured knowledge base. Regarding the use of learning and teaching activities and the technological enabled learning resources in theory classes, students’ comments showed that the activities and resources are effective only when the aims, intended learning outcomes and meanings are clearly stated up front to allow reflections. They were also aware if the aims, objectives and intended learning outcomes except the class delivery. It is also delighted to find the students’ perceptions to theory class have changed significantly after attending the two teachers’ classes. This particular point reinforced the effectiveness of embedding acting skills in lecturing theory classes. In sum, a good lecture should include teachers’ own knowledge, sensitivity to their students’ needs and lives, awareness of the classroom environment, and good performance including physical control, verbal control, emotional control, confidence, listening and reacting.

### **Implications and conclusion**

Implications of this study assures that teacher's facilitation skills are important while appropriate applications of acting skills in lectures would facilitate students' critical thinking and problem-solving skills in theory classes. For the efficacy of discovering the audience needs, teachers may utilise acting skills in their teaching practices with three stages on preparing stories (content), performance (delivery) and audience (students). How do teachers prepare for playing the role as an internal and external character in front of a group of audience? How do teachers ensure interactions between themselves and the character, between themselves and the audience and among audience? How do teachers develop students' critical thinking and problem-solving skills? These questions are critical for teachers to reflect upon while preparing for the instructions of lectures.

The results of this study also implied that teacher's solid subject knowledge is equally important as good presentation skill while preparation, practice and passion are the 3P's for an influential presentation. Therefore, discreet lesson planning, carefully selected visuals and contextualised materials, strategies of presentation and eagerness to teachers are the foundations to success teaching. Although the effectiveness of the learning and teaching activities and the technological enabled learning resources have not been well-addressed and compared to lecturing with acting skills, the students' comments shed the light on the need for better preparations and instructional design if any learning resources are to be used. In order to better inform the instructional design of lectures using this study, other than considering the number of classes, class size, methods and tools, as well as the duration of the study, an extended contrastive study that includes students from different disciplines is proposed. Other than students from design discipline, the population of the study could include students from other disciplines such as Engineering and Business Administration from the same institute.

To conclude, this paper explored whether acting and facilitation skills able to enhance lecture so as to engage, inspire and articulate students' critical thinking and problem-solving skills in theory classes. This study asserted the benefits of adopting acting skills to lecture theory classes and further confirmed that using simple, straight forward language and contextualised examples to explain complex theories are most preferable to students. Last but not least, same as acting, teaching is art, teacher should think different to make a difference, unleash imagination and creativity to make learning and teaching fun.

## References

- Burrows, D.E. (1997). Facilitation: a concept analysis. *Journal of advanced nursing*, 25, 396-404.
- Coghlán, M. (2003). *Edutainment for lifelong learning* (Conference Paper). Community Broadcasters Conference.
- Denscombe, M. (2007) *The good research guide for small-scale social research projects*, 3rd edn. Buckingham: Open University Press.
- Doolittle, P. E. (1995). *Understanding cooperative learning through Vygotsky's zone of proximal development* (Conference Paper). Columbia, SC: Lilly National Conference on Excellence in College Teaching
- Eisner, E. (1968). Qualitative intelligence and the act of teaching. In R.T. Hyman (Ed.), *Teaching: vantage points of study*. Philadelphia, PA: Lippincott.
- Edutainment. 2012. In Merriam-Webster.com. Retrieved February 26, 2012, from <http://www.merriam-webster.com/dictionary/edutainment>
- Griggs, T. (2001). Teaching as acting: considering acting as epistemology and its use in teaching and teacher preparation. *Teacher education quarterly*, Spring, 23-37.
- Habeshaw, S., G. Gibbs & T. Habeshaw. (1992). *53 problems with large classes: making the best of a bad job*. Bristol: TES Ltd.
- Harvey, G., Loftus-Hills, A., Rycroft- Malone, J. et al. (2002). Getting evidence into practice: the role and function of facilitation. *Journal of advanced Nursing*, 37(6), 577-588.
- Lee, R. (2012) *Visual culture and the politics of edutainment*. Retrieved November 20, 2013 from <http://culturalstudiesresearch.org/wp-content/uploads/2012/10/RodneyVisualculture.pdf>
- Moore, A. (2000). "Models of teaching and learning" in *Teaching and learning: Pedagogy, curriculum and culture*. London: RoutledgeFalmer.
- Sarason, S. B. (1999). *Teaching as performance art*. New York: Teachers College Press.
- Tauber, R. T., Mester, C., & Buckwald, S. C. (1993). The teacher as actor: entertaining to educate. *NASSP Bulletin*. 77 (55), 20-7.
- Vygotsky, L. (1934). *Thought and Language*. Cambridge Mass: MIT Press.

Appendix I

**Views on Theory Classes of Cultural Studies Course**

*Thank you for participating in our survey. Your feedback will be collected for writing a paper on “Teachers as Actors? Lecturing Theory Classes in Vocational Education and Training Institutes”.*

A. Please provide us your basic information by circling the correct option.

**Gender:** Male      Female

**Age:**    18 to 23    24 to 29    30 to 35    35 to 40    40+

B. Please indicate your level of agreement from “6” (Strongly Agree) to “1” (Strongly Disagree) with a circle for Questions 1 to 20.

Strongly Disagree      \_\_\_\_\_      Strongly Agree  
 十分不同意            1    2    3    4    5    6    十分同意  
 意

1.	Before attending this course, I have bad perceptions of theory classes. 修讀本課程前，我對文化理論課感到抗拒。	1	2	3	4	5
2.	I enjoyed participating in learning activities such as group discussions, presentations, video screening and role plays, etc. when attending theory classes. 我在上文化理論課時，喜歡參與學習活動，例如：小組討論、匯報、影片放映或角色扮演等。	1	2	3	4	5
3.	Learning activities often promoted interactions, mutual help and peer supports among the teacher and students. 學習活動普遍能促進師生或同學間之互動或相互幫助。	1	2	3	4	5
4.	Most of the learning activities were catering for my learning styles, needs and abilities. 學習活動普遍能照顧我的學習模式、需要及能力。	1	2	3	4	5
5.	The teacher was able to build rapport with students and create a warm and caring learning environment. 老師能與同學建立親和感，並營造親切及關顧的環境。	1	2	3	4	5
6.	Acting skills of a teacher are important when he/she is lecturing theory classes. 老師的教學技巧在文化理論課尤其重要。	1	2	3	4	5
7.	I prefer interacting with the teacher if he/she uses effective questioning/prompting techniques. 我喜歡老師運用提問方法與我互動。	1	2	3	4	5

8.	I prefer the teacher explaining culture theories using real life examples. 我喜歡老師運用生活實例去解說文化理論。	1	2	3	4	5
9.	I prefer the teacher using simple, explicit, down-to-earth language rather than theoretical jargons. 我喜歡老師運用簡單直接而不深奧的語言。	1	2	3	4	5
10.	I believe the teacher will develop my critical thinking and problem-solving skills. 我相信老師能令我提昇我的批評思維及解難的技巧。	1	2	3	4	5
11.	The teacher was able to cater for my learning styles and needs. 老師能迎合我的學習風格及需要。	1	2	3	4	5
12.	I was engaged by the teacher in class most of the time. 我大部分文化理論課的學習動機來自老師。	1	2	3	4	5
13.	I prefer inspiring lectures rather than learning activities. 我喜歡具啟發性的演說課多於學習活動。	1	2	3	4	5
14.	I have a good understanding of the theories of this course and able to apply them in real-life contexts. 我對這課程的理論有充分理解並能應用於日常生活情境中。	1	2	3	4	5
15.	I enjoyed attending the lectures as if I were watching a show. 我享受上這演說課的過程，正如我享受演藝表演一樣。	1	2	3	4	5
16.	A good lecture is resemblance to a good show. 好的演說課有如好的演藝表演。	1	2	3	4	5
17.	The teacher used dramatic elements such as sounds, gestures and costumes to generate emotion and encourage engagement. 老師運用到演藝的技巧如聲音、肢體動作和服飾等去激勵上課時的情緒及參與感。	1	2	3	4	5
18.	The ad hoc acts and responses between the teacher and students are important in theory classes. 老師與學生間即時行動和回應在文化理論課極其重要。	1	2	3	4	5
19.	The presentation skill of the teacher was good and he/she engaged and inspired me. 老師擁有優秀的演示技巧，並能增加我對課堂的投入感。	1	2	3	4	5
20.	After this course, I have good perception to theory classes. 修讀本課程後，我對文化理論課感到興趣。	1	2	3	4	5

C. Please provide us any additional comments in the box below.

~End~

*Uncovering A Cultural Black Box: A Case Study of a Classroom Discourse of a Regional Award-Winning Thai Social Sciences Teacher in a Topic Of Culture*

Kunthida Rungruengkiat, Pornapit Darasawang

King Mongkut's University of Technology Thonburi, Thailand

0107

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Abstract

Cultural understanding and its knowledge is an integral facet in education. Nevertheless, the transmission of cultural related issues and knowledge in educational contexts, as with other subject knowledge or skills, is influenced by the cultural perspectives held by a teacher. To understand a teacher's perspectivization of culture, an understanding of beliefs and practices need to be accounted for. This study examined a Thai social sciences teacher's epistemological beliefs about culture through the teacher's teaching practices and linguistic behavior. The data was collected from a regional award-winning social sciences teacher teaching at a school in central Thailand (outside of Bangkok). The data included a one-hour social sciences class focusing on culture, followed by an interview about the background of the participant. The data was prepared and analyzed in two folds, aiming for in-depth information of (1) classroom practices and (2) linguistic behaviors. The theoretical framework used is classroom discourse analysis, which includes descriptions of types of questions used by teachers and the questions' stance markers in Thai such as certainty adverbs, adjectives, and modals. Classroom practices and stance markers were also analyzed and interpreted to profile epistemological beliefs relating to feelings, attitudes, and judgments of the participant about culture. An in-depth examination of practices and beliefs, which provides teachers' psychological insights and their classroom practices, could serve as a benchmark to better inform educational policy-makers regarding current cultural issues prevalent in this nation. This is vital in improving cultural pedagogy, promoting intercultural dialogue, as well as in achieving the nation's aspirations to be an active member of the globalized world.

### **Culture and epistemology in the context of education**

Education has been a topic of interest among a broad spectrum of people: policy-makers, scholars, teachers and even students themselves. Their concern primarily revolves around the concrete aspects of education such as textbooks, electronic tools, testing and assessment systems. Less attention has been paid to what actually happens in classrooms, or what is said to students. Yet, the learning process occurs primarily through the transaction of knowledge or information, which is then internalized. To investigate the state of classroom learning environment, one may need to examine how knowledge is dealt with or how teachers and students interact with the knowledge. This could later on reflect the structure of knowledge being constructed or transmitted in classrooms.

Knowledge is abstract, and to be able to systematically investigate it, epistemology -- how an individual “construes” the nature and the origin of knowledge (Perry, 1970) -- may “decode” this complex notion. Principally when educational researchers focus on epistemology, they view it as a system of beliefs one person holds which includes origin, nature, sources and justification of knowledge (Belanky et al., 1986; Hofer & Pintrich, 1997; and Schommer-Aikins, 2002). Beliefs or the epistemology of knowledge have been emphasized in many educational studies, but less on how epistemology of knowledge is constructed, which could be vital to students. Its effect mentioned by Hammer and Elby (2002) is that epistemology could influence students’ knowledge, reasoning and learning strategies while it could affect teachers’ behavior of instruction in classrooms.

Culture has been a fuzzy concept which could be simplistic yet extremely complex. It could range from tangible artifacts to social interaction, thoughts or systems of beliefs and values. Focuses of culture vary. For instance, Parson (1949) and Useem and Useem (1963) emphasized that culture is patterns of behavior and products human inherited within one community. However, others have more integrative picture of culture as its both tangible and intangible elements are interconnected. Also, culture can be examined specifically as a value system (Hofstede, 1984; and House et al., 2004), or knowledge of language and communication (Grice, 1975; Leech 1983; and Brown & Levinson, 1987). In linguistics, culture has been perceived in multiple facets. For example, studying social interaction could explain the cultural phenomena at both macro and micro levels (Kluckhohn & Strodtbeck, 1961; Goffman, 1967; and Gumperz, 1982). Moreover, to understand culture, one also needs to consider about approaches of studying culture. Etic approaches view culture from an outsider’s perspective. This approach allows one to formulate universal categories and dimensions whilst comparing them, with the aim to understand culture better. On the other hand, emic approaches take the perspectives of people in the society under investigation. Thus, the patterns found in each culture in emic approaches do not tend to be comparable (Berry, 1969). This study leans towards culture as a product of social interaction, particularly along the continuum of the notion of high culture and daily-life cultural behaviors. Consequently, this culture could reflect embedded beliefs and values within a particular given culture in a community with the emic viewpoint as it does not aim at making a comparison nor creating a universal pattern. In this study, the researchers are also participants in the macro context of culture.

Within the parameters of this research, Thailand, along with other Southeast Asian nations, are actively preparing its citizens to usher in ASEAN 2015. With the

objectives of constructing ASEAN-ness among Southeast Asian member countries, and a critical awareness of cultural differences prevalent in other ASEAN nation members, the issues of culture have been brought up countless times. For Thailand, Thai social sciences teachers, who mainly play the role of constructing or transmitting knowledge, beliefs and attitudes about Thailand and other countries' cultures, reported to employ constructivist approaches (Chongdarakul, 2003) mandated by The National Education Act (Office of the National Education Commission, 1999) to appreciate Thai culture while embracing other cultures. Hence, social sciences teachers are the ones who can provide realistic and reliable insights of information to investigate the notion of culture. Moreover, these teachers will shed light on whether the Thai education about culture promotes openness, acceptance of diversity and differences or tolerance towards others which are vital to modern days' real world contexts.

Social sciences teachers' classroom discourse, as well as their classes, can reveal epistemic information about the local culture. Specifically, linguistic practices in the classroom may be scrutinized to study abstract notions like knowledge, culture, or beliefs of the teachers. Through discourse, teachers and students would negotiate or discuss ideas, pose questions and react. How vital these talks can be in learning is supported by Vykotsy in 1978, where he states, "All the higher mental functions originate as actual relation between people (p.57)." In other words, the thought processes of an individual begins through social interactions before it is individually internalized. As a result, the thinking can be manifested differently through the same process. However, the impact of discourse could correlate with students' learning (Mercer, 2010).

### **Ethnography of communication**

A smaller discourse community like a classroom could reflect its own systems of values, beliefs and social practices. The way each classroom discourse represent itself involves ideologies associated with its the subject, micro community and macro socio-cultural contexts. In each community, language as socialization is used to negotiate, construct and transform knowledge, identity(ies) and difference(s). Ethnographers of communication are interested in micro and macro levels of analyses to examine patterns and functions of linguistic events partaken and defined by the members of a community. Macro analyses focus on the overall structure of the communities such as the social structure, the economy, or relevant ideologies whereas the micro studies would seek to make sense of small linguistic and non-verbal units such as speech acts (turn-taking, questioning and repair), code-switching, pronoun usage, silence and grammatical particles (Duff, 2002).

Through language use, we intend to examine epistemological beliefs of teachers in action. Since a classroom involves many practices of both teachers and students, conducting a study on every aspect of it seems impossible. Therefore, language use or classroom discourse of teachers become central to this research. In Saussurian terms, language could reflect collective worldviews of human beings which result from social interactions and how they "articulate" their world (Harris, 1988). This will provide insights on how teachers construct or transmit beliefs and worldviews through their socialization. Thus, this epistemological construction of beliefs of teachers may also reveal social meaning of "culture" in the Thai context.

### The role of questions and questioning in classroom discourse

It is not always the case that questions posed in classroom discourse perform as questions per se. There seems to be various views on the functions of teachers' questions in classrooms. Teachers may employ questions for several aims such as to check students' pre-existing knowledge, to elicit information from students or even to exert power in classroom discourse (Creider, 2009). However, Chaudron (1988) pointed out that teachers may ask questions to engage students, promote more interaction or evaluate students' progress.

To further elaborate this, Mehan (1979) clearly pointed out a significant difference between questions that teachers use to ask students inside and outside classrooms. The ones inside the classroom are typically followed by evaluations rather than acknowledgement made by teachers. The questions in classrooms tend to correspond with the role of teachers to test whether the knowledge held by the students match predetermined or pre-established domains. In this case, those questions would fall into the category of "known information questions" or "elicitations" In his study, there were two main functions of know information questions: to display students' knowledge and to search for correct answer. This also puts teachers in the expert role in classroom and seems to take change of interaction occurred (Hall & Walsh, 2002). According to Long and Sato (1983) the kinds of questions in a second language classroom were differentiated by whether teachers already know the answers or not: referential questions which are more open-ended, and not the known information questions, and display questions which are similar to known information questions.

A large number of classroom discourse analysis have been focused on IRF (Initial-Response-Feedback or Follow-Up) structures of interaction between teachers and students in classroom which was presented by Sinclair and Coulthard in 1975. Later in 1979, Mehan suggested similar patterns of Initial-Response-Evaluation in classrooms. These two sequence patterns are different as Sinclair and Coulthard viewed teachers' responses to students as feedback whereas Mehan thought of it as an evaluation to the response. Therefore, the role of teachers in the IRE cycles seemed to be the experts with more control of the classroom (Hall & Walsh, 2002).

The cycles of IRE (Mehan 1979) include the initiation of teachers which can be asking closed or open questions to test or evaluate students' pre-existing knowledge or previously transmitted information (I). Then students would provide brief answers (R), and afterwards teachers would evaluate them by giving compliments in the case of correct answers or identifying errors or even reproaches (E). Nevertheless, the IRF (Sinclair & Coulthard, 1975) cycles allow more functions for the third move such as accepting, acknowledging, answering or evaluating students' responses. According to the IRF model, the exchanges initiated by teachers can be formed to elicit and inform some information from students or to direct what is ongoing in classrooms. Thus, in this research, the IRF model was selected as the primary tool to analyze the data to provide overall description of classroom interaction, and later on to portray how questions are used in classrooms.

### Stance and epistemology

Epistemology in education is mainly studied in two main streams (Fujiwara & Phillips, 2006). First, the studies of epistemology as a means to describe a person's epistemological progress. These studies are often longitudinal and concerned with

individuals' developmental model (Magolda; 1992, King & Kitchener, 1994; and Kuhn, 1999; Pintrich, 2002). Also, Schommer (1990) and Schommer-Aikins (2002) are concerned more about the structure of the beliefs themselves in order to unveil its characteristics and nature. According to Schomer (1990), there are five factors construing epistemic beliefs of a person which are (1) structure of knowledge, (2) certainty of knowledge, (3) sources of knowledge, (4) control of knowledge acquisition, and (5) the speed of acquisition.

How teachers construct their questions could also help unveil their epistemological beliefs about culture. Linguistically, stance could refer to attitudes, evaluations and positionings people use in their interaction with the regard of context and whom they are talking to. Kiesling (2009) differentiated between epistemic stance which concerns how a person expresses their relationship to their talk or how certain he/she is of a claim or an assertion, and attitudinal stance which relates to how a person expresses their relation to their interlocutors. According to Patpong (2006), to negotiate attitudes in Thai language, one can use several linguistic devices such as attitudinal particles to make a confirmation, an assertion, an inquiry or even a request. These particles are similar to what Iwasaki and Horie (2005) categorize as information oriented-particles such as (*lâ, rěr, sì, mâng, etc.*). Also, there are epistemic modal auxiliaries which could convey certainty such as *dtông (must), nâa (should or could), kuan (should), or àat (probably)*.

### **Purpose of the Study**

The purpose of this study is to examine how a selected teacher constructs knowledge and beliefs or worldviews about culture in classroom through questions and its linguistic devices. The questions guiding this study are:

1. How does the teacher employ questions in classroom to construct or transmit knowledge?
2. What is the nature of epistemology embedded in linguistic behavior of the classroom discourse?

### **Data Collection**

The primary data of this study is a single case study of one session of classroom observation and a series of informal interviews with the teacher before and after the class. The researchers and the participant negotiated the date for the observation in advance. The participant was informed about the purpose of the research. All permission to do research in this school was granted prior to the actual observation day. The access to the class was authorized by the educational supervisor of the school, the principal and the selected teacher. The students and the teacher were aware of the observation in advance.

The observation was semi-structured where the researchers designed a guideline for the observation including classroom layout, lesson structure, material used (including what the participant wrote on the board), in-class activities and homework assignments. The class was audio-recorded.

### The school

The school site is located in one of the provinces in central Thailand which locates approximately 300 kilometers from Bangkok. It has been operating for 40 years under the Office of Basic Education Commission, Ministry of Education providing

education catering to pre-school, elementary, primary and secondary levels. Each grade has only one group of students with the number ranging from 9-22. The average number of students per class was 17. There were 175 students at the time of the research being conducted. The school won an award from the government for the best practice of integrating moral studies into classroom learning targeting the cooperation between schools, temples and households in their sub-district area in students' learning.

#### The participant

The selected teacher is a female with a background in education specializing in teaching social sciences. She has more than 30 years of experience and received excellent teaching and best practice awards at local and regional levels. Among these, her most recent award was the runner-up for the best educator (OBEC or Office of The Basic Education Commission Awards) of social sciences, religion and culture academic group for the secondary level. Many of her awards received were also about her attempt in promoting moral standards, ethics and sustainable economy among her students.

In her earlier days as a teacher, she began teaching all subjects for one class at primary levels. Later on she has been responsible for subjects such as social science and Thai language. In this school, she is responsible for 8<sup>th</sup> grade social science class and 8<sup>th</sup>-9<sup>th</sup> grades Thai language classes.

#### The class

The class was an 8<sup>th</sup> grade class which was located on the first floor of the school building. There were 22 students in this class, and they were in their second semester. Most students have known each other for quite some time since they were in the same primary school. The bookshelves contained textbooks used for different subjects. While we arrived there, all textbooks were already distributed. We were seated at the back of the class.

The class consisted of 13 boys and 9 girls. All were Thai nationals. Since the students were not the principal focus of the data analysis, the description provided is only to portray the classroom setting. The students were seated in rectangular tables. There were 3-6 students per one table. Mostly each table would have students from the same gender.

#### The lesson

During the time of the visit, this province was about to organize a local celebration for a renown king of Thailand from the 16<sup>th</sup> century. This local celebration is held every year and has been organized since 1979 in the middle of February. Therefore, some students and teachers were wearing traditional outfits in order to represent their participation in the tradition which is celebrated throughout the province. Also, wearing traditional Thai costumes seem to be the typical practice of many educational institutions in this province. The teacher was using this occasion as a thematic basis to construct the content of her class. Also, due to the absence of the Thai teacher who was responsible for Thai language class, she had to provide a Thai language lesson which was also planned in accordance with the theme mentioned. The class lasted 70 minutes.

Her lesson is outlined as follows:

- Greetings
- Revision of the previous lesson (regional Thai rituals)
- Introduction of the key content (the local event) of the current lesson (Excerpt 1)
- Importance of the event (Excerpt 2)
- Class activity: handouts for group study about the event
- Students' presentations about the event
- Suggestion for desired practices of students for the event
- (Thai language) Dictation about words used in the handouts
- Class conclusion and assignment details given

The two excerpts were selected to portray how questions were used to form beliefs about culture in this classroom. The first excerpt was taken at the beginning of her class where she began introducing the theme of the lesson to her students. The second excerpt was the episode when the teacher provided justification and how students should participate in this festival. These were the parts where questions were frequently and differently used.

### **Data analysis and discussion**

All data was translated into English for the purpose of data presentation only. The actual analysis was conducted as the basis of Thai which was the data's original language and the researchers' first language. The transcript's convention can be found in the appendix A.

To portray the overall interaction between the teacher and her students, exchanges were analyzed based on the IRF model. This will provide the future guideline for more in-depth analysis of the questions used by the teacher. The first number is the number of excerpt and the number after the colon suggests the turn. For example, 1:1 means the excerpt 1 and the first turn in this excerpt. The exchanges of the excerpt 1 are shown in the table below. Note that exchanges were not identified by turns because there were some turns (1:1, 1:2, 1:3, and 1:8) which were long and included both initiation and feedback.

This study includes qualitative analysis with discourse analysis methods relying on detailed and close analysis of linguistic elements in carefully-transcribed episodes of classroom talk. The data in each episode will be described and interpreted to portray each one in extensive details. Firstly, exchanges of turns or utterances in each episode will be identified by IRF method based on Sinclair and Coulthard (1975). Then overall sequencing of questions used would be described and followed by the linguistic construction of questions such as grammatical structure, modality and information-oriented particles used. Finally, all linguistic evidence would be means to interpret the beliefs being constructed within each episode.

Excerpt 1: Introducing the King's Day

Initiation	Reply	Feedback
1:1 T: Alright, today I wanna know why <i>students</i> are dressed up differently. You wear colorful clothes like this, why?	Students <laughing>	
1:1 T: [pointing to a student] Wear the shirt properly please.	Students <laughing> [The student adjusted the shirt.]	1:2 T: I thought a gangster was sitting in my class. Embarrassing. It's ok to wear a torn out shirt. We can always fix.
1:2 T: Why are you, <i>young kids</i> dressed up in blue, green, pink?	S1: Thai kids. S2: (province name) kids must wear Thai traditional outfits.	1:3 T: (province name) kids must wear Thai traditional outfits.
1:3 T: How about those who do not wear this? It means...?	S1: Kids without...without	
1:4 T: Why are you, <i>young kids</i> wearing traditional outfits, why <i>kids</i> ?	S1: Because I...It's the day. It's...	
1:5 T: What is the day?	<Silence>	1:6 T: It's that day.
1:7 T: What is the day? What is it?	S1: Day Day Day... Our culture...	1:8 T: Ah you still can't answer this at all.
1:8 T: Why are you, <i>young kids</i> all dressing up in Thai local costumes? Why? Because of what reason, <i>kids</i> ?	Students: Because...	
1:9 T: Because it is what day?	S1: It's (The King's name)'s day	
1:10 T: Who can answer what day is it?	Students: (The King's name)'s day	1:11 T: Ah the majority got the right answer.

Note: young kids = nŏo and kids = lôok

Sequencing of questions

In excerpt 1, the exchanges were repetitive as seen in elicitation sequences used by teachers. These sequences followed the basic elicitation sequences identified in both Sinclair and Coulthard (1975) and Mehan (1979). The majority of the questions used were wh-questions: “why” and “what” suggested the open-ended nature of questions which functioned more like display questions as seen in turns 1:8 and 1:11, but the teacher finally evaluated the students' responses (Turn 1:8 was the bipolarized negative evaluation, and turn 1:11 was the positive evaluation).

According to Long and Sato (1983), closed or display questions tend to be a prompt for short or one specific answer already known to teachers, while open or referential questions are more geared towards open discussion where teachers genuinely look for the answers. There are two issues here: forms and functions of questions. The participant employed linguistic forms “why” which reflected openness in her questions, yet when analyzing her feedback these questions were formulated to gain a short and specific answer. “Why are you wearing colorful clothes?” seemed to be open for discussion, but in this particular context, where the teacher may have asked the students in advance to put these outfits on, there could be only one answer. Thus, these “why” questions are display questions with the purpose to introduce the theme of this lesson as a single correct response to the question.

Looking closely at the feedback given by the teacher, there were several occasions that there were none. The teacher simply moved on to make more elicitation questions. The absence of feedback could be because of the nature of Thai culture where negative comments were not normally provided directly as to not disrupt the harmony of the speech community. The context where the teacher insisted in asking similar questions repeatedly was sufficient to infer that the students' response was not yet correct. The teacher had not given any feedback until turn 1:8 where she delivered the negative feedback.

The lack of feedback at the beginning of the episode and the clear-cut negative or positive feedback revealed that the knowledge or information of this class was transmitted by the teacher. The students simply played a role of a passive participant in this classroom community. The teacher determined if the response was correct or incorrect. This phenomenon could imply that the teacher views knowledge as a fixated domain. The bipolar feedback reflected the nature of static viewpoint on knowledge as culture appeared in this classroom discourse could either be right or wrong.

The linguistic structure of questions gradually changed throughout the excerpt as the teacher attempted to provide hint and at the same time engaged students to respond. The evidence of engagement was in turn 1:1 where the teacher used “I wonder why...” This suggested an open nature of the actual question to follow, and also the gradient of this question. It seemed as if in practice, the participant welcomed the engagement of students, but the response had to be “correct”, as seen in other turns with why-question words later on.

Nevertheless, the questions which appeared in other turns later did not show lack of certainty. Another type of question found in this excerpt is the embedded question-word. The question-word would appear at the beginning or the end such as turn 1:10 “who can answer what day is it?” This was used when the teacher asked questions to target a specific single answer. Note that the sequence of questions was from seemingly open and less certain to more specific and certain (I wonder why questions to who can answer what day is it) The last question used in this excerpt (turn 1:10) targeted only one answer clearly, the festival.

#### The Why Effect

The teacher used why extensively in this episode to elicit the answer, which was the reason why the students wore traditional outfits and not their usual school uniforms.

Therefore, the majority of questions used by the teacher were display or known information questions. However, it can be inferred that the information about the school uniform was ellipited as it was mutually understood or it was the teacher's instruction to wear the traditional clothes.

Throughout this excerpt "why" was used repeatedly. "Why" or *tam-mai* can be considered an adverbial interrogative according to Iwasaki and Ingkapirom (2009). Why in Thai can appear either at the beginning or the end of a sentence; however, the final position tend to be common. For this particular episode, the teacher used far more "why" at sentence-initial positions (turns 1:2, 1:4 and 1:8) than final why ones (turn 1:1). The first two sentence-initial why questions were more general to more specific questions (turns 1:1 and 1:2). The teacher asked why the students wear colorful shirts, then she repeated the question again by adding the specific colors. By doing so, the teacher created a clearer scope of her target answer.

Once the students failed to provide the answer, she repeated the student's answer and adjusted her "why" question to start with the negative information targeting "those who do not wear this" in turn 1:3, and this was followed by the clause "which means..." Even though it could be answered in multiple ways, this unfinished-declarative-sentence question suggested limited answers especially when it was marked with the negative information about the students. This could also be interpreted as a borderline reproach to those students who failed to wear the shirts followed by a command to give one single specific answer.

Another variation of "why" questions used in this episode started with a negative feedback when the students could not answer, and when there was a series of initial-why questions followed by "because of what?" This appeared in turn 1:8. The change from why to what could suggest the tendency to move from open-ended nature of questions to more specific target answer type of questions. Nevertheless, this series of questions was still regarded as display or known information question because the teacher's negative and positive evaluations of the answer were explicit in turns 1:8 and 1:11.

**Excerpt 2: What should you be proud of?**

Initiation	Response	Feedback
	S: Reminiscing	
		2:1 T: Ah it was well-answered, this group got a good answer.
2:1 T: We should reminisce about?	Students: (The King's name)	
		2:2 T: The greatest king who came to live in our province.
2:2 T: So we as a (the province's name), how should we feel about the festival that other people in other provinces don't have? How do you feel, <i>kids</i> that you have this festival (name of the festival)?	Students: Good.	
2:3 T: How do you feel, <i>kids</i> , to make it proper?	S: Impressed	
2:4 T: Impressed about what?	S1: His prestige, the dressing up in Thai outfits	2:5 T: The dressing up in Thai outfits, something other provinces don't have
	S2: Proud	
2:6 T: Proud that...?	S2: We have a place to enjoy and to dress up in Thai outfits.	2:7 T: To be able to wear Thai outfits.

In this excerpt, the participant asked the students about their feeling about the festival and its significance to the locals. She also provided guidelines of proper practices for students. There were mainly two types of questions focusing on the linguistic forms: the unfinished-declarative- sentence questions (turns 2:1, 2:4 and 2:6) and the how-questions (turns 2:2 and 2:3).

The incomplete sentence as question in turn 2:1 suggested a specific frame of answer. This can be another display question since the feedback of the teacher to the students' answer was a repetition of students' response with extra information provided. Turns 2:4 and 2:6 also showed the similar pattern which was a cognitive verb “to reminisce” and affective adjectives “impressed” and “proud.” This combination is interesting as these verbs and adjectives relate to cognition process, yet the teacher chose to create a rather limited scope for questions since the actual question words (who and what) were omitted. The correct responses of these questions were repeated by the teacher implying that they were correct.

Then in the turn 2:2, how-questions appeared in sequences. First, the teacher began by assuming a role of a local of this particular province before asking the actual question. The first how-question in this turn was structured with a “we” pronoun followed by an

adjective clause providing a shell word of the festival in the question. Then the question was repeated again with the change in the pronoun from “we” to “kids” and followed by the specific name of the festival. It was obvious that the two how-questions were parallel in structure, but there was difference in both the pronoun and the content words. This could suggest that first, the teacher assigned a role for students to respond accordingly, and then the actual question came later with specific information given as a clear command for her target answer.

#### The lack of modality and summary

In summary, the teacher barely used linguistic devices to increase or decrease the level of certainty in her questions. The majority of verbs appeared in her questions were not equipped with any modality. There was a scarcity in any linguistic boosters for any questions in this episode as well, except for the use of the adverb “at all” in her negative feedback to evaluate students' response in turn 1:8. Nevertheless, the feedback seems to be a reproach as she used the modal “can” and verb “to answer” with the adverb “at all” to focus on the inability to answer her question of the students rather than a clear judgement of the right or wrong answer. This when compared to her positive evaluation “the majority got the right answer.” in turn 1:11 could still reflect her view on the “culture” she was representing as a static bipolarized notion with only possibilities of a right or wrong answer. Similarly, in Excerpt 2, there were neither modal auxiliaries nor any information-oriented or attitudinal particles which suggested any gradient of certainty visible. Even though the central issue in the second excerpt was feelings and emotions, the teacher was not expressing any clear gradient. This revealed another static view on the culture which was about the local festival and how one should feel about it.

Excerpt 1 reveals how the teacher used questions to structure the introduction of her key content. These questions were open-ended and display questions where the teacher knew or expected certain specific answer from students. Even though the students were occasionally encouraged by the teacher to respond, there seemed to be limitation in terms of the scope of answers that students should give, as seen in the teacher's feedbacks. In Excerpt 2, students were asked with display questions and open-ended question words like how, yet again there was a clear limitation in students' answer when analyzing the feedback she gave to students. Evidently, with this limitation and the lack of any gradient of stance in both excerpts, the teacher appears to have inflexible beliefs on the issue she was about to present to her class. Hence, since her beliefs about the cultural topic discussed in class was fixed, she assumed the role of a knowledge transmitter in these episodes.

#### **Conclusion**

It is crucial that teachers should be aware of how they deliver or construct knowledge in their classroom. Through extensive analyses, the short excerpts selected suggest that the teacher uses questions to structure and transmit cultural information, and the students' response was considered by teacher as being right or wrong. The linguistic evidence also reflects the beliefs that the teacher hold about the local culture she was discussing in her class. This phenomenon reveals a rigid view on the culture, as suggested in the questions' structure and linguistic devices.

The understanding of what a teacher constitutes, based on the recommendation put

forward by Thailand's National Act, is that they are positivist pedagogic agents responsible for transmitting a body of cultural knowledge which is factual and restricted, instead of pluralistic or flexible. Another valuable issue to point out is that this case study was conducted in an awards-winning teacher. This inevitably reveals the values and expectation held by the educational policy-makers with regards to what makes a "good" social sciences teacher. Considering all these together, it appears that the teaching of culture takes a very conservative and traditional approach. This may be a result of cultural values pertinent to the immediate context, but a critical question to raise is whether or not this approach will complement Thailand's efforts to prepare for the ASEAN community. More of research of this nature will reveal that a comprehensive reform may be due for social sciences pedagogy. Furthermore, the findings could suggest teachers, teachers' trainers, educational institutions and policy-makers to pause and ponder about the significance of what really goes on in classrooms, and whether the impact of this kind of teaching yield an efficient outcome on the behalf of students, especially when they face the outside world on their own.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, serif font. The logo is partially enclosed by a large, light blue circular arc that starts from the bottom left and curves towards the right. A smaller, light red circular arc is positioned above the 'iafor' text, partially overlapping the blue arc.

## References

- Belanky, M. F. et al. (1986). *Women's ways of knowing*. New York: Basic Books.
- Berry, J. W. (1989). Imposed etics-emics-derived etics: The operationalization of a compelling idea. *International Journal of Psychology*, 24(6), 721-735.
- Brown, P. and Levinson, S. (1987). *Politeness: Some Universals in Language Usage*. Cambridge: Cambridge University Press.
- Cambridge, Massachusetts, Harvard University Press.
- Chaudron, C. (1988). *Second language classrooms: Research on teaching and learning*. Cambridge University Press.
- Chongdarakul, W. (2003). *The relationships between Thai secondary school social studiesteachers' beliefs about civic education, epistemological beliefs and classroom practices: A model for Thai in-service professional development*. (Doctoral dissertation, Portland State University, Portland).
- Creider, S. (2009). Frames, footing, and teacher-initiated questions: An analysis of a beginning French class for adults. *Working Papers in TESOL and Applied Linguistics*, 9(2), 87-134.
- Duff, P. A. (2002). The discursive co-construction of knowledge, identity, and difference: An ethnography of communication in the high school mainstream. *Applied linguistics*, 23(3), 289-322.
- Fujiwara, T., & Phillips, B. J. (2006). Personal epistemology of Thai university students: Cultural influence on the development of beliefs about knowledge and knowing. In *Proceedings of the 2006 Annual International Conference of the Higher Education Research and Development Society of Australasia (HERDSA): Research and Development in Higher Education* (Vol. 29, pp. 115-122).
- Grice, H. P. (1975). Logic and conversation. 1975, 41-58.
- Goffman, E. (1967). *Interaction ritual: essays on face-to-face interaction*.
- Gumperz, J. (1982). *Discourse Strategies*. Cambridge: Cambridge University Press.
- Hall, J. K., & Walsh, M. (2002). 10. TEACHER-STUDENT INTERACTION AND LANGUAGE LEARNING. *Annual Review of Applied Linguistics*, 22(1), 186-203.
- Hammer, D., & Elby, A. (2002). On the form of a personal epistemology. *Personal epistemology: The psychology of beliefs about knowledge and knowing*, 169-190.
- Harris, R. (1988). *Language, Saussure and Wittgenstein: how to play games with*

words:

Routledge history of linguistic thought series. London: Routledge.

- Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of educational research*, 67(1), 88-140.
- Hofstede, G. (1984). *Culture's consequences: International differences in work-related values* (Vol. 5). sage.
- House R.J. et al. (eds.). (2004). *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*. Thousand Oaks, CA: Sage.
- Iwasaki, S., & Horie, I. P. (2005). *A reference grammar of Thai*. Cambridge University Press.
- Kiesling, S. F. (2009). Style as stance. *Stance: sociolinguistic perspectives*, 171.
- King, P. M., & Kitchener, K. S. (1994). *Developing Reflective Judgment: Understanding and Promoting Intellectual Growth and Critical Thinking in Adolescents and Adults*. Jossey-Bass Higher and Adult Education Series and Jossey-Bass Social and Behavioral Science Series.
- Kluckhohn, F. R., & Strodtbeck, F. L. (1961). Variations in value orientations.
- Kuhn, D. (1999). A developmental model of critical thinking. *Educational researcher*, 28(2), 16-46.
- Leech, G. N., & Leech, G. (1983). *Principles of pragmatics* (Vol. 1, No. 9, p. 85). London: Longman.
- Long, M. H. & Sato, CJ (1983). Classroom foreigner talk discourse: Forms and functions of Teacher's Questions. *TESOL Quarterly*, 15, 26-30.
- National Education Commission. (1999). National Education Act of BE 2543 (1999). *Bangkok, Thailand*.
- Magolda, M. B. B. (1992). *Knowing and reasoning in college: Gender-related patterns in students' intellectual development*. Jossey-Bass.
- Mehan, H. (1979). 'What time is it, Denise?': Asking known information questions in classroom discourse. *Theory into practice*, 18(4), 285-294.
- Mercer, N. (2010). The analysis of classroom talk: Methods and methodologies. *British journal of educational psychology*, 80(1), 1-14.
- Parsons, T. (1949). *The structure of social action* (Vol. 2). New York: Free Press.
- Patpong, P. (2006). *A systemic functional interpretation of Thai grammar: An*

*exploration of Thai narrative discourse* (Doctoral dissertation, Macquarie University Sydney, Australia).

Perry, W. G. (1970). Forms of intellectual and ethical development during the college years. *Austin: Holt, Rinehart and Winston*. [Links].

Pintrich, P. R. (2002). Future challenges and directions for theory and research on personal epistemology. *Personal epistemology: The psychology of beliefs about knowledge and knowing*, 389-414.

Schommer-Aikins, M., & Hutter, R. (2002). Epistemological beliefs and thinking about everyday controversial issues. *The Journal of Psychology*, 136(1), 5-20.

Schommer, M. (1990). Effects of beliefs about the nature of knowledge on comprehension.

second language acquisition (pp. 268–285). Cambridge, MA: Newbury House Publishers.

Sinclair, J. and Coulthard, M. (1975) *Towards an Analysis of Discourse: the English used by teachers and pupils*. London: Oxford University Press.

teachers' questions. In H. W. Seliger and M. H. Long (Eds.), *Classroom oriented research in*

Useem, J., Useem, R., & Donoghue, J. (1963). Men in the middle of the third culture: The roles of American and non-Western people in cross-cultural administration. *Human Organization*, 22(3), 169-179.

Vygotsky, L. S. (1978). *Mind in society: The development of higher mental process*. Cambridge: Harvard University Press.

## Appendix A

### Transcription Symbols

<i>T</i>	Teacher
<i>S(number)</i>	One student
<i>Students</i>	The whole class
<i>italics</i>	The translated words in Thai without any equivalence words in English
( )	The information intentionally omitted to ensure the anonymity of the source of data
< >	Non-verbal cues
[ ]	Gestures in classroom added by the researcher according to the observation note
...	pause

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*The Effect of "jarimatika" Multimedia in  
Counting Ability of Children*

Wang Weijun\*<sup>1</sup>, Farid Ahmadi\*<sup>2</sup>

\*<sup>1</sup>Central China Normal University, China, \*<sup>2</sup>Semarang state University, Indonesia

0123

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Abstract

This study aims to improve the ability to study mathematic in children that will ultimately affect the child's motivation and final score. The development of this method will also facilitate the teachers, the parents and their children to understand the things that exist around them. The main target of learning media is to improve counting number of children.

The paper based on an mix method research that conducted by embedded experiment design (John. W. Craswell, 2010). Techniques and data collection data using pretest and posttest. Quantitative reseacrh data analysis is using t test analysis techniques. This study also observe of implementation stage of learning it uses the "Jarimatika" learning media based on the multimedia which is developed by using more advanced information technology.

The subjects of the study were early childhood in second grade, between the ages of 5-8 years with a total of 40 children. To analyst data this study using SPSS 17.0 conducted by pre-test and post-test design. Techniques and data collection data using achievement tests, research data analysis was using t test analysis techniques. In the result of paried-sample t test showed that children had counting ability significantly high in post test than pre test,  $t(36)=-8.400$ ,  $p < .001$ . The data showed post test ( $M=76.487$ ,  $SD=15.673$ ) and pre test ( $M=48.513$ ,  $SD=12,409$ ). In the differensial Gender indicated that there were no significant different between boys and girls of testing both Pre test ( $t(35)=-138$ ,  $p=.891$ ) and Post test ( $t(34.062)=-1.534$ ,  $p=.134$ ). It was mean that between boys and girls there was simmilarity of counting ability and how to improve their knowledge.

**Keywords:** jarimatika, Multimedia, motivation, Learning

## 1. INTRODUCTION

The existence and enforcement of the Law on Teachers and Lecturers in Indonesia requires educators to be more professional and competent in accordance with his knowledge fields . Development of science is rapidly increasing, it should be balanced with the ability to master technology so that the professionalism of educators can be tailored to the needs and dynamics of science itself. Especially for teachers of elementary school level , in addition to the mastery of teaching techniques , produce scholarly works , and it is important to master the technology in supporting learning process as one of the important skills that must be owned by the teachers in the future .

The main purpose of National Education in Indonesia is the nation's intellectual life . In particular , this means improving Human Resources . What is the situation of education in Indonesia today ? Eight years ago , i.e. in 1993 , the National Education Advisory Board consisting of educational experts , told the legislative council that based on the study of some universities and individuals , the quality of education in Indonesia was decreasing , especially in terms of attitude formation and behavior of students ( Suara Pembaharuan , December 15, 1993 ) . Referring to the Indonesian Law page 23 of 2003 on the national education system , in article 1 and article 39 , which generally states that the meaning of teaching staff is anyone who is in charge of running the role and teaching , assessing learning outcomes , research, community service and education both as a teacher , lecturer , counselor , teaching staff, instructor , tutor , coach , widyaiswara, officials learned , facilitator or whatever it is called which has the same principle and not distinguishable from one another . Professionalism emphasizes the mastery of science or management capabilities along with its implementation strategy . Maister (1997 ) stated that professionalism is not just a technology and management knowledge , but rather an attitude. professional development is more than a technician , not only have the skill, but also has a required behavior .

Computer technology was developed in the early 1950s ( Heinich , et al . , 1996) , and since then the computer has contributed much tremendous benefits to people's lives . The largest contribution in the field of education has been felt since long , though the use of computers in schools is still limited to word processing or by calculation work sheet.

The use of computer software for learning activities is actually quite limited ( Fey and Heid , 1984: 21 ) , and the potential of computer technology as a medium of learning mathematics is so enormous ( Fletcher , 1983: 1 ) . Lots of real contribution from computer dedicated to the development of education , particularly the teaching of mathematics . Computers can be used to address individual differences in students ; teach the concepts ; perform calculations and stimulate student learning ( Glass , 1984: 11 ) .

Computer has advantages which are not possessed by other media. For example, the computer can provide services in repetitive , featuring visualization in an attractive format and design , animated images and good sounds, and serves individual differences . A computer with good software design can visualize repeated presentations and dynamic characteristics that are not found in other media ( Wilson , 1988) .

Education is one very important part in the life of the Indonesian people . With education from primary level to higher education has resulted in many educated

workers who are ready to participate in the development of both current technology, political, economic and socio-cultural. But in reality there are many graduates who have not been able to work in areas of education, although the graduates have earned his bachelor degree. In one study, it is stated that human productivity in Indonesia is so low. This is because less confident, less competitive, less creative and difficult initiatives of its own course, it is caused by the top-down education system, and is not nurturing innovation and creativity (N Idrus CITD 1999).

Indonesian traditional education in the school system that has been implemented in the classroom has lasted hundreds or even thousands of years which is usually delivered by teachers in delivering the subject matter by taking material from reference books that have been used previously (text book) which will be heard by the disciples then continued with the activities noted that the subject matter was submitted. However, with the increasing complexity of human life, the development of technology added with intense competition between human resources leads to the increasing demand for Indonesian people who must have high competitiveness to get a better life. At this time, many researchs have been done that show the new system of learning activity that is active learning which provides many opportunities for students to be able to absorb more the subject matter, remember and understand longer and the most important is to the learning activities itself rather than traditional learning. Fink suggests that students must do more than just listen, active learning system.

Educational development occurs in all countries as well as in Indonesia. The development of education in Indonesia is indicated by the development of educational curriculum, ranging from curriculum 1994 Competency Based Curriculum and the Education Unit Level Curriculum. In 2007-2008 school year, Indonesia is using Education Unit Level Curriculum which leads to more independence of any educational institution or school to manage learning in the classroom. It is mandated by Act No. 20 of 2003 and Government Regulation of the Republic of Indonesia Number 19 of 2005. This requires a teacher to be creative in delivering both concerning the subject matter of emotional intelligence, such as linguistic and mathematical logic.

Mathematics is one of the science branch which is very important for any country. This is agreed by Morris Kline (1961) that the rise and fall of a nation today depends on the progress in the field of mathematics. Slamet also argued that the mathematical function can be an endurance Indonesia in the 20th century on the highway of the nations cited by Lisnawati in mathematics teaching methods (1993:25). The importance of mathematics to the progress of the nation require students and pupils can deepen their knowledge of mathematics and can apply in everyday life.

Mathematics by the majority of students are still considered a scourge, a dull subject, filled with symbols, formulas are difficult and very confusing (Masykur and Fathani, 2008). Pranoto one observer of mathematics education and mathematics ITB lecturer, said, "less varied than the existing patterns of teaching, students' fear on mathematics teaching pattern is also caused by the teacher, who sees his students that is so much asking as being brash and does not adhere to the pattern teaching teachers" (Wirasto, 1987).

Based on the explanation above it can be concluded that the role of instructor or teacher is very strategic in the teaching of mathematics, to make students interest in learning mathematics. Furthermore, the teacher is also required to be more

creative in delivering mathematics and reduce the perception of students about the nature of mathematics as an abstract object .

Elementary students will be easier to remember and understand the mathematics learning if he is happy to do so and accompanied by concrete experiences that exist in everyday life . It is similar with what delivered by Zoltan P. Dienes quoted by ETRuseffendi ( 1980:135 ) says all abstractions based on the situation and concrete experience , Multiple Embodiment Principal is a principle in which when applied by teachers for each concept being taught will enhance students' appreciation of the concept . If an elementary school student involved in the learning the students will feel happy , not bored and spirit will increase in student learning . Through this game in the form of instructional media, students are encouraged to work directly in learning process and unwittingly been able to apply learning concepts in mathematics .

Based on what has been described above, it takes an innovation that can enhance elementary students' interest and achievement in mathematics . one of the way that can be done is using learning media trough jarimatika game by utilizing a junk so that the child will understand more about Jarimatika material . through the game , children will be easy to remember and understand what they have done . The game will also educate children to be active in learning . The learning media can also support the program in achieving its purpose that is Education Unit Level Curriculum .

At the stage of field observations in Tambak Aji 01 elementary school, Semarang , which is based on sampling the data obtained student scores from year to year for Mathematics showed an increase in value - average grade for the period 2006/2007 to 2009/2010 was only 35 % each year . For that reason, created a new method in the new process of learning multimedia technologies by using Jarimatika method but presented in the form of an interactive CD so that students in calculating artimatika only accompanied by computer , so students can quickly and accurately perform a variety of activities to improve numeracy skills with an interactive CD . Evaluation process and numeracy test at the end of this learning is also performed in this system . By utilizing this learning software writer designed a game form Jarimatika interactive , fun and will make students become interested in studying math and trying to improve the numeracy ability.

## **2. LITERATURE REVIEW**

### **2.1 Multimedia-enabled learning**

To make a popular and efficient multimedia system, the general principle for user interface design should be examined (Mayhew, 1992; Smith & Mosier, 1986). Additionally understanding the way of how people thinking, learning and realizing is also one important factor in designing userfriendly interface for multimedia systems (Najjar, 1997). Mayhew (1992) and Smith and Mosier (1986) proposed that interface design considerations could be grouped under e psychology, computer science, graphical design and curriculum design. Whereas Najjar (2001) suggested the focus should be on improving students learning experiences, while constructing the multimedia system. Clark and Mayer (2003) combined those cognitive learning theory and proposed the following principles:

Multimedia, presentations using images and verbal expression simultaneously are clearer than just verbal expression is selected. According to cognitive theory and

results from experiments, information consisting of images and verbal data (oral or written data or both) can produce better learning performances. Presentations using multimedia can encourage students to establish linkage between words and graphics, resulting students with stronger willingness to learn. Second is Formation: the addition of oral explanation with text presentation improves the learner experiences. However, overloading with visual material should be avoided. When reading text students tend to concentrate on complicated words rather than the whole information. Audio delivery ensures sequential rate of information processing is maintained. This is essential when the quantity of information is large.

## 2.2 Media

Media is derived from the Latin which is the plural of "medium" which literally means "Intermediary" or "Introduction" is an intermediary or introductory message source to the recipient. Some experts provide a definition of instructional media. Schramm (1977) suggested that learning media is the messenger of technology that can be used for learning purposes. Meanwhile, Briggs (1977) argues that learning media is physical media to deliver content / learning materials such as books, movies, videos and many more. While, the National Education Association (1969) revealed that learning media is communication media in print and audio-visual, including technology hardware. From the three above opinions, it can be concluded that the instructional media is anything that can be channeled messages, can stimulate the mind, feelings, and the willingness of students so as to encourage the creation of learning process in self-learners. Brown (1973) revealed that instructional media are used in learning activities can affect the effectiveness of learning.

At first, the media only serves as a learning tool used by teachers to teach which was visual aids. Around mid century, to 20 for utilization of visual features with the use of audio equipment, there was the audio visual aids. In line with the development of science and technology, particularly in the fields of education, current use of assistive devices or media become increasingly widespread learning and interactive, such as the computer and internet. Learning Media has several functions, including:

1. Learning media can overcome the limitations of experience possessed by the learners. Experience of each learner is different, depending on the factors that determine the child's wealth of experience, such as the availability of books, encircling opportunities, and so on. Learning media can overcome these differences. If learners may not be brought to the immediate object being studied, the object is brought to learners then. Objects referred to in the form of a real, miniature, models, and images that can be presented in audio visual and audial.
2. Learning media can transcend the limitation of the classroom. Many things may not be experienced directly in the classroom by the students of an object, because the object is too big or too small, the object is moving too slow or too fast moving, objects that are too complex, object sounds too smooth, and objects containing dangerous and high risk. Through the use of appropriate media, then all objects can be presented to students.
3. Instructional media allows for direct interaction between the learner and his environment.
4. Media produces uniformity observations
5. Media implants the basic concepts correct, concrete, and realistic.

6. Media arouse new desires and interests.
7. Media awaken and stimulate the child's motivation to learn.
8. The media gives the integral experience or thorough the concrete to the abstract.

### 2.3 Computer

A computer is a general purpose device that can be programmed to carry out a finite set of arithmetic or logical operations. Since a sequence of operations can be readily changed, the computer can solve more than one kind of problem. Computers can be used to address individual differences in students; teach concepts; perform calculations and stimulate student learning (Glass, 1984: 11). Computers are increasingly being incorporated into school curriculums. Teachers present processes and concepts using programs such as Powerpoint, and students can utilize visual models and word processor to enhance their learning experience. Are Computers Effective at instructing students to retain information better? Some studies show a dramatic increase in performance while others show that computer has small to moderate-sized positive effects on achievement (Avrim, 2000). From research, it can be concluded that computer is best used when it is in addition to the instruction of a teacher and not when it replaces the teacher. The exact implications of computers in the classroom are unclear, but one thing that is apparent is that the outlook of computers in education is promising.

### 2.3 Arithmetic

Arithmetic is an ability to calculate arithmetic operations such as addition, subtraction, multiplication and division quickly without the help of a calculator even for numbers whose value is quite large. While the clever finger arithmetic is practical theory quickly learn to count by twisting fingers of the two hands. Smart Fingers Arithmetic capabilities such as Add, Multiply, Subtract, For (takkubagi), fraction, Circumference, Area, Volume, rank, roots Rank, Prima Factor. There are several advantages of Smart Finger Arithmetic, the memory of which is not to overload the brain, does not change the basic mathematical methods, using a mathematical formula that is standard, Moving counting from the brain to the fingers, has a curriculum that relevant with the Education Unit Level Curriculum Mathematics in elementary school which can apply mathematics hands and fingers to play while learning.

### 2.4 Jarimatika

There are several advantages of Smart Finger Arithmetic, ie which are not burdening the memory of the brain, does not change the basic mathematical methods, using a mathematical formula that is standard, Moving counting from the brain to the fingers, Having relevant with Indonesian curriculum elementary mathematics, to apply mathematical hands and fingers to play while learning refers to. The combination of jarimatika and multimedia system would like improve children motivation for learning.

### 2.5 Gender

The concern over the shortage of highly qualified scientists, especially girls scientists, has highlighted the need of science education for children (Jarvis & Pell, 2002). The belief is that if children develop positive attitudes toward science and enjoy learning

science during the school. Research on gender and attitudes toward science, however is mixed. Some research have shown girls attitudes toward science are significantly less positive than boys (Hendley, Stables, &Stables 1996).

### 3. PURPOSE THE STUDY OF AND RESERACH QUESTION

The purpose of this study was to examine the effect of jarimatika Multimedia to counting acqitition of final score using jarimatika Multimedia software that developpt by macromedia flash built for second grade in primary school. A previous study investigated how students with different ability levels performed in this multimedia environtment (Liu, 2004). This sample of this study from second grade primary school. In addition examination any change in students attitudes and mathematic knowledge from pretest and posttes . There are two questions guided this study :

1. What is the effect of jarimatika multimedia learning on second grade of primary school final score mathematic ?
2. Are there any differences in final score mathematic learning between boys and girls children after using the program ?

### 4. RESEARCH METHOD

#### 4.1 Participant and Setting

40 students from one primary school students and two teachers in Semarang Indonesia participated in the study. All participants were from formal education classes and 25 boys, 15 girls. Two teachers from the same primary school and they had experiences teaching 5-6 years.

#### 4.2 Design and Product

The design of this reserach was mix method research using embeded experimentd design (One Phase),(Jown. W.Creswell, 2010).

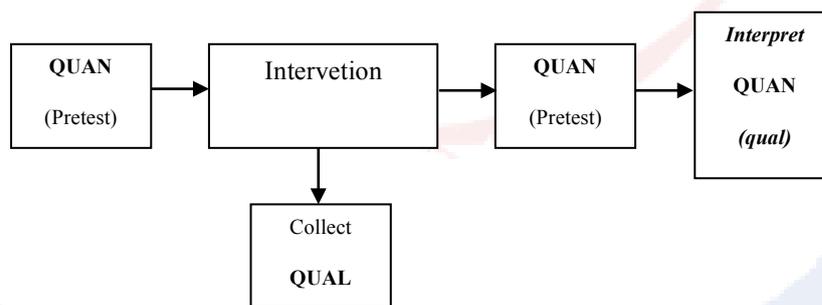


Figure 1. : embeded experimentd design (One Phase)

In Figure 1 drawn that there was two step of quantitative data finding, It was pre test and post test design. Observation qualitative data finding conducted by intervention step before build pretest to get result of experiment design. In experiment method during learning in the classroom and it was conducted by implementing the class act of the study consisted of two cycles, and the cycle there are activities including Planning, Implementation / execution of the action (acting), Observation (observing), and Reflection (reflecting).

### 4.3 Product

The product of this study was jarimatika multimedia that design by macromedia flash MX based on requirement study in the classroom. In planning steps describing about how to make a plan before develop product. The figure 2-3 showed design layout of this product (jarimatika Multimedia)



Figure 2 : Design layout of jarimatika Multimedia



Figure 3 : Design of jarimatika method

#### 4.4 Measurement

The 10 items multiple choice questions and 6 items explanation questions examined in pre test for investigating students counting ability after conventional learning in the classroom that conducted by teacher without media learning . The next step was examined counting ability using jarimatika multimedia, There was 10 items online test as one of contents in jarimatika multimedia learning and students can saw their score directly.

### 5. RESULTS

#### 5.1 Discriptive Data

The result of the data analyst using SPSS 17.0 showed that both of boys and girls had Standard Deviation for pre test 14.409 and Mean 50.514, for post test Mean 78.514 and SD 17.673. The Table 1 below showed the detail of result.

Table 1. Means and Standard Deviations in preliminary for the pre test and post test :

Variable	Group	N	Mean	SD
Pre test	B	25	50.25	14.698
	G	15	50.824	14.441
	T	40	50.514	14.409
Post test	B	25	73	17.501
	G	15	80.588	12.485
	T	40	78.514	17.673

#### 5.2 Counting Ability

The result of paired samples t test using SPSS 17.0 showed that children had counting ability significantly high in post test than pre test,  $t(40)=-8.400$ ,  $p < .001$ . The data showed post test ( $M=78.487$ ,  $SD=17.673$ ) and pre test ( $M=50.513$ ,  $SD=14.409$ ).

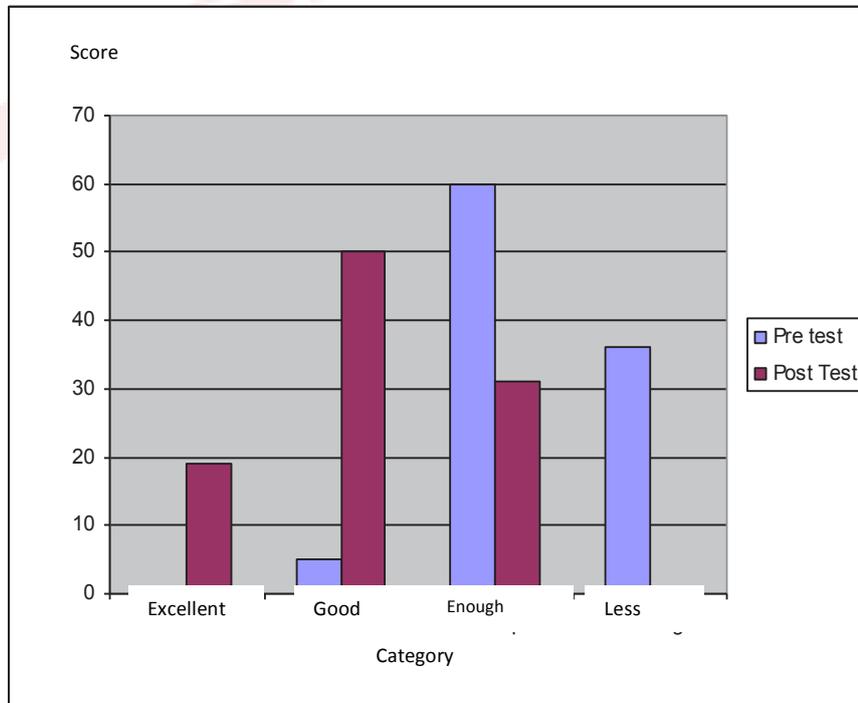
#### 5.3 Gender

*Gender.* The result indicated that there were no significant different between boys and girls both Pre test ( $t(35)=-1.38$ ,  $p=.891$ ) and Post test ( $t(34.062)=-1.534$ ,  $p=.134$ ). It was mean that between boys and girls there was simmilarity of counting ability and how to improve their counting ability.

This study also observe how to improve and provide great motivation in primary school students, especially the second grade that can not count well, this is a continuation of activities as early as possible students equipped with the activities of information technology-based, using computer media and interactive CDs, involving classroom teachers and students as mentors and assist students in learning the steps to run this. Based on these considerations can be formulated the problems, how do we improve elementary school students' interest and accelerate the process of mastering each letter and word, and answered the question of whether the research activities and the learning of the students learning participants can quickly master how to read and intelligently know the colors that will be presented in this study, the process of how

the motivation and desire of children to read, as well as follow-up research and learning to apply it on the capabilities and intelligence of children.

The Graph 1 described that there was significantly increase of mathematic learning score categories between cycle 1 using konvensional learning method and cycle 2 using jarimatika multimedia learning method.



Graph 1 :Student success rate of counting ability between cycle 1 and 2 by jarimatika multimedia

## 6. DISCUSSION

The results of the study showed that the children had significantly increased their counting ability final score from pretest and posttest. The teachers was also increased their performance, how to tough good learning using jarimatika multimedia, that results showed in quantitative data by action research in the classroom and action plan that maked by teachers.

There was no gender difference in the pre test and post test score. Both boys and girls increased their counting ability final score. Such results are in line with the findings research (Whitehead, 1996). It also confirmed the findings of a previous study that examined the same multimedia learning and found no gender differences.

Students to the material absorption in Indonesian subjects first semester second Grade can be improved. It is characterized by good lesson plan that made by teacher, the student's ability to absorb the learning materials both conventional and multimedia based on the second cycle has increased significantly, so expect this learning model always can be applied by teacher at each lesson. Students learning outcomes in the Indonesian subjects first semester first grade can be improved., Particularly on the subject of improving the understanding and interest in mathematic for students that is characterized by an increased value of the average cycle 1 and cycle 2. The average

results of the study on the second cycle and 76 percentages categorized as good and the number of students who responded to this study is viewed as the optimal value that can be achieved by the students.

Students in difference gender had the same ability for counting, it based on the result of data analyst in gender area. There was no significantly difference final score counting ability between boys and girls. Both of them got increasing score before using jarimatika multimedia learning in post test.

## **7. RECOMENDATION**

To increase interest, the ability to self-learning and foster self-confidence of students in counting, it is recommended a few things :

- a) Multimedia-based interactive learning activities need to be implemented as a variation in the applied learning models.
- b) Students and teachers need to be done the update process of science, especially relating to the use of information technology.

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## 8. REFERENCES

Liu, M. (2004). *Examining the performance and attitudes of sixth grades during their use of problem solved multimedia learning environment.*

Miles, M. B & Huberman, A.M (1994). *Qualitative data analysis (2nd ed.)*. Thousand Oaks, CA: Sage

Earl Babbie, (2007), *The Practice of Social Research.*

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, Vol. 32, pp.513-530.

Bronfenbrenner, U. (1994). Ecological models of human development. In *International Encyclopedia of Education*, Vol. 3, 2<sup>nd</sup>. Ed. Oxford: Elsevier  
Creswell, John W & Clark, Vicki L. P. (2007). *Designing and Conducting Mixed Methods Research*. Thousand Oaks, California: Sage Publication Inc.

Edmonds, W.A. & Kennedy, T.D. (2013). *An Applied Reference Guide to Research Designs: Quantitative, Qualitative, and Mixed Methods*. Thousand Oaks, California: Sage Publication Inc.

A Learner-Centered Approach to Multimedia Explanations: Deriving Instructional Design Principles from Cognitive Theory, Roxana Moreno, *University of New Mexico*, Richard E. Mayer, *University of California Santa Barbara*

Nagel, T. Robinson, G. Condon, J., & Trauer, T (2009), *Approach to treatment of mental illness and substance dependence in remote indigenous communities: Result of a mixed methods study*. Australian Journal of Rural Health.

Brophy, Jere (1997). *Motivating students to learn*. Guilford, CT: McGraw-Hill. (ISBN: 0070081980).

Carlson, E. 1969. *Learning through Games*. Washington, D.C.: Public Affairs Press.

John W. Creswell (2010), *Qualitative, Quantitative, and mixed methods approaches second edition.*

Vaughan Tay, 2003, *Multimedia: Making It Work*, Jogjakarta, Penerbit Andi  
IEEE Reference Guide for Instructional and Development.  
<http://webstage.ieee.org/organizations/eab/tutorials/refguideforpdf/mms01.htm>,  
Browse tanggal 10 Maret 2009

*The Relationship between Students' Learning Style and Academic Performance in  
Mara Professional College, Malaysia*

Mumtaz Begam Binti Abdul Kadir

MARA Professional Colleges, Malaysia

0127

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Abstract

A study was conducted to determine MARA Professional Colleges students' perception on learning style. The study builds on the Dunn and Dunn model and instruments of learning style. This model believes that students' preferences and learning outcomes are related to factors other than intelligence, such as environment, opportunities to move around the classroom, working at different time of the day and taking part in different types of activity. The learning style dimensions studied are environment, emotional, sociological, physiological and psychological. Data were collected via questionnaires from 508 students. The study utilizes correlation and regression statistics to analyse the data. The finding of the survey show there is a relationship between the five dimension measured environment ( $r=0.006$ ), emotional ( $r=0.624$ ), sociological ( $r=0.138$ ), physiological ( $r=0.260$ ) and psychological ( $r=0.431$ ). Emotional contributed the most which is 28.3%, followed by psychological (9.4%), sociological (1.9%), physiological (1%) and environment does not contribute towards educational performance. The results suggest that focuses should be given on student's level of motivation, persistence, responsibility and need for structure. It also revealed that environmental elements of sound, light, temperature and furniture or seating design do not contribute to academic performance. The results of the study have valuable implication to the college lecturers and administrators to adapt teaching style and activities to student learning preferences.

## **Introduction**

What is learning style? It is the way a person processes, internalizes and studies new and challenging material. Students' performance may be related to learning preferences or styles as learners. In many cases, neither students nor lecturers are aware that difficulty in learning may not rest solely in the material itself. Meanwhile, Domino (1970) found out that college students taught in their preferred learning styles scored higher on tests, fact knowledge, attitude and efficiency than those taught in instructional styles different from their preferred style. Mismatch of teaching styles and learning styles could give negative impact to students. Students tend to be bored and inattentive in class, do poorly on tests, get discouraged about the course and may conclude that they are not good in the subject and give up (Felder & Silverman 1988 & Oxford et.al 1991). As a result, students' success in classes may ultimately depend on understanding the learning style characteristics of students who enrol in the respective courses.

## **Literature Review**

Most of the time lecturers who are confronted by low grades, unresponsive classes, poor attendance, may become overly critical of their students or begin to question their own competence as teachers (Felder 1995). A study by Stice (1987) concluded that students retain 10% of what they see and hear, 26% of what they hear, 30% of what they see, 50% of what they see and hear, 70% of what they say and 90% of what they say as they do something. So, lecturers have to vary the teaching methods to increase the students' understanding.

One of the most widely known theories assessed is the learning style model Dunn & Dunn (2000). Dunn & Dunn's learning style model uses four main sensory receivers which are visual, auditory, kinaesthetic and tactile to determine the dominant learning style. According to the theory, one or two of these receiving styles is normally dominant. This style may differ according to task. An important principle in Dunn & Dunn's model is the idea that students' achievements are heavily influenced by relatively fixed characteristics (Dunn & Griggs 2003).

Dunn and Dunn (1992) define learning style as 'the way in which individuals begin to concentrate on, process, internalize and retain new and difficult academic information'. According to Dunn (2003), the inability of schools and teachers to take account of preferences produces endemic low achievement and poor motivation. There are empirical researches as shown by Riding & Grimley, (1999); Richardson (1994); Cano & Garton (1994) suggest that learning styles can enhance academic performance in several respects. Analyses of the learning styles of non-achieving students have revealed that, as a group, such students learn in a style and with instructional strategies that differ significantly from those of students who perform well in school (Dunn & Griggs, 1988, 1990).

White (1980) confirmed there was a pattern of intellectual change which occurred in college students. Perry (1970) further stated that basic progression of intellectual change influenced the teachers to seek alternative ways to teach and advice. White (1980) and Lyons (1984) encouraged teachers who hoped to nurture the importance of basic progression in the development of intellectual change, to practice their art with responsive versatility in an effort to retain more students.

Therefore, the literatures from previous studies show correlations between learning style and academic performance. There are repeatedly evidenced the statistically increased academic achievement (Cafferty, 1980; Carbo, 1980; Douglass, 1979; Krinsky, 1982; Pizzo, 1982; Shea, 1983; Tannenbaum, 1982; Trautman, 1979; Urbschat, 1977; Weinberg, 1983; Wheeler, 1983; White, 1980) and improved attitudes toward learning (Copenhaver, 1979; Pizzo, 1982) that emerge when students are taught through their unique personal characteristics.

### **Problem Statement**

The concept of learning style has a broad meaning. In this research, it is proposed and defined as an individual's preferential focus on different types of information, the different ways of perceiving the information, and the understanding of information (Li et al 2008). Students' performance may be related to learning preferences, or styles as learners. Students may also self-select into or away from classes based on their learning preferences. As a result, students' success in classes may ultimately depend on understanding the learning style characteristics of the students who enrol in course. Reid (1987) in his research stated that students with their variety of language and cultural backgrounds and differences in age and previous education, often come together in programmes in which they are taught homogeneously by teachers who have little knowledge of learning styles. Another purpose is to better understand the different learning styles among these students in order to develop appropriate teaching strategies for improving teaching methodology at these colleges. Although learning style has been heavily researched (Coffield et al 2004; Reynold & Vince 2007; Welsh et al 2007; Hornyak et al 2007; Herbert & Stenfors 2007; Sievers 2007; Hyde 2007; Kayes 2007; Gracia et al 2007; Demirbas & Demirkan 2007; Armstrong & Mahmud 2008; Li et al 2008), not much is known about MARA Professional Colleges students' learning style, especially in the field of professional education.

### **Purpose of the Study**

This paper therefore has the following objectives:

- i. To examine the relationship between learning style dimension (environment, emotional, sociological, physiological and psychological) with academic performance.
- ii. To examine the contribution of learning style dimension (environment, emotional, sociological, physiological and psychological) towards academic performance.

### **Methodology**

This study was carried out through a survey method, using questionnaires as the main instrument. The sample consists of 508 respondents among male and female students, aged 18-25 years old, who were enrolled in Diploma and Higher National Diploma programme in MARA Professional Colleges. The Dunn and Dunn model of learning style is used in this study. The questionnaire consists of two sections to measure the studied element. Section A consists of 9 items on demography information (college, age, gender, residential, semester, programme and CGPA). Section B contains 45 items firstly, to measure learning style dimension (environment, emotional, sociological, physiological and psychological). Likert scale was used whereby scale '1' is Strongly Disagree and

scale '5' is for Strongly Agree. A pilot study was carried out to revise the questionnaire and for item analysis. The validity and reliability of the questionnaire was measured. Factor analysis was performed to determine the underlying factorial structure of the scale. The result of the analysis revealed 5 dimensions (environment, emotional, sociological, physiological and psychological) with eigenvalues greater than 1.0. The internal consistencies of scale were assessed through computing Cronbach's alpha. The dimensions of learning style show the reliability value between 0.813 to 0.930. Implication from these values indicates that all of the items used for each component in the questionnaire have a high and consistent reliability values.

The research conceptual framework for this current study is suggested in Figure 1. This research conceptual framework explains that academic performance of students is influenced by elements of learning style (environment, emotional, sociological, physiological and psychological). The dependent variable in this research is academic performance. The independent variables in use are environment, emotional, sociological, physiological and psychological.

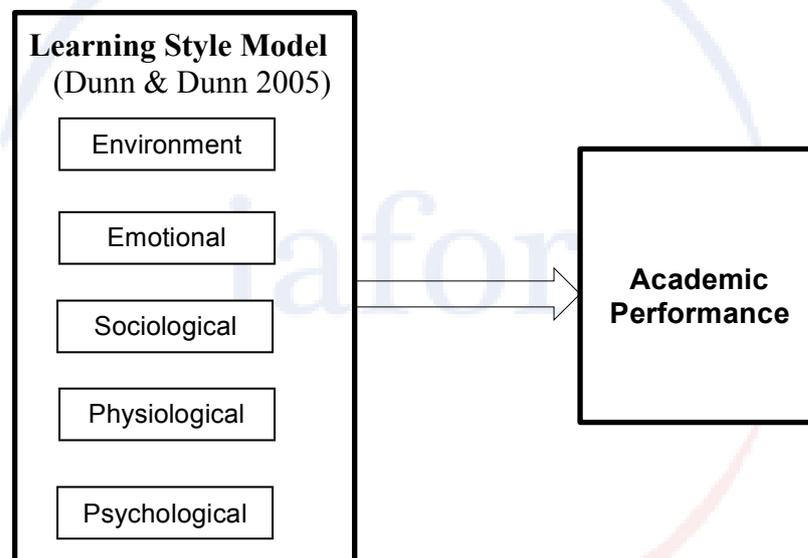


Fig 1: Research Conceptual Framework

## Findings

In this study, the relationships between the learning style dimension (environment, emotional, sociological, physiological and psychological) and academic performance were examined. Table 2 shows the results of Pearson Correlation Analysis.

Table 2 Analysis of Pearson Correlation– Zero Order

	Environmen t	Emotiona l	Sociologica l	Physiologica l	Psychologica l
Academic Performance	<b>0.006</b> (508) p = 0.09	<b>0.624</b> (508) p = 0.00	<b>0.138</b> (508) p = 0.00	<b>0.260</b> (508) p = 0.00	<b>0.431</b> (508) p = 0.00
Environment	1.000 (508) p=.	<b>0.350</b> (508) p=0.00	<b>0.242</b> (508) p=0.00	<b>0.330</b> (508) p=0.00	<b>0.258</b> (508) p=0.00
Emotional	<b>0.350</b> (508) p=0.00	1.000 (508) p=.	<b>0.333</b> (508) p=0.00	<b>0.470</b> (508) p=0.00	<b>0.301</b> (508) p=0.00
Sociological	<b>0.242</b> (508) p=0.00	<b>0.333</b> (508) p=0.00	1.000 (508) p=.	<b>0.329</b> (508) p=0.00	<b>0.251</b> (508) p=0.00
Physiologica l	<b>0.330</b> (508) p=0.00	1.000 (508) p=.	<b>0.329</b> (508) p=0.00	1.000 (508) p=.	0.334 (508) p=.
Psychologica l	<b>0.258</b> (508) p=0.00	<b>0.301</b> (508) p=0.00	<b>0.251</b> (508) p=0.00	0.334 (508) p=.	1.000 (508) p=.

\*p&lt; 0.05

1. Relationship between learning style dimension (environment) with academic performance.

Ho<sub>1</sub>: There is no significant relationship between learning style dimension (environment) with academic performance.

The results shows that the correlation coefficients between learning style dimension (environment) and academic performance is  $r = 0.006$ ,  $n = 508$ , ( $p < 0.05$ ). No significant correlation ( $p < 0.05$ ) was found between learning style dimension (environment) with academic performance.

2. Relationship between learning style dimension (Emotional) with academic performance.

Ho<sub>2</sub>: There is no significant relationship between learning style dimension (emotional) with academic performance.

The results shows that the correlation coefficients between learning style dimension (emotional) and academic performance is  $r = 0.624$ ,  $n = 508$ , ( $p < 0.05$ ). Significant positive correlation ( $p < 0.05$ ) was found between learning style dimension (emotional) with academic performance.

3. Relationship between learning style dimension (sociological) with academic performance.

Ho<sub>3</sub>: There is no significant relationship between learning style dimension (sociological) with academic performance.

The results shows that the correlation coefficients between learning style dimension (sociological) and academic performance is  $r = 0.138$ ,  $n = 508$ , ( $p < 0.05$ ). Significant correlation ( $p < 0.05$ ) was found between learning style dimension (sociological) with academic performance.

4. Relationship between learning style dimension (physiological) with academic performance.

Ho1<sub>4</sub>: There is no significant relationship between learning style dimension (physiological) with academic performance.

The results shows that the correlation coefficients between learning style dimension (physiological) and academic performance is  $r = 0.260$ ,  $n = 508$ , ( $p < 0.05$ ). Significant positive correlation ( $p < 0.05$ ) was found between learning style dimension (physiological) with academic performance.

5. Relationship between learning style dimension (psychological) with academic performance.

Ho1<sub>5</sub>: There is no significant relationship between learning style dimension (psychological) with academic performance.

The results shows that the correlation coefficients between learning style dimension (psychological) and academic performance is  $r = 0.431$ ,  $n = 508$ , ( $p < 0.05$ ). Significant positive correlation ( $p < 0.05$ ) was found between learning style dimension (psychological) with academic performance. The correlation coefficient value gained from this analysis shows relationship between the learning style dimensions and academic performance.

2. Contribution of learning style dimension (environment, emotional, sociological, physiological and psychological) towards academic performance.

The result from the correlation as shown in Table 2 fulfils the required conditions for regression analysis. The correlation analysis shows that the studied dependent variable does not have a high correlation. Tabachnik and Fidell (1996) in Pallant (2001) stated that regression analysis can only be done if the correlation value between the studied enabler is  $< 0.7$ . Thus, the regression analysis can be carried out. Linear regression analysis was used to determine the contribution of the independent variable which is the learning style dimension towards academic performance as stated in hypothesis Ho2<sub>1</sub> below.

Ho2<sub>1</sub>: There is no significant contribution from independent variable learning style dimension (emotional) towards academic performance.

Ho2<sub>2</sub>: There is no significant contribution from independent variable learning style dimension (sociological) towards academic performance.

Ho2<sub>3</sub>: There is no significant contribution from independent variable learning style dimension (physiological) towards academic performance.

Ho<sub>2</sub><sub>4</sub>: There is no significant contribution from independent variable learning style dimension (psychological) towards academic performance.

Table 3 and 4 show the results of linear regression analysis for the learning style dimension (emotional). The linear regression analysis shows that the independent enabler which is the learning style dimension (emotional) is the indicator with correlation ( $\beta = 0.705$ ,  $t = 8.461$  and  $p = 0.000$ ) ( $p < 0.05$ ) and the value of  $R^2$  ( $R^2 = 0.283$ ) contributes 28.3 % towards academic performance among Mara Professional College students. Thus, Ho<sub>2</sub><sub>2</sub> will be rejected.

Table 3 Analysis of Linear Regression between Learning style dimension (emotional) towards academic performance

Independent Variable	B	Beta ( $\beta$ )	t	Sig. -t	$R^2$	Contribution (%)
Learning Style Dimension (Emotional)	0.705	0.622	8.461	0.000	0.283	28.3
Constant	2.705		5.901	0.000		
R	0.534 <sup>a</sup>					
R squared	0.283					
Adjusted R squared	0.279					
Standard Error	0.853					

Table 4 Analysis of Variance

Source	Sum of Squared	df	Mean Square	F	Sig (p)
Regression	52.140	1	52.140	71.589	0.000 <sup>a</sup>
Residual	131.826	506	0.728		
Total	183.966	507			

The contribution of attitudinal factor towards entrepreneurial intention among Mara Professional College students forms the linear regression as below:

$$Y = 2.705 + 0.705 X_1 + 0.853$$

Y = Academic Performance

$X_1$  = Learning Style dimension (emotional)

Constant 2.705

Standard Error 0.386

Table 5 and 6 show the results of linear regression analysis for the influence of learning style dimension (sociological) towards the academic performance. The linear regression analysis shows that the independent enabler which is the learning style dimension (sociological) is the indicator with correlation ( $\beta = 0.138$ ,  $t = 27.988$  and  $p = 0.000$ ) ( $p < 0.05$ ) and the value of  $R^2$  ( $R^2 = 0.019$ ) contributes 1.9 % towards academic performance among MARA Professional College students. Thus, Ho<sub>2</sub><sub>2</sub> will be rejected.

Table 5 Analysis of Linear Regression Between learning Style dimension (sociological) towards academic performance

Independent Variable	B	Beta (β)	t	Sig. -t	R <sup>2</sup>	Contribution (%)
Learning Style Dimension (Sociological)	0.105	0.138	27.988	0.000	0.019	1.9
Constant	3.363		3.137	0.000		
R		0.138 <sup>a</sup>				
R squared		0.019				
Adjusted R squared		0.017				
Standard Error	0.456					

Table 6 Analysis of Variance

Source	Sum of Squared	df	Mean Square	F	Sig (p)
Regression	2.044	1	2.044	9.839	0.000 <sup>a</sup>
Residual	105.105	506	0.208		
Total	107.149	507			

The contribution of attitudinal factor towards entrepreneurial intention among Mara Professional College students forms the linear regression as below :

$$Y = 3.363 + 0.105 X_1 + 0.033$$

Y = Academic Performance

X<sub>1</sub> = Learning Style Dimension (Sociological)

Constant 0.120

Standard Error 0.033

The regression linear analysis in Table 7 and 8 show that the independent enabler which is the learning style dimension (Physiological) is the indicator which has the correlation of (β = 2.907, t=20.137 and p=0.000) (p<0.05) and the value of R<sup>2</sup> (R<sup>2</sup>=0.010) indicates the contribution of 1.0% towards the academic performance among MARA Professional College students. Thus, Ho<sub>2</sub> is rejected.

Table 7 Analysis of Linear Regression Between Learning Style Dimension (Physiological) Towards Academic Performance

Independent Variable	B	Beta (β)	t	Sig. -t	R <sup>2</sup>	Contribution (%)
Learning Style Dimension (Physiological)	0.025	0.026	3.679	0.591	0.010	1.0
Constant	2.907		7.035	20.137		
R		0.026 <sup>a</sup>				
R squared		0.010				
Adjusted R squared		0.010				
Standard Error	0.460					

Table 8 Analysis of Variance

Source	Sum of Squared	df	Mean Square	F	Sig (p)
Regression	0.074	1	0.074	0.349	0.000 <sup>a</sup>
Residual	107.075	506	0.212		
Total	107.149	507			

The contribution of Learning Style Dimension (Physiological) towards academic performance among of MARA Professional College students forms the linear regression as below

$$Y = 2.907 + 0.025 X_1 + 0.460$$

Y = Academic performance

X<sub>1</sub> = Learning style dimension (Physiological)

Constant 2.907

Standard Error 0.416

The regression linear analysis in Table 9 and 10 show that the independent enabler which is the learning style dimension (Psychological) is the indicator which has the correlation of ( $\beta = 0.346$ ,  $t=3.679$  and  $p=0.000$ ) ( $p<0.05$ ) and the value of R<sup>2</sup> (R<sup>2</sup>=0.094) indicates the contribution of 9.4% towards the academic performance among MARA Professional College students. Thus, Ho23 is rejected.

Table 9 Analysis of Linear Regression Between Learning Style Dimension (Psychological) Towards Academic Performance

Independent Variable	B	Beta (β)	t	Sig. -t	R <sup>2</sup>	Contribution (%)
Learning Style Dimension (Psychological)	0.346	0.307	3.679	0.000	0.094	9.4
Constant	2.926		7.035	0.000		
R	0.307 <sup>a</sup>					
R squared	0.094					
Adjusted R squared	0.087					
Standard Error	0.671					

Table 10 Analysis of Variance

Source	Sum of Squared	df	Mean Square	F	Sig (p)
Regression	6.098	1	6.098	13.533	0.000 <sup>a</sup>
Residual	58.573	506	0.451		
Total	64.670	507			

The contribution of Learning Style Dimension (Psychological) towards academic performance among of MARA Professional College students forms the linear regression as below

$$Y = 2.926 + 0.346 X1 + 0.671$$

Y = Academic performance  
X1 = Learning style dimension (Psychological)  
Constant 2.926  
Standard Error 0.416

From the linear regression analysis can be concluded that Learning Style Dimension (Emotional) contributed the most 28.3%, followed by Psychological 9.4%, Sociological only contribute 1.9 %, physiological (1%) and environment does not contribute towards educational performance.

### **Discussion and Implication**

In this study the environment factors do not contribute to the academic achievement. However, studies showed that the instructional environment do affect to the processing skills and brain behaviour. By redesigning the instructional environment into a totally responsive atmosphere could improve the attention of the students in class (Pizzo 1982; Krimsky 1982 & Shea 1983).

Motivation varies with students' interests and successes, and the degree to which their teachers' styles match their own. Motivation changes class to class, teacher to teacher, and day to day. Some students are self-motivated to learn, and others lack motivation. A self-motivated student, usually like school and enjoy learning on their own. However, if students are lack motivation they will think about their reasons for attending college. An expanding body of research affirms that teaching and counselling students with interventions that are congruent with their learning-style preferences results in their increased academic achievement and more positive attitudes toward learning (Dunn, 1982; Dunn & Burke, 2006 & Dunn et al., 2009)

Persistence is an analytic quality. Analytic processors "stay on task" while learning. Whereas, global processors often require "breaks" for intake, interaction, and focus changes. Some students finish what they start, while others have many things going on at once and may not finish what they have started. If the students are persistent, they generally finish what have been started. However, if they are lack persistence, they may get bored or distracted easily. These are the students who need considerable support and have to have their assignments in small chunks with periodic due dates. Semester-long projects without periodic checks would be disastrous with these students.

Students differ by preferring more or less structure. Students who prefer structure want the teacher to give details about how to complete the assignment. They need clear directions before completing an assignment. Students who prefer less structure want the teacher to give assignments in which the students can choose the topic and organize the material on their own. The older students become, the less structure they need, although, under pressure (of exams or multiple study assignments), many college students require structure (Nelson 1993 Sawyer, 1995).

Responsibility has a unique meaning in the area of learning style. Some students like to please others by doing what is asked of them. They complete assignments to please the lecturers. Other students are less likely to conform. They prefer to complete

assignments because they want to rather than because someone else wants the assignment done. These students may need to look for something interesting and personally meaningful in assignments. Responsibility tends to correlate with conformity whereas students with low responsibility scores are usually non-conforming (Dunn, White & Zenhausern, 1982). Some people experience three different stages of nonconformity--the "terrible twos", "adolescence", and "mid-life crisis". Although some students are either consistently conforming or consistently nonconforming, others respond uniquely to particular situations. Teachers should know how to work with nonconforming students (Dunn & Griggs, 1995; Dunn, White, & Zenhausern, 1982).

It is hoped that the findings of this study can be used to improve the teaching practice and the performance of students. In view of the results of this study, it may prove beneficial to consider learning style preferences when designing and teaching courses to maximize learning success. As mentioned earlier, it is quite difficult determine individual learning styles of the students, dividing them into classes based on their learning styles, and teaching them accordingly. However, the teachers can address each learning style at least some of the time in their teaching. This way, the students' positive attitude toward the courses would also be promoted.

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## References

- Armstrong, S. & Mahmud, A. (2008). Experiential Learning and the Acquisition of Managerial Tacit Knowledge. *Academy of Management Journal*, 7(2), pp. 189-208.
- Cafferty, E. (1980). An analysis of student performance based upon the degree of match between the educational cognitive style of the teachers and the educational cognitive style of the students. Unpublished doctoral dissertation, University of Nebraska.
- Cano, J. & Garton, B. L. (1994). The relationship between agriculture preservice teachers' learning styles and performance in a methods of teaching agriculture course. *Journal of Agricultural Education*, 35(2), 6-10.
- Carbo, M. (1980). An analysis of the relationship between the modality preferences of kindergartners and selected reading treatments as they affect the learning of a basic sight-word vocabulary. (Doctoral dissertation, St. John's University, 1980). *Dissertation Abstracts International*, 41/04A, 1939. (University Microfilms No. 80-21790)
- Coffield, F.; Moseley, D.; Hall, E. & Ecclestone, K. (Ed.) (2004): *Learning Styles and Pedagogy in post-16 Learning: A Systematic and Critical Review*. Wiltshire: Learning and Skills Research Centre.
- Copenhaver, R. (1979). The consistency of student learning styles as students move from English to mathematics. Unpublished doctoral dissertation, Indiana University.
- Demirbas, O. O.; Demirkan, H. (2007): *Learning Styles of Design Students and the Relationship of Academic Performance and Gender in Design Education*. *Learning and Instructions*, 17, pp. 345-359.
- Domino, G. (1970). Interactive effects of achievement orientation and teaching style on academic achievement. *ACT Research Report*, 39, 1-9.
- Douglass, C.B. (1979). Making biology easier to understand. *The American Biology Teacher*, 41 (5), 277- 299.
- Dunn, R. (1978). Teaching Students Through Their Individual Learning Style Prescription. *College Student Journal*, 3(3), 333-339.
- Dunn, R. & Griggs, S. (1990). Research on the learning style characteristics of selected racial and ethnic groups. *Journal of Reading, Writing and Learning Disabilities*. Washington, DC: Hemisphere Press Incorporated, 6(3). 261-280.
- Dunn, R. (2000). Learning styles: Theory, research, and practice. *National Forum of Applied Educational Research Journal*, 13 (1), 3-22.
- Dunn, R. and Griggs, S.A. (2003), *Synthesis of the Dunn and Dunn Learning Style*

Model: Who, What, When, Where, and So What?, Center for the Study of Learning and Teaching Styles, St John's University, New York, NY.

Dunn, R., & Griggs, S. (1995). *Multiculturalism and learning styles: Teaching and counseling adolescents*. Westport, CT: Greenwood Publishing.

Dunn, R., Griggs, S., & Price, G. (1993). Learning styles of Mexican-American and Anglo-American elementary-school students. *Journal of Multicultural Counseling and Development*, 21(4), 237-247.

Dunn, R., Griggs, S., Olson, J., Gorman, B., & Beasley, M. (in press). A meta analytic validation of the Dunn and Dunn learning styles model. *Journal of Educational Research*.

Dunn, Stevenson (1997). Teaching Diverse College Students To Study A learning Style Prescription. *College Student Journal*, 31(3), 333-339.

Felder & Silverman (1988). "Learning and Teaching Styles in Engineering Education," *Engr. Education*, 78(7), 674-681.

Felder, Henriques (1995). Learning and Teaching Styles in Foreign and Second Language Education, *Foreign language Annals*, 28(1), 21-21.

Garcia, P.; Amandi, A.; Schiaffino, S.; Campo, M. (2007). Evaluating Bayesian Networks' Precision for Detecting Students' Learning Styles. *Computers & Education*, 49, pp. 794-808.

Hargreaves (1996). How Undergraduate Students Learn, *European Journal of Engineering Education*, 21(4), 425-434.

Harless, D. K. (1996). *A comparison of gender differences in the relationship among learning styles, achieving styles and studies strategies of college students*. University of Minnesota. DAI-A 56/07. AAC 9537867

Hartman, H.J. (2001). *Metacognition in Learning and Instruction*. Kluwer Academic Publishers: Netherlands.

Herbert, A., Stenfors, S. (2007): Choosing Experiential Methods for Management Education, in: Reynolds, M.; Vince, R. (Ed.), *Handbook of Experiential Learning & Management Education*. Oxford: Oxford Press.

Hodges, H. (1982). Madison prep: Alternatives through learning styles. In *Student learning styles and brain behavior*. Reston, VA: National Association of Secondary School Principals, 28-32.

Hyde, P. (2007): Integrating Experiential Learning through Live Projects. In Reynolds, M.; Vince, R. (Eds.), *the Handbook of Experiential Learning & Management Education*. Oxford: Oxford University Press.

Kayes, D. C. (2007): Institutional Barriers to Experiential Learning Revisited. In

Reynolds M & Vince R. (Ed.), *The Handbook of Experiential Learning & Management Education*. Oxford: Oxford University Press.

KrimskyJ, .S. (1982). A comparative analysis of the effects of matching and mismatching fourth grade students with their learning style preferences for the environmental element of light and their subsequent reading speed and accuracy scores. Unpublished doctoral dissertation, St. John's University.

KrimskyJ, .S. (1982). A comparative analysis of the effects of matching and mismatching fourth grade students with their learning style preferences for the environmental element of light and their subsequent reading speed and accuracy scores. Unpublished doctoral dissertation, St. John's University.

Li, Y. S, Chen, P. S. & Tsai, S. J. (2008): A Comparison of the Learning Styles among Different Nursing Programs in Taiwan: Implications for Nursing Education. *Nurse Education Today*, 28, pp. 70-76.

Liau, T.L. (2000). The Case for Emotional Literacy: The influence of emotional intelligence on problem behaviours in Malaysian secondary school students. *Journal of Moral Education*, 32(1).

Megowan (1998). An Investigation of the impact of student and faculty learning style congruency and academic achievement in an undergraduate industrial technology program (African-Americans). *Dissertation Abstract International*, 58(12), 1262A.

Moir & Jessel (1989) Adolescent coping: the different ways in which boys and girls cope. *Journal of Adolescence*. 14(2), 119–133.

Nelson, B.J (1993). *An Investigation of the Impact of Learning Style Factors on College Students Retention and Achievement*. Disertasi Ed. D. St John's University.

Oxford, R., M. Ehrman, and R. Lavine. (1991). "Style Wars: Teacher-Student Style Conflicts in the Language Classroom," in S.Magnan, ed., *Challenges in the 1990's for College Foreign Language Programs*. Boston: Heinle and Heinle.

Pallant, J. (2001). *A step by step guide to data analysis using SPSS for windows (Version10)*. Philadelphia : Open University Press.

Perry, W. Jr. (1970) *Forms of Intellectual and Ethical Development in the College Years*. New York: Holt, Rinehart & Winston.

Pizzo, J. (1982). Learning styles: Teaching through small group techniques. *Early Years*, 12 (9), 32-35.

Reid, J. (1983, May). Perceptual learning style preferences of international students. Paper presented at the National NAFSA Conference, Cincinnati.

Reynold, M & Vince, R.(eds.) (2007). *Handbook of Experiential Learning and*

Management. Oxford:Oxford University Press.

Richardson, J. T. E. (1994). Cultural specificity of approaches to studying in higher education. *Higher Education*, 27, 449-468.

Riding, R., & Grimley, M. (1999). Cognitive style and learning from multimedia materials in 11-year children. *British Journal of Educational Technology*, 30(1), 43-59.

Shea, T.C. (1983). An investigation of the relationship among preferences for the learning style element of design, selected instructional environments and reading test achievement of ninth grade students to improve administrative determinations concerning effective educational facilities. Unpublished doctoral dissertation, St. John's University.

Sheal, P. R (1994). *How to Develop and Present Staff Training Course*. London: Kogan Page Ltd.

Sievers, B. (2007). Pictures from Bellow the Surface of the University: The Social Photo-Matrix as a Method for Understanding Organizations in Depth. In Reynolds, M.; Vince, R. (Eds.), *the Handbook of Experiential Learning & Management Education*. Oxford: Oxford University Press.

Solomon & Kerndall (1979). *Children in classrooms, An Investigation of Person-environment Interaction*, NY: Praeger.

Stice, J.E. (1987). "Using Kolb's Learning Cycle to Improve Student Learning," *Engineering Education*, vol. 77, no. 5, Feb. 1987, pp. 291-296.

Tabachnick, B.G. and Fidell, L.S. (2001). *Using Multivariate Statistics*. Allyn & Bacon : Boston,MA.

Tannenbaum, R. (1982). An investigation of the relationships between selected instructional techniques and identified field dependent and field independent cognitive styles as evidenced among high school students enrolled in studies of nutrition. Unpublished doctoral dissertation, St. John's University.

Trautman, P. (1979). An investigation of the relationship between selected instructional techniques and identified cognitive style. Unpublished doctoral dissertation, St. John's University.

Tyson & Velma Venerta (1996). *An Analysis of the differential performance of girls on standardized multiple-choice mathematics achievement test compared to constructed response tests of reasoning and problem solving*. The University of Iowa. DAI-A 56/10. ACC 9603091.

Urbschat, K.S. (1977). A study of preferred learning models and their relationship to the amount of recall of CVC trigrams. Unpublished doctoral dissertation, Wayne State University.

- Weinberg, F.H. (1983). An experimental investigation of the interaction between modality preference and mode of presentation in the instruction of arithmetic concepts to third grade underachievers. Unpublished doctoral dissertation, St. John's University.
- Welsh, M.A., Dehler, G. E. & Murray, D. L. (2007). Learning about and Through Aesthetic Experience: Understanding the Power of Experience-Based Education. In Reynolds M & Vince R. (Ed.), the Handbook of Experiential Learning & Management Education. Oxford: Oxford University Press.
- Wheeler, R. (1983). An investigation of the degree of academic achievement evidenced when second grade learning disabled students' perceptual preferences are matched and mismatched with complementary sensory approaches to beginning reading instruction. Unpublished doctoral dissertation, St. John's University.
- White, R.T. (1980). An investigation of the relationship between selected instructional methods and selected elements of emotional learning style upon student achievement in seventh grade social studies. Unpublished doctoral dissertation, St. John's University.
- White, R.T. (1980). An investigation of the relationship between selected instructional methods and selected elements of emotional learning style upon student achievement in seventh grade social studies. Unpublished doctoral dissertation, St. John's University.
- Wiersma (1995) *Research methods in education: An introduction (6 th ed.)*. Massachusetts: Allyn and Bacon.

*The Diversity of Learning Skills among Entrepreneurial Students in MARA  
Professional College Malaysia*

Nik Hasrawati Nik Hassan, Mumtaz Begam Bt Abdul Kadir

MARA Professional College, Malaysia

0128

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Abstract

This study was aimed to investigate the study skills acquired by the entrepreneurial students of MARA Professional College, Malaysia. The study involved 106 randomly selected respondents. The study using questionnaire and Likert five-point scale to measure six categories of skills learned by Dunn and Dunn which are reading skills, note taking skills, time management skills, listening skills, reference skills and examination skills. The result showed listening skills (mean 3.67) is the most dominant learning skills practiced by the respondents. The second category is the category of reading skills (mean 3.61), followed by the third is category note taking skills (mean 3.51), fourth is reference skill (mean 3.49), fifth is the category for the examination skill (mean 3.26) and the sixth is time management skills (mean 2.82). The level of the lowest management skills is time management skills. The result of this study showed that time management skill is the skill that with the lowest mean. Entrepreneurial students are less skilful in managing time well, One of the key success factors of a high achiever is having an efficient time management. This will allow them to take part in various activities successfully (Khalid Mohamed Noor, 2005). In addition, efforts should be taken to increase the level of learning skills to improve the effectiveness of teaching and learning.

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## **INTRODUCTION**

Learning is an activity that is influenced by the cognitive skills. We can distinguish the brain mechanism that is involved in learning activity and the factors that drive the mechanism. The factors that drive the mechanism are motivation and attitude, whereas the brain mechanism involved in learning activity is called study skills (Mace 1976). Undeniably, being successful in academic and co-curriculum is the main goal of every student in the college. An excellent academic achievement is not impossible if the students know the effective styles or strategies of learning. There are a few factors that contribute to the excellent achievement by students, among them are intellectual quotient, extra efforts, extra concentrations during the process of teaching and learning as well as good learning strategies. (Khalid, 2005:3).

An institution of higher education plays a role in producing quality graduates and thus become an important asset for the development of the country. Undoubtedly, learning in higher education demands the commitment from the students. According to Sheal (1994), learning is a mental and physical process that leads to qualitative changes in a person to see, comprehend and appreciate something. Learning process is not limited only to attain knowledge and recall what have been learnt before. Learning activities should focus on the concept of knowledge and information and turn it into their life as well as the development of attitudes. (Hargreaves 1996).

MARA Professional Colleges Malaysia (MPCM) are educational institution that operates under the supervision of Higher Education Division, Majlis Amanah Rakyat (MARA). There many diploma and higher National Diploma Courses in this colleges. One of the diploma course offered is Diploma in Entrepreneurs (DEN). In this course students are trained to be entrepreneurs. There isn't any research done on this students study skills. Therefore, the research on study skills was carried out to identify the dominant study skills among the students of Entrepreneurship Programme in MARA Professional Colleges Malaysia (MPCM) and its impact on academic achievement.

## **STATEMENT OF THE PROBLEM**

The six aspects of study skills that are investigated here; Reading Skills, Listening Skills, Time Management Skills, Note-Taking Skills, Reference Skills and Test – Taking Skills are believed to be the aspects that influence the academic achievement of a student. (Yahya Othman, 2003; Mohd Nashuha Jamidin et al., 1995).

Time Management Skills can be defined as the skill of making use of time efficiently. Reading Skills is a thinking process related to explicit and implicit meaning, as well as applying the information gained from lectures, from a book or from other sources. Reference Skills is the skill of reading and searching extra references to acquire knowledge, whereas Listening Skills refers to listening activity and to store the information together with the existing information in mind. Lastly, Test – Taking Skills means to know the strategic ways in making preparation for the examinations.

Dunn dan Dunn model (1978) is used in this investigation to identify the study skills among the students of Entrepreneurship Programme in MARA Professional Colleges Malaysia (MPCM). What are the dominant study skills practiced by these students? In addition, what are the dominant study skills practiced by these students according to

gender and academic achievement? This research was conducted to answer these questions.

## **OBJECTIVES**

There are three objectives of this research:

1. To identify the dominant study skills among the students of Entrepreneurship Programme in MARA Professional Colleges Malaysia (MPCM)
2. To identify the study skills possessed by the students of Entrepreneurship Diploma Programme according to gender.
3. To identify the study skills possessed by the students according to academic achievement.

## **SIGNIFICANT OF RESEARCH**

1. The college is able to identify the dominant study skills among the students in their learning activity.
2. The college can either improve or modify the regulations or infrastructure in order to provide a conducive and stimulating environment.
3. The research findings can be an additional value in this field.

## **LITERATURE REVIEW**

Shiqin (2003) in a case study related to the learning of Chinese language by foreign students in Australia had explained in more detail about the study skills needed by the students to ensure that they are able to master the language. A number of samples that was tested by using graphic pictures and flashcards showed that this method can help the students to remember the meaning or the correct use of Chinese words according to context and obtained high scores in three tests conducted compared to the other group that just listened and observed. Furthermore, a case study by Ng et al. (2005) which focus on the expectations of self-directed learning by using information technology showed that the students in smartschools realized that self – directed learning skills are important to help them towards achieving excellent academic achievement. Besides, the students also realize that motivation is crucial as a ‘drive factor’ in their learning and consequently help them to obtain high grades in academic.

Further research on this topic was done by James, Chris dan Michael (2003). As many as 88 respondents were involved in the research, with 70 from them are females and 18 are males. Their findings showed that there was a relationship between the success of students pursuing a degree and the study skills possessed by them, as well as the teaching challenges, response strategies and study skills.

To strengthen the argument, we can also refer to a study made by Heidrun and Albert (2005) on self-learning program evaluation for competency in Mathematics for low achievers in primary schools. The findings of the study show that there was an increment in academic achievement when these students were assisted with various study skills such as time management. Consequently, there was an improvement in the group under study.

This coincides with the opinion expressed by Dieter, Petra and Maria (2005) in a study entitled "Factors Affecting Reading Achievement in Germany and Spain." The study used data from Germany and Spain, and was divided into two components, students and schools. The purpose of the study was to analyse the factors that influence the reading activity among the students in Germany and Spain. The results derived from this study show that positive factors such as interest and concentration in reading contribute to the reading achievement, therefore help the students to have more comprehension on the reading material. On the other hand, negative factors such as absenteeism, late to schools and not completing homework lead to low reading and academic achievement.

Hence, a study by Yesim Somuncuoglu (2001) entitled the relationship between performance goal orientation and the use of learning can be used to complement the research studied. This is because this study is related to the past studies that are discussed previously. The purpose of this study was to identify whether there is a significant relationship between student achievement and learning strategies. The results of this study show that there is a positive relationship between the student achievement and the cognitive skills in learning. The conclusion of this study shows that the value of learning and achievement should be concurrent with the study skills gained.

A study by Keefe (1987) explains that the study skills possessed by students are different from each other. This difference can be traced from various aspects such as gender, physical form, behavior, way of thinking, way of interacting, study skills and cognitive styles that are preferred by the students to acquire new information. As a student, they should understand their style of study skills. This can be done by the students by taking measures such as understanding and applying the learning style that can be applied to improve their academic achievement and creativity (Griggs, 1985). The researches done show that there is a relationship between study skills and academic achievement. Therefore, these researches are suitable to be used as a reference to prove the relationship between study skills and academic achievement.

In conclusion, study skill is as a metacognition in the students to learn in the best way in order to acquire useful information for their learning. In researcher's opinion, study skills are important elements that should be emphasized, for instance reading skills, note - taking skills, time management skills, listening skills, reference skills and test - taking skills as it will help the students to grasp the information better and convey it in a useful form. The methods of the study skills should be fully utilized by the students in teaching and learning process.

## **DESIGN OF RESEARCH**

The design used for this research is descriptive survey, in which the data was collected using questionnaire. A descriptive research is able to provide an insight or information regarding specific thing at specific times, as well as helping to plan for the future. (Wiersma 1995; Mohd Majid Konting 1994).

## POPULATION AND SAMPLING

The population of research is drawn from the students of Entrepreneurship Programme MARA Professional Colleges Malaysia (MPCM). As many as 106 students are selected as sample group. Stratified sampling is used to select the sample.

## DATA COLLECTION INSTRUMENT

This survey is divided into two sections. Section A consists of the questions on the demographic data of respondents such as gender, age, college, programme, academic achievement Cumulative Grade Point Average (CGPA) and residence. Whereas, Section B consists of 54 items that have been translated and modified from Dunn and Dunn model of study skills questionnaire. (1978). The six study skills proposed by Dunn and Dunn model are Reading Skills, Note-Taking Skills, Time Management Skills, Listening Skills, Reference Skills and Test – Taking Skills. The summary of items according to Dunn and Dunn model is shown in Table 1.

Table 1 : Distribution of items for each category of study skills

Study Skills	Number of Item
Reading Skills	10
Note – Taking Skills	11
Time Management Skills	10
Listening Skills	5
Reference Skills	8
Test – Taking Skills	10
Total Item	54

Five point Likert scale was used to obtain the responses, in which '1' is for 'strongly disagree' and '5' for 'strongly agree'. Pilot study was also carried out and the result indicated that the reliability for the components of learning styles is between  $\alpha = 0.86$  to 0.91. The value obtained show that all the items used for each component in the questionnaire have high reliability and consistency.

## RESULTS

The respondents involved in this research were drawn from the students of MARA Professional Colleges Malaysia (MPCM). The mean score interpretation as in Table 2 was used to interpret the average mean score obtained from each item.

Table 2 : Mean Score Interpretation

Mean Score	Mean Score Interpretation
1.00 to 2.33	Low
2.34 to 3.66	Moderate
3.67 to 5.00	High

Sources : Barnett 2000; Jamil 2002; Jainabee 2005 & Mumtaz 2008

## RESPONDENTS' PROFILE

This research was conducted in MARA Professional Colleges Malaysia (MPCM). The respondents for this research were drawn from the students pursuing full – time Entrepreneurship Diploma Programme. As many as 106 students were chosen as respondents. The distribution of students according to gender, residence and academic achievement is shown in Table 3 and Table 4.

Table 3 : Distribution Analysis of Respondents by Gender

Gender	Number	Percentage (%)
Male	39	36.8
Female	67	63.2
Total	106	100.0

The total respondents sum up to 106 respondents. Out of this number, 39 (36.8%) are males whereas 67 (63.2%) are females.

Table 4 : Distribution of Respondents by Overall Grade Point Average (Overall GPA)

Achievement	Number	Percentage (%)
1.66 to 1.99	1	0.9
2.00 to 2.49	5	4.7
2.50 to 2.99	53	50.0
3.00 to 3.49	41	38.7
3.50 to 4.00	6	5.7
Total	106	100.0

The majority of the respondents were within the moderate academic achievement category, with overall GPA of 2.50 to 2.99 (50.0%), followed by 38.7% of respondents within high academic achievement category with overall GPA of 3.00 to 3.49, 5.7% of respondents within very high academic achievement category with overall GPA of 3.50 to 4.00 and 0.9% within very low academic achievement category with overall GPA of 1.66 to 1.99.

## DATA ANALYSIS

This section answers the questions on the variety of study skills possessed by the students of Entrepreneurship Diploma Programme in MARA Professional Colleges Malaysia (MPCM). Descriptive analysis was done by using mean value of each study skills for six study skills proposed by Dunn and Dunn model.

Table 5 : Analysis of Mean of Study Skills

Study Skills	Mean	Standard Deviation	Interpretation
Reading Skills	3.6189	.54451	Moderate
Note – Taking Skills	3.5106	.66526	Moderate
Time Management Skills	2.8203	.92645	Moderate
Listening Skills	3.6785	.84588	High
Reference Skills	3.4910	.89229	Moderate
Test – Taking Skills	3.2653	.90762	Moderate

The overall analysis of study skills for students of Entrepreneurship Diploma Programme in MARA Professional Colleges Malaysia (MPCM) indicated the highest mean for Listening Skills Category (mean 3.679 SD= 0.846). This is followed by Reading Skills, (mean 3.619 SD= 0.545), Note – Taking Skills (mean 3.511 SD= 0.666), Reference Skills (mean 3.491 SD= 0.892), Test – Taking Skills (mean 3.265 SD= 0.908) and lastly Time Management Skills (mean 2.820 SD = 0.92645).

Table 6: Analysis of Mean of Study Skills by Gender

Study Skills	Gender	Mean	Standard Deviation	Interpretation
Reading Skills	MALE	3.6333	.54451	Moderate
	FEMALE	3.6045	.61161	Moderate
Note – Taking Skills	MALE	3.5150	.66526	Moderate
	FEMALE	3.5062	.61328	Moderate
Time Management Skills	MALE	<b>2.8436</b>	.92645	Moderate
	FEMALE	<b>2.7970</b>	.65203	Moderate
Listening Skills	MALE	3.6974	.84588	High
	FEMALE	3.6597	.76753	Moderate
Reference Skills	MALE	3.5865	.89229	Moderate
	FEMALE	3.3955	.77868	Moderate
Test – Taking Skills	MALE	3.4128	.90762	Moderate
	FEMALE	3.1179	.61544	Moderate

Analysis of study skills according to gender indicated that male students have high mean for Listening Skills (mean 3.697 SD= 0.846). On the other hand, female students have moderate mean for all category of study skills. However, the highest mean for female students is Listening Skills (mean 3.660 SD=0.768). The least study skill possessed by both male and female students is Time Management Skills.

Table 7: Analysis of Mean of Study Skills by Academic Achievement

Study Skills	Achievement	Mean	Standard Deviation	Interpretation
Reading Skills	3.50-4.00	3.6400	.58566	Moderate
	3.00 – 3.49	3.6755	.52143	High
	2.50-2.99	3.5415	.67933	Moderate
	2.00 -2.49	3.4500	.43704	Moderate
Note – Taking Skills	3.50-4.00	3.6000	.71054	Moderate
	3.00 – 3.49	3.5094	.55989	Moderate
	2.50-2.99	3.5244	.72319	Moderate
	2.00 -2.49	3.1667	.36515	Moderate
Time Management Skills	3.50-4.00	3.2400	.58992	Moderate
	3.00 – 3.49	3.0000	.79373	Moderate
	2.50-2.99	2.5463	.60087	Moderate
	2.00 -2.49	2.3833	.75211	Moderate
Listening Skills	3.50-4.00	3.9600	.43359	High
	3.00 – 3.49	3.6642	.80744	Moderate
	2.50-2.99	3.6488	.84354	Moderate
	2.00 -2.49	3.4667	.32660	Moderate
Reference Skills	3.50-4.00	4.1000	.62124	High
	3.00 – 3.49	3.5920	.75684	Moderate
	2.50-2.99	3.2287	.88472	Moderate
	2.00 -2.49	3.3542	.77628	Moderate
Test – Taking Skills	3.50-4.00	3.4600	.49800	Moderate
	3.00 – 3.49	3.3019	.78654	Moderate
	2.50-2.99	3.0366	.66248	Moderate
	2.00 -2.49	3.0333	.84063	Moderate

The academic achievement of students is categorized according to overall Grade Point Average (Overall GPA) as the following:

Overall GPA	Interpretation
2.00-2.49	Low
2.50-2.99	Moderate
3.00-3.49	High
3.50-4.00	Very high

As for analysis of study skills according to academic achievement, the result indicated a high mean for Reference Skills for students with very high overall GPA (3.50-4.00). This shows that students from this category have good Reference Skills (mean 4.100 SD=0.621), whereas the least skill possessed is Time Management Skills (mean 3.240 SD= 0.589). On the other hand, the students with moderate overall GPA (2.50-2.99) shows the highest mean for Listening Skills (mean 3.648 SD= 0.843) and the lowest mean for Time Management Skills (mean 2.5463). So, the result for students with low overall GPA (2.00-2.49) indicated the highest mean for Reference Skill (mean 3.354 SD= 0.776) and the lowest mean for Time Management Skills (mean 2.383).

## DISCUSSIONS AND IMPLICATIONS

In this research, the study skills among the students of Entrepreneurship Programme in MARA Professional Colleges Malaysia (MPCM) were measured based on six dimensions study of skills, which are Reading Skills, Note-Taking Skills, Time Management Skills, Listening Skills, Reference Skills and Test – Taking Skills. The conclusion of this research indicated that in overall, the dominant study skills possessed by the students of Entrepreneurship Diploma Programme is Listening Skills (mean 3.67). The second category goes to Reading Skills (mean 3.61), followed by Note – Taking Skills (mean 3.51), fourth is Reference Skills (mean 3.49), fifth is Test – Taking Skills (mean 3.26) and the sixth category is Time Management Skills (mean 2.82). The summary shows that the least study skills mastered by the students is Time Management Skills.

From the six aspects that have been measured, the three study skills that have high range of mean values are Listening Skills, Reading Skills and Note – Taking Skills. Following the list are Reference Skills, Test – Taking Skills and Time Management Skills which have moderate mean values. Listening Skills shows the highest mean, whereas Time Management Skills shows the lowest mean.

According to this research, out of the six study skills, the students have a high mastery level of Listening Skills. Students with good Listening Skills are able to concentrate on the lecturer who is giving lecture. Students need to ignore all the distractions going on inside or outside the classroom. However, to gain the best result from Listening Skills, students need to jot down important facts and information during lecture in classroom. (Abdul Rahim Selamat, (1989). A study done by Siti Hawa Munji (1989) shows that during lecture, students need to focus to the content of lectures actively and precisely. Students are also encouraged to share notes or materials with their friends. Besides, it is also essential for the lecturers to understand and know the creative and attractive ways of giving lectures so that the students will not feel bored and are able to concentrate on the content of lectures.

The fact that Time Management Skills is the skill with the lowest mean in this research indicated that the students of Entrepreneurship Programme in MARA Professional Colleges Malaysia (MPCM) have low capabilities of managing time well. This is a worrisome problem, as the main factor of a successful and high score student is an effective time management, that enable them to take part in various activities successfully (Khalid Mohamed Noor, 2005). Padilah Ali (1994) claims that the planning and preparation of time table can reflect the real workloads faced by the students. Aziz Shah (2009) also states that excellent students always divide and utilize their time effectively. This is because they always appreciate time. The students have to realise that they have to appreciate every seconds because time waits for no man. Time is irreversible. However, there are still a number of students who deliberately waste their time by doing unbeneficial activities, which in some cases may lead to harming themselves. The root to this problem is believed to be the low mastery level of study skills, especially Time Management Skill.

Students who are excellent in Time Management Skills will plan their activities efficiently. Lack of time or excess time is not going to happen. This is because with proper techniques, strategies and commitment they will be able to fill their time with

useful activities. Furthermore, the activities done will also be more effective, beneficial and give maximum return to the students and consequently may help to shape them into well – rounded students.

Based on the results of this research, several recommendations are suggested to the college as the following:

1. The college needs to facilitate their students in their learning by giving them more exposure on study skills through workshops or courses. This is important as it can help to create awareness among the students about the correct study skills and their impacts to their learning. The majority of Malaysian students lack of study skills. Their perception that study skills are mastered indirectly during study is a wrong idea. Khalid (2005) explains that the low achievers assume that the study skills are developed in them indirectly when they become a student. Every year, we read about the success stories of excellent students in our country. However, the situation is different when it comes to students who have academic achievement within moderate and low categories. It is necessary for the students with low and moderate academic achievement to get an early exposure on study skills so that they can apply it as early as when they start their courses. This will consequently improve their academic performances.
2. Apart from giving workshops and courses to the students, it is also necessary for the lecturers to be exposed and trained with the correct study skills to facilitate both teaching and learning hence making the learning – teaching cycle more effective. This is because as a lecturer, they need to understand the students' learning styles and skills so that teaching and learning will be more attractive and effective. The lecturers should teach and promote the correct study skills to the students. The teaching of study skills is not necessarily done directly and formally, it can also be integrated in the teaching and learning process.
3. The college, especially the Counselling and Careers Development Unit (CCDU) should conduct motivational programmes especially those regarding study skills. Besides, the CCDU unit should also play a more effective role in promoting the students to join positive lifestyle and attitude development sessions in order to boost their motivations in studying. Moreover, the counsellors should also play their roles as a friend, advisor and student's advocate in any circumstances. The counsellors have also been trained with specific skills to handle with students. Therefore, the students may identify their strengths and weaknesses in learning.

## REFERENCES

- Abdul Ghani Awang (1996). *Kemahiran Belajar Di Institusi Pengajian Tinggi*. Kuala Lumpur: Dewan Bahasa Dan Pustaka.
- Abdul Rahim Selamat (1989). *Belajar Cara Belajar*. Kuala Lumpur: Nurin Entreprise.
- Abdullah Hassan dan AINON Mohd. (2004). *Guru sebagai pendorong dalam bilik darjah*. Bentong: PTS Publications & Distributors Sdn Bhd.
- Baharin Abu(2000). *Teaching Effectiveness and Staff Professional Development Programs in HEI in Malaysia*. Published Doctoral Thesis, The University of Birmingham, UK.
- Baharin Abu, Othman Md Johan, Syed Mohd Shafeq Syed Mansor, Haliza Jaafar (2007). *Kepelbagaian Gaya Pembelajaran Dan Kemahiran Belajar Pelajar Universiti Di Fakulti Pendidikan, UTM Johor*. No. Vot Penyelidikan 71881. Jabatan Asas Pendidikan Universiti Teknologi Malaysia.
- Dieter Kotte, Petra Lietz, Maria M. L. (2005). Factors influencing reading achievement in Germany and Spain: Evidence from PISA 2000. *International Education Journal*, 6(1), 113-124.
- Dunn, R., & Dunn, K. (1978). *Teaching Student Through Their Individual Learning Styles: A Practical Approach*. Reston Publishing.
- Erlanawati Sawir. (2005). Language difficulties of international student in Australia: The effect of prior learning experience. *International Education Journal*, 5(4), 65-75.
- Griggs, S. A. (1985). *Counselling student through their individual learning styles*. The National Institute of Education, The University of Michigan.
- Hargreave, D.J (1996). How Undergraduate Student Learn. *European Journal Of Engineering Education*, 21(4), 425-434.
- Heidrun Stoger dan Albert Ziegler. (2005). Evaluation of an elementary classroom self regulated learning program for gifted mathematic underachievers. *International Education Journal*, 6(2), 261-271.
- James Kuo, Chris Hagie dan Michael T Miller. (2003). Encouraging College Student Success. *International Education Journal*, 14, 60-67.
- Kamarudin Haji Husin & Siti Hajar Hj. Abdul Aziz. (1996). *Penguasaan kemahiran membaca, kaedah dan teknik*. Kuala Lumpur: Kumpulan Budiman Sdn Bhd.
- Keffe, J. (1987). *Learning styles theory and practise*. Reston: National Association of Secondary Schools Principals.
- Khalid Mohamed Noor (2002). *Belajar Teknik Belajar*. Kuala Lumpur: PTS Publication And Distributor Sdn. Bhd.
- Khalid Mohamed Noor. (2005). *Belajar Teknik Belajar*. Bentong: PTS Publication Sdn. Bhd.
- Lee Shok Mee. (1997). *Psikologi Pendidikan 2, teori dan aplikasi dalam pengajaran dan pembelajaran*. Kuala Lumpur: Kumpulan Budiman Sdn. Bhd.
- Lynch, D. J (2006) Motivational factors, learning strategies and resource management as predictors of course grades. *College Student Journal* 40 (2): 423-428.
- Mace, C.A. (1976). *The Psychology of study*. England: Penguin Books Ltd.
- Mohamad Aziz Shah Mohamed Arip (2009). *Kaunseling Motivasi Berjaya Ke Universiti*: Penerbit Universiti Pendidikan Sultan Idris.
- Mohammad Aziz Shah Mohamed Arip. (2009). *Kaunseling Motivasi Berjaya Ke Universiti*. Perak: Penerbit Universiti Pendidikan Sultan Idris.
- Mohd Najib Abdul Aziz & Nor Shafrin Ahmad. (2008). *Kemahiran belajar dan*

- hubungannya dengan pencapaian akademik. *Jurnal Pendidik dan Pendidikan*, Jil 23, 29-47.
- Mohd Najib Konting (1994). *Kaedah Penyelidikan Pendidikan*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Mohd Yunus Noor. (1990). *Psikologi belajar dan teknik belajar yang berkesan*. Petaling Jaya: Fajar Bakti Sdn. Bhd.
- Ng Lee Yen, Kamariah Abu Bakar, Samsilah Roslan, Wong Su Land & Petri Zabariah. (2005). *Predictor of self regulated learning in Malaysian smart school*. *International Education Journal*.
- Osman Affan. (2007). *Kemahiran Belajar Menjadi Pelajar Smart Study*. PTS Millennia Sdn. Bhd.
- Padilah Ali (1994). *Teknik Belajar Untuk Kejayaan*. Kuala Lumpur: Dewan Bahasa Pustaka.
- Shiqin Hu. (2003). Teaching Chinese to English backgown primary students Vol 3, bil 1, *Flinders University*.
- Siti Hawa Munji (1989). *Strategi Belajar: Lulus Peperiksaan*. K. Lumpur: Usaha C & L Sdn. Bhd.
- Yahya Othman (2003). *Mengajar Membaca, Teori & Aplikasi, Panduan Meningkatkan Kemahiran Mengajar Membaca*. Selangor: PTS Publication & Distributors Sdn. Bhd.
- Yesim Somuncuoglu Ali Yildirim. (2001). Relationship between achievement goal orientation and use of learning strategies. *Journal of education Research*, 92, 267-276.

*Learning Style Preferences among Students of MARA Professional College Malaysia*

Mohd Syaifulhafizi Md Noh, Mumtaz Begam Abdul Kadir

MARA Professional College, Malaysia

0129

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Abstract

The study examines MARA Professional College students learning styles preferences. A total of 758 diploma level students of different study years, programmes and gender were involved in this study. This study employed a set of questionnaire measuring on students' different learning styles using five likert scales to determine five categories of Dun and Dun (1978) learning styles which are environment, emotional, sociological, physiological and psychological. Cronbach Alpha coefficient for the instrument was measured between the range of 0.813 to 0.930. The result of the study showed that Emotional category (mean 3.710, SD = 0.428) is the most dominant learning style adopted by the respondents. The second category is the sociological dimension (mean 3.588 SD = 0.614), followed by psychological as the third dimension (mean 3.492, SD = 0.603), the fourth dimension is physiological (mean 3.460 SD = 0.529) and the fifth is the environment category (mean 3.138, SD = 0.483). The results from this study showed that the diversity of learning styles gave different impacts on students' academic performances. In addition, recommendations were given to improve the effectiveness of teaching and learning.

## **INTRODUCTION**

A higher education institution plays an important role in producing high quality graduates who will become assets to the development of the country. According to Sheal (1994), learning is a mental and physical process that leads to a qualitative change in someone perspective, understanding and in appreciating something. The learning process is not only related to improving knowledge and recalling what they have learned. On the other hand, learning should focus on the activity to get the concept, knowledge and further information and to be applied in life as well as the formation of attitudes (Hargreaves 1996).

Each individual has a different attitude towards the adoption of a teaching and learning process. Learning style is a personalized way used by each individual to search, store, and retrieve information (Felder & Henriques 1995). Learning styles that are practiced by every individual is different from each other. Each student began to form their early learning style from early age and will continue to use these learning styles when he/she grow up. Learning styles practiced by an individual may be influenced by certain factors. According to Dunn and Dunn (1978), an individual's learning style is influenced by environmental, emotional, sociological, physiological and psychological elements.

In addition, learning style is one of the important factors that could affect academic achievement (Doris, 1993; Liau, 2000). According to Abdul Ghani Awang (1996) one of the factors that leads to deterioration of students' academic achievements is their failure to adapt to the teaching and learning style in universities and their inability to find a right learning style. As a result, it will affect their academic performances thus unable to achieve an excellent result.

Learning styles should be altered to each lecturer's teaching style. Problem will arise when lecturers did not diversify their teaching styles to meet the needs of these students. Students will feel bored, unfocused, and lost interest in a particular subject which will discourage them from studying (Darman Ash, 2000). Studies have proven that active involvement of student in the learning process leads to a student's success (Hartman 1995; Dewar 1995). Important basis to encourage students to participate actively in the learning process lies in understanding the learning styles to meet the varieties learning styles (Birkey & Rodan 1995; Agogino & His 1995).

Therefore, the research on learning styles has been made to find out the learning styles possessed by each individual student and their relationships to academic achievement.

## **PROBLEM STATEMENT**

A survey conducted by Dunn and Dunn (1978) a century ago reported that each individual has his/her own learning style. As a result, each student has a variety of individual styles, strategies and learning rates. This diversity should be identified by the instructor. In addition, the learning style has a strong influence on academic achievement. Among the causes of low academic achievement is the students' failure to adapt to teaching style in educational institutions, and their inability to have a right

learning style (Darman Abu 2000, 2003; Abdul Ghani Awang, 1996). Dunn and Dunn's model (1978) was used in this study to determine different learning styles of MARA Professional College students like the dominant style adopted by them. Beside, this paper also determines whether the students' learning styles/were influence by gender, academic performance and residential area. Thus, this research is done to answer the questions above.

## **OBJECTIVES**

There are two objectives of the study:

1. Identifying the learning styles practiced by MARA Professional College students as a whole.
2. Identifying learning styles by gender, place of residence and academic performance.

## **SIGNIFICANCE OF RESEARCH**

1. The college can identify and organize teaching and learning strategies.
2. The college can either improve or modify the regulation or infrastructure in order to provide a conducive environment.
3. Outcome of this study will be a great value in this field.

## **LITERATURE REVIEW**

Learning style of each individual must be understood as each of them will process the information obtained in different ways. From a psychological context, learning is defined as changes in individual behavior produced by the experience and the environment (Carlson 1987). By knowing how and why an individual chooses specific learning styles will add more information in their educational development. Cognitive staging may not be related to their age and achievements. According to Dunn and Dunn (1978), learning style refers to the manner in which the elements of the five basic stimuli that affect a person's ability to understand, interact and respond to the learning environment.

The cognitive theory shown that the development of human learning was based on their age. Although it is not a final determinant but generally the age stage will be associated with a person's maturity and susceptibility to choose or follow a particular learning style. Young male students usually prefer learning through simulation and games while elder students prefer lectures, structured instruction, drill and memorization.

Studies conducted to see the relationships between gender and teaching and assessment strategies show how gender affects problem solving styles (Nelson 1996). Tyson (1996) found that female students did not show a high level of cognitive performance in relative to male students in Mathematics subject but the difference is not very significant.

Harless (1996) mentioned that there is a correlation between learning style and gender but the significant differences between males and females are not obvious. This

finding is supported by a survey conducted by Nik Mohd Rahimi (2000) which showed no significant difference between the group of men and women in the four learning styles.

Solomon and Kerndall (1979) also raise an issue of gender because women were found to engage in highly structured activities while men prefer activities with lower structure. Mior and Jessel (1989) argue that women are more susceptible to engage in unfair thoughts on personal and collective situations. They should be encouraged to investigate structure and work in group.

Individual learning style preference can easily be identified using Dunn Learning Style Inventory, Dunn & Stevenson (1997). Dunn (1995) stated that the studies of Mohd Najib and Nor Shafrin (2008) about learning styles have the correlation with the achievement of students either high or low achievement. However, Megowan study (1998) on 68 American students from the Faculty of Industrial Technology at the University of Mississippi showed no relationship between students' learning styles and their academic achievements. Similar findings were obtained by Cavanagh and Stephen (1995) in his study of 192 nursing students using Kolb learning style inventor where they found that there is no significant relationship between learning style and achievement. Norihan Abu Hassan (2001) also found that there are no significant differences between the learning styles of excellent, average and poor students in learning mathematics. These findings imply that the positive effects of learning style are the same for all students even if they have different capabilities.

## **METHODOLOGY**

The study design used is descriptive shaped survey with data collected using questionnaires. Descriptive study will provide insight or information at a specific time, in addition to developing future plan (Wiersma 1995; Mohd Majid Konting 1999).

## **SAMPLE AND POPULATION**

The study population consisted of students enrolled in the College of Professional MARA in Malaysia. The study sample consisted of 737 students. Students were selected randomly but following specific structure.

## **INSTRUMENT**

This questionnaire consists of two parts. Part A includes reference to demographic characteristics such as gender, place of residence and academic achievement. Part B consists of 45 items that have been translated and adapted from the learning style questionnaire Dunn & Dunn (1978). Five aspects of learning patterns studied by Dunn and Dunn model are environmental, emotional, sociological, physiological and psychological. A summary of the number of items by Dunn and Dunn model are shown in table 1.

Table 1: Distribution of items for each learning styles category

<b>LEARNING STYLE</b>	<b>Items</b>
Environmental	9
Emotional	17
Sociological	5
Physiological	9
Psychological	5
<b>TOTAL</b>	<b>45</b>

To get the response, 5 point Likert scale was used which is '1' for strongly disagree and '5' strongly agree. Next, a pilot study was carried out and the reliability of the components of learning styles are between  $\alpha = 0.86$  to 0.91. Implications of the value obtained showed that all the items are used for each component in the questionnaire survey has the high reliability and consistency.

## **FINDINGS**

Studies conducted involved respondents from MARA Professional College students in Malaysia. Interpretation of mean scores shown in table 2 was used to interpret the average mean score of each item.

Table 2: Interpretation of mean score

<b>Mean Score</b>	<b>Interpretation</b>
1.00 - 2.33	Low
2.34 - 3.66	Medium
3.67 - 5.00	High

Source: Barnett 2000; Jamil 2002; Jainabee 2005 & Mumtaz 2008

## **PROFILE OF RESPONDENTS**

The study was conducted at the College of Professional MARA in Malaysia. Respondents for this study consists of students majoring in a variety of full-time program. A total of 737 students were selected as respondents for this study. Distribution of the number of students by gender, place of residence and academic performance.

## **RESULT**

This section answers the questions for the variation of learning styles practiced by MARA Professional College students. Descriptive analysis using the mean value made by showing students' learning styles based on the 5 categories of learning such as the Dunn and Dunn model.

Table 3: Mean Analysis of Learning Style

Learning Style	Mean	Standard Deviation	Interpretation
Environmental	3.138	0.483	Medium
Emotional	<b>3.710</b>	0.428	High
Sociological	3.588	0.614	Medium
Psychological	3.460	0.529	Medium
Physiological	3.492	0.603	Medium

It was found that Emotional learning style category heavily influenced students' learning in MARA Professional College. This is because the available learning style for this category has the highest mean value compared to other categories.

Table 4: Cross-correlation analysis between Learning Style and their place of residence

LEARNING STYLE	PLACE OF RESIDENCE	MEAN (SD)	INTERPRETATION
Environmental	HOSTEL	3.1282 (0.48)	Medium
	RENTAL HOME	3.1636 (0.51)	Medium
	FAMILY	3.1399 (0.45)	Medium
Emotional	HOSTEL	3.7084 (0.42)	High
	RENTAL HOME	3.7190 (0.45)	High
	FAMILY	3.6797 (0.34)	High
Sociological	AHOSTEL	3.5965 (0.62)	Medium
	RENTAL HOME	3.5666 (0.58)	Medium
	FAMILY	3.5407 (0.73)	Medium
Physiological	HOSTEL	3.4448 (0.51)	Medium
	RENTAL HOME	3.5095 (0.57)	Medium
	FAMILY	3.4074 (0.47)	Medium
Psychological	HOSTEL	3.4914 (0.59)	Medium
	RENTAL HOME	3.5016 (0.64)	Medium
	FAMILY	3.4519 (0.61)	Medium

Next, the cross-correlation analysis between Learning Style and their place of residence is found that for all three categories of the hostel residence, rental homes and live with the family also had the highest mean value on emotional category. Results of this analysis indicate that the overall MARA Professional College students, regardless of where they live, were strongly influenced by emotional factor in their learning styles.

Table 5: Cross-correlation analysis between gender and their learning style

LEARNING STYLE	GENDER	MEAN (SD)	INTERPRETATION
Environmental	MALE	3.2801 (0.54)	Medium
	FEMALE	3.0339 (0.40)	Medium
Emotional	MALE	3.7745 (0.49)	High
	FEMALE	3.6628 (0.37)	High
Sociological	MALE	3.6166 (0.63)	Medium
	FEMALE	3.5676 (0.60)	Medium
Physiologikal	MALE	3.5023 (0.56)	Medium
	FEMALE	3.4284 (0.51)	Medium
Psychological	MALE	3.5190 (0.61)	Medium
	FEMALE	3.4728 (0.60)	Medium

For the gender aspect, it found that both male and female students' learning styles were influences by the emotional factor. However, male students were more emotionally influenced on education, compared to female students. For other learning styles, the data showed that both male and female sexes are at moderate means.

Table 6: Cross-correlation analysis between academic performance and their learning style

LEARNING STYLE	ACADEMIC PERFORMANCE	MEAN (SD)	INTERPRETATION
Environmental	2.00-1.49	3.2519 (0.58)	Medium
	2.50-2.99	3.1329 (0.47)	Medium
	3.00-3.49	3.0842 (0.47)	Medium
	3.50-4.00	3.1826 (0.48)	Medium
Emotional	2.00-2.49	3.6892 (0.39)	High
	2.50-2.99	<b>3.7092</b> (0.44)	High
	3.00-3.49	<b>3.6771</b> (0.43)	High
	3.50-4.00	<b>3.7918</b> (0.37)	High
Sociological	2.00-2.49	<b>3.8167</b> (0.64)	High
	2.50-2.99	3.6038 (0.58)	Medium
	3.00-3.49	3.5034 (0.65)	Medium
	3.50-4.00	3.5034 (0.62)	Medium
Physiologikal	2.00-2.49	3.4769 (0.49)	Medium
	2.50-2.99	3.4499 (0.54)	Medium
	3.00-3.49	3.4591 (0.54)	Medium
	3.50-4.00	3.4879 (0.51)	Medium
Psychological	2.00-2.49	3.4500 (0.65)	Medium
	2.50-2.99	3.4746 (0.59)	Medium
	3.00-3.49	3.4816 (0.60)	Medium
	3.50-4.00	3.5977 (0.62)	Medium

According to academic performance, it is found that the learning styles of moderate, high, and excellent students were greatly influenced by emotional factors. Whereas low performing students showed their learning style is strongly influenced by

sociological factors. In this respect, it can be concluded that the majority of students choose the dominant learning style on emotional aspects.

## **DISCUSSION AND IMPLICATION**

The findings showed that the most dominant learning style adopted by MARA Professional College students is emotional style. This is followed by sociological, psychological, physiological and finally the environment style. The research also found to be in conformity with the study of Low (2003) and Darman (2003) who found that emotional category is dominant in student learning styles. Compared to female students, male students were more emotionally influence on education. Referring to this study, it is understood that the students look forward to be praised and reprimanded from their parents and lecturers as motivation in their learning process. They will also be happy to get good marks or grades on assignments and tests.

In addition, the findings also show that students are more likely to be given freedom in doing the work or assignment in their own ways and for the tasks to be graded. Given task or job must also be clarified with detailed instructions. This means that good grades, compliment and constructive criticism from parents and lecturers are forms of motivation for students that will be a catalyst for their emotional balance and learning performances.

Therefore, parents and lecturers are recommended to consistently advise and take care of the educational development of students. Lecturers are also encouraged to provide multi-dimensional nature of tasks and inter-discipline to students. The "problem based learning" or "active learning" is very appropriate to run in their teaching. In this way it can attract students and increase their motivation and emotion. In effect, it will improve the students' emotion and motivation thus leading to academic achievement and good grades.

According to Dunn and Dunn Model (1978), motivation can be categorized into two types: intrinsic and extrinsic motivation. Intrinsic motivation is internal motivation for students to participate in the learning process. These motivations such as needs, interests, attitudes and natural emotions or are guided by the requirements of the environment and experience. Meanwhile, extrinsic motivation is the insistence and encouragement to take action to obtain reward. In learning, the intended benefits in the form of scores, grades, and positions in the class gift. With both motivations, students will work hard to achieve success in their field of study. Lecturers also should give clear instructions and aim to enhance students' understanding and encourage them to learn more effectively.

Along with the development of education nowadays, students should be nurtured with "creative thinking" skill with a mindset that the "spoon-feeding" method is no longer relevant. Two-way interaction between lecturers and students is very important. The lecturer also should be clearer and well versed in relating existing experience with inspiration around or to explain to the students the relationship between the past and the present. This is because teaching is not just asking the question When and Where,

but also the question of Why, How and What should be embedded in the learning and teaching (Zoe Burgess, 2010).

Students also love to learn the new things and tend to learn using game method. According to Atan Long (1988), learning is a process that begins with the capture of stimuli received by the senses. The finding also shows that students prefer to study at night and in the morning rather than the afternoon. This might be because of more quiet and peaceful surroundings at those times compared to in the afternoon.

Nelson's (1993) and Zamri Mohamed Amin (2000) study found that the matching and suitability of learning styles will lead to a good academic record. Nelson's findings (1993) on the impact of learning style factors on college students' understanding and achievement show the positive impact on the learning style of the student's academic achievement. For those who getting exposures to learning style were having higher academic achievement rather than those not getting exposure on learning styles.

As a result of these findings, those recommendations are given to the college:

- i. The college should help students to identify and adopt learning style by holding workshops and courses to increase students' awareness about their learning styles.
- ii. Lecturers also need to be exposed in order to understand the students' learning styles in order to plan more effective teaching method and diversity in the process of teaching and learning.
- iii. Counseling units also play an important role in driving students undergo improvements attitudes and behavior so that it can foster interest and inspire students to learn. Thus, students can identify own strengths and weaknesses will be identified by the students as well as exposed also to other skills that can form the character and leadership of the self that will have an impact on their future career opportunities.
- iv. The restructuring of the curriculum can also be done by encouraging the use of "problem based learning" or "student centered learning". Along with that, good amenities and appropriate to the needs of lecturers and students, such as infrastructure and conducive environment to enhanced for optimal comfort during the process of teaching and learning can be achieved. Basic needs such as playing fields, ease of Internet access, projector, study and living room, as well as the layout of the lecture hall should be given priority.
- v. The college also should provide motivation program from time to time to give inspiration to students to succeed. Responsibilities assigned by the college for students to carry out a program, business or carnival must be continue because the results show that the category of emotional learning style also owned by the students.
- vi. The college and the lecturer should give a clear and structured instruction to students who have the emotional learning styles category because they requires a clear and structured instruction to perform certain tasks assigned to them successfully.

## REFERENCES

Abdul Ghani Awang (1996). *Kemahiran Belajar Di Institusi Pengajian Tinggi*. Kuala Lumpur: Dewan Bahasa Dan Pustaka.

Agogino, A.M. & His, S. (1995). Learning Style Based Innovations to Improve Retention of Female Engineering Students in the Synthesis Coalition. *In ASEE/IEEE Frontiers in Education 95' Proceedings, Purdue University*. Retrieved from <http://fairway.ecn.purdue.edu/asee/fie95/4a2/4a21/4a21.htm>

Baharin Abu (2000). *Teaching Effectiveness and Staff Professional Development Programs in HEI in Malaysia*. Published Doctoral Thesis, The University of Birmingham, UK.

Birkey, R. C. & Rodan J.J. (1995). *Adult Learning Styles and Preferences for Technology Programs*. Retrieved from National University Research Institute website: <http://www2.nu.edu/nuri/11conf/conf1995/birkey.html>

Carlson (1987). *Psychology: The Science Behaviour*, Allyn & Bacon: Mc Graw Hill, Boston.

Cavanagh, Stephen (1995). *Nurse education today*. Retrieved from the Eric database. (EJ507734)

Dewar, T. (1995). *Adult Learning Online*. Retrieved from <http://www.cybercorp.net/~tammy/lo/oned2.html>

Doris, B. M. (1993). An Investigation of Students' Learning Styles in Various Disciplines in Colleges and Universities. *The Journal of Humanistic Education and Development* 33(2), 65-74.

Dunn, Stevenson (1997). Teaching Diverse College Students To Study A learning Style Prescription. *College Student Journal*, 31(3), 333-339.

Dunn, Dunn (1978). Teaching Students Through Their Individual Learning Style Prescription. *College Student Journal*, 3(3), 333-339.

Felder, Henriques (1995). Learning and Teaching Styles in Foreign and Second Language Education, *Foreign language Annals*, 28(1), 21-21.

Hargreaves (1996). How Undergraduate Students Learn, *European Journal of Engineering Education*, 21(4), 425-434.

Harless, D. K. (1996). *A comparison of gender differences in the relationship among learning styles, achieving styles and studies strategies of college students*. University of Minnesota. DAI-A 56/07. AAC 9537867

Hartman, H.J. (2001). *Metacognition in Learning and Instruction*. Kluwer Academic Publishers: Netherlands.

- Liau, T.L. (2000). The Case for Emotional Literacy: The influence of emotional intelligence on problem behaviours in Malaysian secondary school students. *Journal of Moral Education*, 32(1).
- Low X. X. (2003). *Pola Gaya Pembelajaran Pelajar-Pelajar Di Kelas Lukisan Kejuruteraan Sekolah Menengah Sains Muar*. Universiti Teknologi Malaysia. Laporan PSM
- Megowan (1998). An Investigation of the impact of student and faculty learning style congruency and academic achievement in an undergraduate industrial technology program (African-Americans). *Disertation Abstract International*, 58(12), 1262A.
- Mohd Majid Konting (1994). *Kaedah Penyelidikan Pendidikan*. Kuala Lumpur: Dewan Bahasa Dan Pustaka, Kementerian Pendidikan Malaysia.
- Mohd Najib Abdul Aziz & Nor Shafrin Ahmad (2008). Kemahiran Belajar dan Hubungannya Dengan Pencapaian Akademik: Kajian di Daerah Kerian, Perak. *Jurnal Pendidikan dan Pendidikan*, 23, 29-47
- Moir & Jessel (1989) Adolescent coping: the different ways in which boys and girls cope. *Journal of Adolescence*. 14(2), 119–133.
- Nelson, B.J (1993). *An Investigation of the Impact of Learning Style Factors on College Students Retention and Achievement*. Disertasi Ed. D. St John's University.
- Nik Mohd Rahimi, Kamarulzaman Abd. Ghani & Zamri Mahamod (2000). Kepelbagaian gaya pembelajaran Bahasa Arab Komunikasi mengikut jantina dan lokasi sekolah. Seminar Prosiding Pendidikan Pendidikan Kebangsaan 2000. *Siri Penerbitan Fakulti Pendidikan, UKM*, 70-78.
- Norihan Abu Hassan (2001) *Perkaitan antara pencapaian awal, kaedah pengajaran, gaya pembelajaran dan kesukaran subjek terhadap pencapaian matemaik di kalangan pelajar Diploma Kejuruteraan*. Tesis Phd (tidak diterbitkan) UKM.
- Sheal, P. R (1994). *How to Develop and Present Staff Training Course*. London: Kogan Page Ltd.
- Solomon & Kerndall (1979). *Children in classrooms, An Investigation of Person-environment Interaction*, NY: Praeger.
- Tyson & Velma Venerta (1996). *An Analysis of the differential performance of girls on standardized multiple-choice mathematics achievement test compared to constructed response tests of reasoning and problem solving*. The University of Iowa. DAI-A 56/10. ACC 9603091.
- Wiersma (1995) *Research methods in education: An introduction (6 th ed.)*. Massachusetts: Allyn and Bacon.

Zamri Mahamod & Mohamed Amin Embi (2000). *Pengenalpastian Gaya dan Strategi Pembelajaran Bahasa Sebagai Satu Cara Mengatasi Masalah Kepelbagaian Pelajar Di Dalam Kelas Bahasa*. Seminar Prosiding Pendidikan Kebangsaan 2000.

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*Assessing Learning Style of Entrepreneurial Students in MARA Professional College, Malaysia*

Muhamad Fauzi Bin Zainal Abidin, Mumtaz Begam Bt Abdul Kadir

MARA Professional College, Malaysia

0130

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Abstract

This study was done to examine different learning styles adopted by 106 randomly chosen Diploma level Entrepreneurship students in Melaka MARA Professional College. This study employed a set of questionnaire measuring on students' different learning styles using five likert scales to determine five categories of Dun and Dun (1978) learning styles which are environment, emotional, sociological, physiological and psychological. The result of the study showed that Emotional category (mean 3.719, SP = 0.461) is the most dominant learning style adopted by the respondents. The second category is the sociological style (mean 3.589 SP = 0.573), followed by psychological as the third preferred style (mean 3.496, SP = 0.402), the fourth dimension is physical style (mean 3.4770, SP= 0.533) and the least adopted style is the environment style (mean 3.157, SP= 0.314). The results from this study showed that the varieties of learning styles gave different impacts on students' academic performances. In addition, recommendations were given to improve the effectiveness of teaching and learning.

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## INTRODUCTION

A higher education institution plays an important role in producing high-quality graduates that will be an asset to the nation. Learning in Higher Education Institutions requires self-learners' commitment. Sheal (1994) states that learning is a process involving mental and physical abilities that leads to a qualitative change in a person's ways of interpreting, understanding and valuing something. The learning process is not only related to improve knowledge and recalling things that have been learned but also to learn on how to get the concept and information, and to apply the knowledge in life as well as the development of good attitudes (Hargreaves 1996).

Each individual has different ways towards the adoption of a teaching and learning process. Individual's method used to find, store and retrieve information is known as learning styles (Felder & Henriques 1995). Learning styles practiced by every person is different from each other. Each student began to form learning styles from early childhood and will continue to use these learning styles in their life. Learning styles practiced by an individual may be affected by the certain factors. According to Dunn and Dunn (1978), an individual's learning style is influenced by elements of environmental, emotional, sociological, physical and psychological.

Learning style is one of the important factors that can influence students' academic achievement (Doris, 1993; Liao, 2000). According to Abdul Ghani Awang, (1996) one of the factors of students' academic achievement deterioration is their failure to adapt to the teaching and learning approach in universities and their inability to find a right learning style for them. As a result, it will affect their academic performances thus unabling them from achieving excellent results in examinations.

Learning styles should be altered so that they are compatible with each lecturer's teaching style. Problems will arise when the lecturers do not diversify their teaching styles to meet the students' needs. Students will feel bored, unfocused, and lost interest in a particular subject and that will discourage them from studying (Darman Ash, 2000). Studies have proven that students' active involvement in the learning process will lead them to success (Hartman 2001; Dewar 1995). Important factor that encourage students to participate actively in the learning process base on their understanding in learning styles to meet the diverse learning styles (Birkey & Rodan 1995; Agogino & His 1995).

A study of the diversity of learning styles was conducted in Malacca City MARA Professional College (KPMBM) and focused on students majoring in Diploma in Entrepreneurship (DEn). KPMBM is an educational institution that operates under the auspices of the Higher Education Division of Majlis Amanah Rakyat (MARA). Apart from DEn programme, the College also offers Diploma in Islamic Banking and Finance (DBF). KPMBM has been in operation since 2009 and has produced a total of 249 graduates. Among of the key factors that contribute to KPMBM graduates' academic achievement is the individual learning style practiced by students. Therefore, a research on learning styles has been made to find out learning styles possessed by the students and its relationship to their academic achievement.

## **PROBLEM STATEMENT**

A survey conducted by Dunn and Dunn (1978) a century ago reported that each individual has his/her own learning style. As a result, each student has a variety of individual styles, strategies and learning rates. This diversity should be identified by the instructor. In addition, the learning style has a strong influence on academic achievement. Among the factors that cause low academic achievement are the students' failure to adapt to teaching style in educational institutions and their inability to find a right learning style (Darman Abu 2000, 2003; Abdul Ghani Awang, 1996). Dunn and Dunn's model (1978) was used in this study to determine different learning styles of the students in Diploma in Entrepreneurship, KPMBM. Beside, this paper also determines whether the students' learning styles/were influence by gender, academic performance and residential area. The main purpose of this research is to answer the questions above.

## **RESEARCH OBJECTIVES**

There are two objectives of this study:

1. Identifying learning styles practiced by Diploma in Entrepreneurship students of MARA Professional College Melaka City as a whole.
2. Identifying learning styles practiced by Diploma in Entrepreneurship students based on their gender, academic achievement and residence.

## **SIGNIFICANCE OF RESEARCH**

1. The college can identify and organize teaching and learning strategies.
2. The college can either improve or modify the regulation and infrastructure in order to provide a conducive environment.
3. Outcome of this study will give a great value in this field.

## **LITERATURE REVIEW**

Learning style of each individual must be understood as each of them will process the information obtained in different ways. From a psychological context, learning is defined as changes in individual behavior produced by the experience and the environment (Carlson 1987). By knowing how and why an individual chooses specific learning styles will add more information in their educational development. Cognitive staging may not be related to their age and achievements. According to Dunn and Dunn (1978), learning style refers to the manner in which the elements of the five basic stimuli that affect a person's ability to understand, interact and respond to the learning environment.

The cognitive theory shown that the development of human learning was based on their age. Although it is not a final determinant but generally the age stage will be associated with a person's maturity and susceptibility to choose or follow a particular learning style. Young male students usually prefer learning through simulation and games while elder students prefer lectures, structured instruction, drill and memorization.

Studies conducted to see the relationships between gender and teaching and assessment strategies show how gender affects problem solving styles (Nelson 1996). Tyson (1996) found that female students did not show a high level of cognitive performance in relative to male students in Mathematics subject but the difference is not very significant.

Harless (1996) mentioned that there is a correlation between learning style and gender but the significant differences between males and females are not obvious. This finding is supported by a survey conducted by Nik Mohd Rahimi (2000) which showed no significant difference between the group of men and women in the four learning styles. Solomon and Kerndall (1979) also raise an issue of gender because women were found to engage in highly structured activities while men prefer activities with lower structure. Mior and Jessel (1989) argue that women are more susceptible to engage in unfair thoughts on personal and collective situations. They should be encouraged to investigate the learning structure and how to work in group.

Individual learning style preference can be identified using Dunn Learning Style Inventory, Dunn & Stevenson (1997). Dunn (1995) stated that the studies of Mohd Najib and Nor Shafrin (2008) about learning styles have the correlation with the achievement of students either high or low achievement. However, Megowan study (1998) on 68 American students from the Faculty of Industrial Technology at the University of Mississippi showed no relationship between students' learning styles and their academic achievements. Similar findings were obtained by Cavanagh and Stephen (1995) in his study of 192 nursing students using Kolb learning style inventor where they found that there is no significant relationship between learning style and achievement. Norihan Abu Hassan (2001) also found that there are no significant differences between the learning styles of excellent, average and poor students in learning mathematics. These findings imply that the positive effects of learning style are the same for all students even if they have different capabilities.

## **RESEARCH DESIGN**

The study design used is descriptive survey and the data were collected using questionnaires. Descriptive study will provide insight or information at a specific time, in addition to developing future plan (Wiersma 1995; Mohd Majid Konting 1999).

## **POPULATION AND RESEARCH SAMPLE**

The population consisted 106 students studying Diploma in Entrepreneurship at Malacca City MARA Professional College. In this research, random sample selection was made (Babbie 2001; Mertens 1998; Mohd Majid 2005). The population was divided by students' gender, year of study, and residence. The sample size was selected based on the determination of the sample size formula presented by the Research Division, National Education Association and tables to determine the sample size presented by Krejcie and Morgon (1970).

## RESEARCH INSTRUMENTS

This questionnaire consists of two parts. Part A includes reference to demographic characteristics such as gender, place of residence and academic achievement. Part B consists of 45 items that have been translated and adapted from the learning style questionnaire Dunn & Dunn (1978). Five aspects of learning patterns studied by Dunn and Dunn model are environmental, emotional, sociological, physiological and psychological. A summary of the number of items by Dunn and Dunn model are shown in table 1.

Table 1 : Distribution of items for each category of learning styles

Category Of Learning Styles	Number Of Item
Environment	9
Emotional	17
Sosiological	5
Physical	9
Psychological	5
Total	45

To get the response, 5 point Likert scale was used wherein '1' stands for strongly disagree and '5' stands for strongly agree. The researcher has used Cronbach Alpha method to get the index of reliability of the questionnaires. Alpha coefficient approaching the 1:00 mark of the scale items that measure the same thing and show those items have high reliability. According to George and Mallery (2001) for an instrument, Cronbach Alpha coefficients level must be at least 0.7. In this study, questionnaire data is continuous type and collected using a scale interval called '*semantic differential technique*'. Thus, the method of Cronbach Alpha (Cronbach 1949; Norusis 2005) was used to measure the reliability between the items. Alpha value less than 0.60 was considered low and not acceptable, Alpha value between 0.60 and 0.80 is acceptable and Alpha values above 0.80 indicate high reliability item. Cronbach Alpha values above 0.60 are often used as an index of reliability in a research. A pilot study was carried out and the reliability of the components of learning styles are between  $\alpha = 0.86$  to 0.91. Implications of the value obtained showed that all of the items used for each component in the questionnaire survey have high reliability and consistency.

## FINDINGS

Studies conducted involved respondents from Diploma in Entrepreneurship students studying in Kolej Profesional MARA Melaka. Interpretations of mean scores shown in Table 2 was used to interpret the average mean score of each item.

Table 2 : Interpretations of mean scores

Mean Scores	Interpretations Of Mean Scores
1.00 to 2.33	Low
2.34 to 3.66	Average
3.67 to 5.00	High

Source : Barnett 2000; Jamil 2002; Jainabee 2005 & Mumtaz 2008

## Profile of Respondents

This study was done in Kolej Profesional MARA Bandar Melaka. Respondents for this study consist of 106 full-time students in Entrepreneurship Diploma program. The distribution number of students according to gender, place of residence, and academic performance are shown in Table 3 to 5.

Table 3 : Distribution of Respondents by Gender

Gender	Number	Percentage (%)
Male	39	36.8
Female	67	63.2
Total	106	100.0

Total of respondents were 106. From this numbers, 39 respondents (36.8%) were male the other 67 respondents (63.2%) were female.

Table 4 : Distribution of Respondents by Place of Residence

Place of Residence	Number	Percentage (%)
Hostel	80	75.5
Rented house	21	19.8
Family house	5	4.7
Total	106	100.0

Based on Table 4 above, it can be seen that 80 (75.5%) of the respondents live in the hostel provided by the collage. Whereas 21 (19.8%) of them live in rented houses and only 5 (4.7%) of them live with their families.

Table 5 : Distribution of Respondents According to Cumulative Grade Point Average (CGPA)

Performance	Number	Percentage (%)
1.66-1.99	1	0.9
2.00-2.49	5	4.7
2.50-2.99	53	50.0
3.00-3.49	41	38.7
3.50-4.00	6	5.7
Total	106	100.0

The majority of the respondents are within the moderate level of academic performance which CGPAs of 2.50 to 2.99 (50.0%), followed by 38.7% at high level performance of CGPA 3.00 to 3.49 and 5.7% of respondents in the excellent performance level of CGPA 3.50 to 4.00. It can also be seen that only 0.9% respondents are at a very low level of performance with CGPA of 1.66 to 1.99.

### The Findings of the Analysis of Learning Styles

This section answers the questions for the variation of learning styles practiced by the students of Diploma in Entrepreneurship of Kolej Profesional MARA Bandar Melaka. Descriptive analysis using the mean value is made by showing students' learning styles based on the 5 categories which are shown in the Dunn and Dunn Model.

Table 6 : Overall Learning Style Mean Analysis

Learning Style	Mean	Standard Deviation	Interpretation
Environment	3.157	0.314	Average
Emotional	3.719	0.461	High
Sosiological	3.589	0.573	Average
Physical	3.465	0.533	Average
Psychological	3.496	0.402	Average

Table 7 : Analysis of Learning Style Mean by Gender

Learning Style	Gender	Mean	Standard Deviation	Interpretation
Environment	Male	3.2707	.67191	Average
	Female	2.9169	.42963	Average
Emotional	Male	<b>3.8039</b>	.54322	High
	Female	3.6418	.40892	Average
Sosiological	Male	3.6103	.68048	Average
	Female	3.3940	.68044	Average
Physical	Male	3.4558	.68055	Average
	Female	3.3101	.55032	Average
Psychological	Male	3.3795	.71051	Average
	Female	3.3075	.59932	Average

Learning Style Analysis by Gender shows that male students have higher mean on learning styles for Emotional category (mean 3.80 SD = 0.543) and moderate for all other learning styles. For the female students, they showed an average mean for all learning styles. However, the highest mean for the girls is the emotional category with mean of 3.64 (mean 3.64 SD = 0.409).

Table 8: Analysis of Learning Style Mean by place of residence

	Place of Residence	Mean	Standard Deviation	Interpretation
Environment	Hostel	3.0595	.56439	Average
	Rented house	3.0265	.59099	Average
	Family	2.9333	.21660	Average
Emotional	Hostel	<b>3.7368</b>	.45381	High
	Rented house	3.6162	.52535	Average
	Family	3.4941	.40026	Average
Sosiological	Hostel	3.5200	.68592	Average
	Rented house	3.4476	.56535	Average
	Family	2.8400	.94234	Average

Physical	Hostel	3.3931	.60289	Average
	Rented house	3.3386	.59367	Average
	Family	3.0000	.63343	Average
Psychological	Hostel	3.3700	.62691	Average
	Rented house	3.2381	.16366	Average
	Family	3.1600	.26077	Average

Based on Table 8, analysis of Learning Styles by place of residence shows that students who live in the hostel have the highest mean in the emotional category. All the other categories are in the average level according to students' place of residence.

Table 9: Analysis of Learning Style Mean By Academic Performance

	Performance	Mean	Standard Deviation	Interpretation
Environment	2.00-2.49	2.9111	.38809	Average
	2.50-2.99	3.2013	.60430	Average
	3.00-3.49	2.8533	.44473	Average
	3.50-4.00	3.0185	.57270	Average
	Min	2.9961	.31450	Average
Emotional	2.00-2.49	3.6353	.21773	Average
	2.50-2.99	<b>3.8135</b>	.43590	High
	3.00-3.49	3.5366	.50946	Average
	3.50-4.00	<b>3.8431</b>	.29451	High
	Min	<b>3.7071</b>	.45932	High
Sociological	2.00-2.49	<b>3.9200</b>	.86718	High
	2.50-2.99	3.6679	.60884	Average
	3.00-3.49	3.1561	.66860	Average
	3.50-4.00	3.4667	.58878	Average
	Min	3.5527	.57375	Average
Physical	2.00-2.49	3.2222	.52705	Average
	2.50-2.99	3.4990	.60373	Average
	3.00-3.49	3.2358	.56557	Average
	3.50-4.00	3.0000	.59628	Average
	Min	3.2393	.52667	Average
Psychological	2.00-2.49	3.5600	.32863	Average
	2.50-2.99	3.4746	.60140	Average
	3.00-3.49	3.0927	.66045	Average
	3.50-4.00	3.4333	.61210	Average
	Min	3.3894	.40132	Average

Academic performances of the students were categorized by CGPA achievement as follows:

Table 10 : Evaluation Cumulative Grade Point Average (CGPA) and Interpretation

CGPA	Interpretation
2.00-2.49	Low
2.50-2.99	Average
3.00-3.49	Good
3.50-4.00	Excellent

Learning Style Analysis of Academic Performance showed that excellent students have higher mean in the emotional category compared to other categories. This shows that excellent students most prefer emotional learning style (mean 3.843 SD=0.295) with the least preferred learning style is physical category (mean 3.000 SD= 0.596). Students with average performance have highest mean in emotional category (min 3.8135 SD=0.4359) and lowest mean in environment categories (mean 3.201 SD=0.604). Student with low performance have higher mean in sociological category (mean 3.920 SD=0.867) and the lowest mean is in environment category (mean 2.911 SD=0.388).

## DISCUSSION AND IMPLICATION

The findings showed that emotional learning style is most dominant style adopted by the respondents among the others five learning style categories. The second preferred category of learning style practiced by the students is sociological category. The third category is the physical category and followed by psychological style and finally the environment category. The findings show that students of Entrepreneurship programme have high motivation value. The learning style practiced by students of entrepreneurship program is highly influenced by the emotional elements. The findings of this study agree with Low (2003) and Darman (2003) study who found that the most dominant style adopted by students is emotional category.

Motivation in this emotional category is the most dominant element in learning styles. This shows that motivation and encouragement given to students will help to improve their learnings. Students will be happy when they perform well in studies. Thus, students' emotions and motivations will improve when they obtain good marks or grades. In addition, feedbacks and constructive criticism from friends, parents and lecturers are needed to motivate the students towards a better learning process.

Motivation is categorized into two types: intrinsic motivation and extrinsic motivation. Intrinsic motivation is an internal motivation for students to participate in a learning process. This encouragement are needs, interests, attitudes and emotions naturally or guided by the requirements of the environment and experience. Meanwhile, extrinsic motivation is the insistence and encouragement to take action to get reward. In the learning processes, the intended benefits are in the form of scores, grades, and achievement in class. By having both motivations, students will work hard to achieve success in their field of study. Lecturers also need to give clear directions and aims to enhance students' understanding and encourage them to learn more effectively. Students also need to be exposed with the problem based learning or active learning, so that they will be more participate and involve in the learning process. Entrepreneurship education needs a different teaching pedagogy in which entrepreneurship education is linked to work-related learning (Dwerryhouse, 2001),

experiential learning (Kolb, 1984), action-learning (Smith, 2001) and entrepreneurial training (Gibb, 1999).

A study by Nelson (1993) and Zamri Mohamed Amin (2000) found that suitability and compatibility of learning styles will produce a good academic performance. Findings from the study of Nelson (1993) on the impact of learning style factors on college students' understanding and achievement show positive impact on the learning style of the student's academic achievement, where students who get the exposure to the learning styles usually acquire higher academic achievement compared to students who do not get exposure on the learning styles.

As a result of these findings, the researchers put forward some proposals to the college as follows:

- i. The college should help students to identify and practice learning style by conducting workshops and courses to increase students' awareness about their learning styles.
- ii. Lecturers also need to be exposed in order to understand the students' learning styles in order to plan more effective teaching process to be implemented during the lesson session. In addition, the diversity of the teaching and learning process needs to be applied so that students are more motivated in terms of their emotional aspects.
- iii. Curriculum restructuring for Entrepreneurship Diploma Programme conducted by the college in accordance with the findings of this study by added the curriculum of the 'hands on'. Students are given opportunities to run a business or real simulated business in college to practice what they have learned in class. Capital to buy materials to start a business is given by the "Bahagian Pembangunan Usahawan MARA". This is consistent with the learning style of sociological category owned by the majority of students' average performance. Sociological category involve relationships with peers and adults showed entrepreneurial traits possessed by students who will become entrepreneurs. If the objective of education is to prepare individuals to act as entrepreneurs, the most effective technique is to facilitate experiments by trying entrepreneurship out in a controlled environment, for instance through business simulation or role playing. (Hytti and O'Gorman, 2004).
- iv. The college also should conduct motivation program from time to time to motivate the students to succeed. Responsibilities assigned by the college for students to conduct a business or entrepreneurship carnivals should be continued because finding shows that learning style of emotional category also owned by entrepreneurial students. The college and the lecturer should give a clear and structured instruction for students who have learning styles of emotional category as they requires a clear and structured to perform certain tasks assigned to them.

## **PROPOSED EXTENSION STUDY**

1. Factors that influence learning styles practiced by students.
2. To distinguish between students who have been exposed to learning style knowledge and students who do not get the exposure.
3. The level of understanding of the lecturer towards students' learning styles to adapt teaching and learning process.
4. The relationship between learning styles and students' academic achievements.
5. The same study through qualitative methods such as interviews or combination of the two methods to get a better research results.

## **CONCLUSION**

Students' learning style is influenced by various factors. Among them is the yesteryear learning which is still been practiced by the students or due to the teaching and learning styles adopted by the education system. Each student has different learning style because each individual has his/her own methods to process the information. By identifying the advantages and disadvantages of each learning style practiced by the students, it will help administrators particularly lecturer to develop a teaching and learning process that is suitable and according to the level of their students.

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## REFERENCES

- Abdul Ghani Awang (1996). *Kemahiran Belajar Di Institusi Pengajian Tinggi*. Kuala Lumpur: Dewan Bahasa Dan Pustaka.
- Agogino, A.M. & His, S. (1995). Learning Style Based Innovations to Improve Retention of Female Engineering Students in the Synthesis Coalition. In *ASEE/IEEE Frontiers in Education 95' Proceedings, Purdue University*. Retrieved from <http://fairway.ecn.purdue.edu/asee/fie95/4a2/4a21/4a21.htm>
- Baharin Abu (2000). *Teaching Effectiveness and Staff Professional Development Programs in HEI in Malaysia*. Published Doctoral Thesis, The University of Birmingham, UK.
- Birkey, R. C. & Rodan J.J. (1995). *Adult Learning Styles and Preferences for Technology Programs*. Retrieved from National University Research Institute website: <http://www2.nu.edu/nuri/11conf/conf1995/birkey.html>
- Carlson (1987). *Psychology: The Science Behaviour*, Allyn & Bacon: Mc Graw Hill, Boston.
- Cavanagh, Stephen (1995). *Nurse education today*. Retrieved from the Eric database. (EJ507734)
- Dewar, T. (1995). *Adult Learning Online*. Retrieved from <http://www.cybercorp.net/~tammy/lo/oned2.html>
- Doris, B. M. (1993). An Investigation of Students' Learning Styles in Various Disciplines in Colleges and Universities. *The Journal of Humanistic Education and Development* 33(2), 65–74.
- Dunn, Stevenson (1997). Teaching Diverse College Students To Study A learning Style Prescription. *College Student Journal*, 31(3), 333-339.
- Dunn, Dunn (1978). Teaching Students Through Their Individual Learning Style Prescription. *College Student Journal*, 3(3), 333-339.
- Felder, Henriques (1995). Learning and Teaching Styles in Foreign and Second Language Education, *Foreign language Annals*, 28(1), 21-21.
- Hargreaves (1996). How Undergraduate Students Learn, *European Journal of Engineering Education*, 21(4), 425-434.
- Harless, D. K. (1996). *A comparison of gender differences in the relationship among learning styles, achieving styles and studies strategies of college students*. University of Minnesota. DAI-A 56/07. AAC 9537867
- Hartman, H.J. (2001). *Metacognition in Learning and Instruction*. Kluwer Academic Publishers: Netherlands.
- Liau, T.L. (2000). The Case for Emotional Literacy: The influence of emotional intelligence on problem behaviours in Malaysian secondary school students. *Journal of Moral Education*, 32(1).
- Low X. X. (2003). *Pola Gaya Pembelajaran Pelajar-Pelajar Di Kelas Lukisan Kejuruteraan Sekolah Menengah Sains Muar*. Universiti Teknologi Malaysia. Laporan PSM
- Megowan (1998). An Investigation of the impact of student and faculty learning style congruency and academic achievement in an undergraduate industrial technology program (African-Americans). *Disertation Abstract International*, 58(12), 1262A.
- Mohd Majid Konting (1994). *Kaedah Penyelidikan Pendidikan*. Kuala Lumpur: Dewan Bahasa Dan Pustaka, Kementerian Pendidikan Malaysia.
- Mohd Najib Abdul Aziz & Nor Shafrin Ahmad (2008). *Kemahiran Belajar dan Hubungannya Dengan Pencapaian Akademik: Kajian di Daerah Kerian, Perak*.

- Jurnal Pendidikan dan Pendidikan*, 23, 29-47
- Moir & Jessel (1989) Adolescent coping: the different ways in which boys and girls cope. *Journal of Adolescence*. 14(2), 119–133.
- Nelson, B.J (1993). *An Investigation of the Impact of Learning Style Factors on College Students Retention and Achievement*. Disertasi Ed. D. St John's University.
- Nik Mohd Rahimi, Kamarulzaman Abd. Ghani & Zamri Mahamod (2000). Kepelbagaian gaya pembelajaran Bahasa Arab Komunikasi mengikut jantina dan lokasi sekolah. Seminar Prosiding Pendidikan Pendidikan Kebangsaan 2000. *Siri Penerbitan Fakulti Pendidikan, UKM*, 70-78.
- Norihan Abu Hassan (2001) *Perkaitan antara pencapaian awal, kaedah pengajaran, gaya pembelajaran dan kesukaran subjek terhadap pencapaian matemaik di kalangan pelajar Diploma Kejuruteraan*. Tesis Phd (tidak diterbitkan) UKM.
- Sheal, P. R (1994). *How to Develop and Present Staff Training Course*. London: Kogan Page Ltd.
- Solomon & Kerndall (1979). *Children in classrooms, An Investigation of Person-environment Interaction*, NY: Praeger.
- Tyson & Velma Venerta (1996). *An Analysis of the differential performance of girls on standardized multiple-choice mathematics achievement test compared to constructed response tests of reasoning and problem solving*. The University of Iowa. DAI-A 56/10. ACC 9603091.
- Wiersma (1995) *Research methods in education: An introduction (6 th ed.)*. Massachusetts: Allyn and Bacon.
- Zamri Mahamod & Mohamed Amin Embi (2000). *Pengenalpastian Gaya dan Strategi Pembelajaran Bahasa Sebagai Satu Cara Mengatasi Masalah Kepelbagaian Pelajar Di Dalam Kelas Bahasa*. Seminar Prosiding Pendidikan Kebangsaan 2000.

*Factor Affective Stress and Stress Removing Methods of  
Undergraduate Student Teachers*

Siriporn Srichantha

Loei Rajabhat University, Thailand

0132

The Asian Conference on Education 2013

Official Conference Proceedings 2013

Abstract

The objectives of this research were to study the stress levels, factors affecting personal stress, and stress removing methods, of undergraduate students teachers. The data was collected from 330 students using a probability sampling method and was analysed by percentage mean, standard deviation (SD), and t-test. The results of the study showed that almost all of the undergraduate students surveyed had normal stress levels. The study showed that the most popular methods for the students to reduce stress were hobbies such as talking with friends and watching TV.

## **Background and Significance**

Stress is a mental state can be caused to all sex and all occupational groups Especially in the current situation with the technological advances. The social and economic changes quickly living in a society that is busy and there is stiff competition. Cause problems and difficulties in life more Coupled with the lack of recreation. Or engage in recreational activities.

Stress is a catalyst for change, both psychological and physical, especially to the soul is expressed in many forms, such as pressure, obviously a conflict and anxiety, etc. (Suchat Somprayu, 1999). Stress can cause aberrant behavior leading to various problems such as drugs, violence, family problems crime, etc.

Students are several factors that can cause stress, such as economic problems. Family problems Learning Problems And factors that come from the students themselves, it is a state of body and mind, as certain illnesses. Alcoholism and drug (Department of Mental Health, 1999) These causes will affect the state of mind. Cause pressure Anxiety Confusion and stress Cause lack of concentration, lack of perseverance, the lower classes had to be suspended from school. Student or ceases Or deviant behavior Addiction drugs Problem of prostitution Including the destruction of their lives with.

Therefore, this research study will provide basic information about the level of stress and the factors that affect stress of undergraduate students teachers.

## **Purpose of the Study**

The objectives of this research were to study the stress levels, factors affecting personal stress, and stress removing methods, of undergraduate students teachers.

## **Definitions**

Stress means a condition in which a person feels uncomfortable pressure, anxiety, mental confusion and result in a physical reaction. As well as change some of their behavior, which can be divided into three levels: low, which is normal.

## **Expected Application**

1. The sand stress levels the factors that contribute to stress and how to eliminate the stress of students
2. The results will be a research institution for basic information or agency responsible for the students to develop a project or activity to promote mental health and reduce the stress of students

## **Research Methodology**

The data was collected from 330 students using a probability sampling method and was analysed by percentage mean, standard deviation (SD), and t-test

### **Tools used in the research**

Planning of activities Thai Folk Plays 7 activities and use time activities about 25 minutes. Test of Mathematics Concepts of Pre-School Children include Counting and number 1-30 Knowing the number and odd number Comparison than less than equal Positive elements 10 Deletion elements 10

### **The statistics used for research**

The statistics used to analyze the data included mean and standard deviation. The analysis was presented in table followed by description

### **Results of Data Analysis**

That the most popular methods for the students to reduce stress were hobbies such as talking with friends and watching TV.

### **Conclusion Discussion**

The objectives of this research were to study the stress levels, factors affecting personal stress, and stress removing methods, of undergraduate students teachers. The data was collected from 330 students using a probability sampling method and was analysed by percentage mean, standard deviation (SD), and t-test. The results of the study showed that almost all of the undergraduate students surveyed had normal stress levels. The study showed that the most popular methods for the students to reduce stress were hobbies such as talking with friends and watching TV.

## References

Robinson, L. Psychaitric Nursing as a Human Experience, Philadelphia: W.B. Samders, 1989







*Using Educational Technology to Enhance Student Engagement and Retention*

Shirley Wong

Northern Melbourne Institute of TAFE, Australia

0144

The Asian Conference on Education 2013

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Abstract

The Bachelor of Accounting course of the Northern Melbourne Institute of TAFE in Australia was recently established and has adopted educational technology (ET) in the delivery of the course. This paper is written to identify the ET tools that have been used in teaching and to evaluate the success of this tool to enhance student engagement and retention.

**Keywords:** student engagement and retention, educational technology

## **Introduction and Literature Review**

Educational technology is widely adopted in higher education courses in Australia.

The socio-cultural constructivist theory of learning states that learners are self-motivated to interact with other learners and teachers (O'Donnell 2006). This has to greatly depend on the year level, and age of the learners. The higher the year level, the more learning experience the students gain, the more motivated they will be towards their study. Mature aged students are generally more independent and self-motivated.

Bigum's research (2008) showed that teachers were slow in adopting new technology, particularly when risks arose from implementation of the technology.

The education needs of learners and instructors need to be understood (Gilbert 2007). Before implementing the technology good preparation and induction program should be taken to ensure the success in introducing the technology (Owen 2008).

Young M. et al. (2010) researched into the art and science of fostering engaged learning and discovered that giving students challenging requirements with support from the instructors lead to greater engagement and higher achievement.

In empowering students, he suggested that they should be allowed to have control over what they learned. He stated that students generally learned less if being overly controlled such as in strict instructions on assignments. He said that they were engaged even on uninteresting matters if they have control over them.

Concerning autonomy over learning, he mentioned that it consisted of method autonomy, schedule autonomy and criteria autonomy.

He said that providing support to students included communication with students, giving them guidance and feedback and enough time to complete the assigned tasks.

Referring to providing challenging tasks, he found out that students should be given sufficient time and skills to complete the tasks with positive feedback from instructors.

He warned instructors to be aware of role overload which happened when students were overloaded with assignments with strict deadlines.

Several authors carried out research into providing feedback on student engagement. Nicol (2009) commented that feedback was effective in engaging students and should be provided on time for students to act on, be clear and be related to the criteria of the assessment. Weaver (2006) however said that students did not act on the feedback received. Freeman and McKenzie (2002) supported the idea of peer feedback to engage students. Hepplestone S. et al. (2011) researched on providing feedback to students without giving the grade until they planned and took action on the feedback as this could help them to focus on the feedback rather than the grade.

Palmer, R. (2011) investigated into factors improving the retention of students of colour who were underrepresented in science and engineering courses. He discovered that support by peer group improved students' academic performance and enabled them to network with each other. By participating in science and engineering extracurricular activities, they could gain practical knowledge relating to the subjects. Support and encouragement from parents, peers,

teachers, counsellors in their high school education helped students to transit smoothly from high school to universities.

The research into developing a freshman orientation survey to improve student retention within a college by Brown J. et al. (2011) showed that one third of the students dropped out from their enrolment in the colleges which also failed to maintain the 60% level of graduates targeted. The authors discovered that the students' high school performance, the result of their aptitude tests, the place they resided during their college life, their parents' education, occupation, the level of income, financial support and expectation of them had a significant positive correlation with their retention in colleges.

The remainder of this paper follows with a section on conceptual framework which discusses Bloom's six level of understanding in the application of educational technology in learning. Next, the methods used in the research are detailed. The paper is concluded with a discussion of the result.

### **Conceptual Framework**

Bloom's taxonomy discusses six levels of understanding: knowledge, comprehension, application, analysis, synthesis and evaluation. Firstly, the student will recognize and reproduce information obtained. He then starts to look into the information to identify the relationship among them. He will use the knowledge gained to solve problems and identify different solutions to different problems, and finally develop new solutions to new problems. In the evaluation stage, he is able to assess the situation and decides whether the solutions to the problems are appropriate. ET is a useful tool to enhance the six levels of understanding and can help in the smooth transition of one level to the other.

### **Methodology**

Observation of the teaching practices was conducted to identify the ET used in teaching and the successes and failures in designing and applying the technology.

### **Results**

#### **Technologies Applied**

Different ET is applied in teaching including lectures, seminars, tutorials, assessments, mentoring, feedback and administrative and personal support.

#### **LECTURES**

Face-to-face lectures are conducted to present the main concepts and principles of the subjects. Activities such as discussion and doing multiple-choice questions are introduced to add varieties to the presentation.

The class size is small so that interaction between lecturers and students is effective.

In the subject of professional practice, students are taught on skills of job searching and look for jobs to work for two weeks. They agree that it is a good opportunity to network with potential employers, but feel that the work period should be lengthened.

## **SEMINARS**

In the subject Contemporary Issues in Business/Accounting, guest speakers are invited to present in seminars on contemporary issues in business and accounting organised by students. Presentation, writing journal and research essay related to the seminars are given as the assessment tasks. The subject has a high score in students' evaluation which may be due to the fact that students have control over what to learn and the materials covered in the seminars are practical.

## **TUTORIALS**

Exercises on solving problems related to the real life practices of the subjects are used to help students to develop their analytical skills, consolidate and integrate their knowledge.

Case studies are introduced to enhance interaction between teachers and students and among students themselves. The drawback is that a few students may dominate and deprive the other students the chance to contribute. Some students complain that too much reading is involved and lose interest in the activity.

Debate and presentation are used to engage students to actively research into the issues covered in class and share their findings with peer students. The activities can help them to develop coordination and communications skills which are essential elements required of an employee in the workplace.

Field trips are organised to enable students to have onsite experience of the application of theories delivered in class. Students express great interest in these activities as they can see the association of the concepts acquired with the practice involved.

## **ASSESSMENTS**

Different forms of assessments including presentations, tests, assignments and examinations are conducted. Some teachers offer flexibility to students by allowing them to take home the examination paper to complete. Other teachers allow students to choose their topic in assignments. In some subjects, small assessments are conducted early to ensure students are on track and big assessments are broken into small ones to ease the pressure of having heavy weighting of one assessment on students.

## **MENTORING**

In the subject introduction to business law which has a high failure rate, the mentoring program is introduced to improve the retention rate of first year students. Students getting distinction and high distinction are trained and paid to mentor the students who fail in the subject. The feedback from the program is good. The mentors say they benefit from the experience of helping fellow students, get paid and have a good reference from the teachers. Mentees welcome the activity as they can get help free of charge from fellow students other than from teachers.

A support unit is established to provide counselling and study skills service to students in need.

## **FEEDBACK**

Immediate feedback is provided to students' queries including draft of assignments. Students appreciate teachers' quick response. An open door policy is implemented where students

can see teachers any time without appointment. Students are given second trial of assignment or test after receiving feedback from teachers if they fail in these assessments.

### **ADMINISTRATIVE AND PERSONAL SUPPORT**

Time-tabling is tailored to meet the needs of students so that they can attend classes for two or three days to allow them to work part-time to support their living.

At risk students whose attendance in classes fall below 50% at the first stage and whose performance fail to meet the standard in the first assessment at the second stage are interviewed to find out the reasons for the failure and the help that can be extended to them.

Personal support such as advice concerning their family issues is extended to students who have a close relationship with teachers.

### **STUDENT LIFE AND MEDIA (SLAM)**

SLAM is a section established within the institute to help students to meet new friends and engage in on and off campus events including competition in sports, trips and tours. All on campus activities are free. Assistance is also given to students to set up their own clubs.

### **Evidence from Student Enrolment and Subject Evaluation Questionnaire**

The enrolment for the course was very strong over the last few years with the number of students enrolled at 60 in 2012 compared to 6 enrolled in 2008 when the course started. This indicates that the department is on the right track of engaging and retaining students. The improvement of the subject evaluation result from credit grade in 2011 to distinction grade in 2012 in table 1 further supports this conclusion.

**TABLE 1: RESULT OF SUBJECT EVALUATION QUESTIONNAIRE OF BACHELOR OF ACCOUNTING**

	<b>SEM 2 2011</b>	<b>SEM 2 2012</b>
Achieve learning outcome	69.7%	77.7%
Appropriate assessment	67.1%	81.0%
Helpful and timely feedback	57.9%	76.9%
Manageable workload	65.8%	77.3%
Appropriate learning resources	69.7%	82.6%
Relevance to future career	77.6%	81.4%
Professionally relevant skills development	56.6%	68.6%
Learning stimulation	63.2%	72.3%
Overall, well taught	61.8%	76.4%
Overall, quality of subject	65.8%	74.8%

### **Conclusion**

Educational technology is used in the delivery of the Bachelor of Accounting course in the institute. Teachers generally find the technology can enhance students' engagement and retention. Further research can be carried out on the demographics of the students affecting their retention at the college.

## References

- Bigum, C., et al., 'Landscaping on Shifting Ground: Teacher Education in a Digitally Transforming World, *Asia-Pacific Journal of Teacher Education*', 36(3), pp 245-255, 2008.
- Bloom, B., 'Human Characteristics and Student Learning', New York, McGraw Hill, 1976.
- Brown, J. et al., 'Developing a Freshman Orientation Survey to Improve Student Retention Within a College', *College Student Journal*, pp. 834 – 851, 2011.
- Caballe S., 'Using Mobile Devices to Support Online Collaborative Learning', *Mobile Information Systems* 6, pp27 – 47, 2010.
- Franceschi, K., et al. 'Engaging Group E-Learning in Virtual Worlds', *Journal of Management Information Systems*, Summer, Vol. 26, no. 1, pp73 -100,2009.
- Freeman, M. et al., 'A Confidential Web-based Template for Self-and peer-assessment of student teamwork: Benefits of Evaluating Across Different Subjects', *British Journal of Educational Technology* 33, no.5, pp551 – 69, 2002.
- Gilbert, M., et al., 'E-Learning: The Student Experience', *British Journal of Educational Technology*, 38(4), pp560 – 573, 2007.
- Ipsos, M., 'Student Expectations Study: Key Findings from Online Research', Joint Information Systems Committee (Briefing Paper), Bristol, 2007.
- Kelller John., 'Development and Use of the ARCCS Model of Motivational Design', *Journal of Instructional Development*, 10(3), pp2 – 10, 1987.
- Kennedy, G., et al., 'First Year Students' Experience with Technology: Are They Really Digital Natives?' *Australasian Journal of Educational Technology* , 24(1), pp108 – 122, 2008.
- Lockwood, F., et al., 'Innovation in Open Distance Learning: Successful Development of Online and Web Based Learning, Routledge, 2001.
- McMahon, M., 'E-Learning in Higher Education', *EBSCO Research Starters*, pp.1 -7, 2009.
- Nicol, D., 'Assessment for Learner Self-regulation: Enhancing Achievement in the First Year Using Learning Technologies', *Assessment & Evaluation in Higher Education* 34, no. 3, pp335 – 52, 2009.
- O' Donnell A., et al., 'Collaborative Learning, Reasoning and Technology', Routledge, 2006.
- Owen S., et al., 'Students' Voices: Learning with Technologies', *Australian Information and Communications Technology in Education Committee*, 2008.
- Palmer, R., et al., 'A Qualitative Investigation of Factors Promoting the Retention and Persistence of Students of Colour in STEM', *The Journal of Negro Education*, Vol. 80, No. 4, pp. 491 – 504, 2011.
- Salmon, G., 'E-Activities: The Key to Active Online Learning', RoutledgeFalmer, 2002.

Sutherland-Smith, W., et al., 'Minding the P's for Implementing Online Education: Purpose, Pedagogy and Practicalities', Australian Journal of Teacher Education, Vol 35, 7, pp 64 -77, November 2010.

Weaver, M. R., 'Do Students Value Feedback? Student Perceptions of Tutors' Written Responses', Assessment & Evaluation in Higher Education 31, no. 3, pp379 – 94, 2006.

Young, M., et al., 'The Art and Science of Fostering Engaged Learning', Academy of Educational Leadership Journal, Vol. 14, Special Issue, pp1 – 18, 2010.

The logo for the International Association for Online Education (iafor) is centered on the page. It features the lowercase letters 'iafor' in a light blue, sans-serif font. The text is enclosed within a large, stylized circular graphic composed of two overlapping, thick, curved lines. The upper-left portion of the circle is a light red color, while the rest of the circle is a light blue color, matching the text. The lines are slightly irregular, giving the logo a hand-drawn or artistic feel.

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*Cross-Age Tutoring: Its Effects on High Performing Students and Students At-risk  
with Learning Disability in Mathematics*

Michel Pampelon Basister

University of Nueva Caceres, Philippines

0151

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Abstract

This study aimed to determine the effects of cross-age tutoring on high performing students and students at-risk with learning disabilities in Mathematics. The study reveals that compared to students in the control group, students in the experimental group shows higher increase both in cognitive and non-cognitive factors. The significant differences posted between the control and experimental groups of both high performing students and at-risk students are sufficient evidence to show that cross-age tutoring is an effective intervention to improve the cognitive and non-cognitive aspects of involved students.

Generally speaking, no significant relationships were found between cognitive and non-cognitive factors. This could be attributed to the homogeneity of the group. However, despite range restriction, the slight to substantial although not significant relationships posted between cognitive and non-cognitive factors can be considered as encouraging results that deserve to be examined in the future.

## 1. Introduction

The United Nations Educational, Scientific and Cultural Organization (UNESCO) underscore that education is not simply about making schools available for those who are already able to access them. Instead, it is also about being proactive in identifying the barriers and obstacles encountered by learners in attempting to access opportunities for quality education, as well as in removing those barriers and obstacles that lead to exclusion. The pledge of international community composed of governments, development agencies, civil society and the private sector to work together to reach the goals of Education for All (EFA) movement, which is to provide quality basic education for all children further support the idea of meeting the learning needs of all children.

Thus, the availability of scientifically based instructional practices which address the needs of all students, including those who are not functioning on grade level is crucial in meeting the goals of Education for All movement. Availability of research-supported practices applicable in classrooms as well as in schools as a whole, validated in the settings where it is to be implemented will facilitate access to the general education curriculum for struggling students most importantly those with special education needs.

The Department of Education in the Philippines acknowledged that learning gaps varies across students; thus, interventions that may have to be provided should be tailored to individual learning needs. The said department further recommended cross-age tutoring as one form of interventions that can be provided to students.

Tutoring takes and builds on one of the better aspects of human nature and values as well, which is our capacity and willingness to help each other, making it as one of the learning tool for both tutors and tutees, as well as an instrument for building positive interpersonal relationships among children.

It is precise for educational institutions to ensure that right attitude is being developed since it helps students to stay motivated towards their studies and react constructively to their learning experiences. Thus, a teaching strategy and intervention programs, which provides a learning environment that equip students with both necessary knowledge and skills and positive attitude will be more beneficial.

Education communities have the same opinion that students experiencing learning difficulties with academics need extra support and individualized attention. Individualized instruction caters to different learning styles and provides feedback and encouragement that are tailored to the learner's specific needs. This support could be given not only by teachers and school administrators but by high performing students in the school as well through cross-age tutoring.

The generally poor performance of the Filipinos in Mathematics as revealed by the 2003 Trends in International Mathematics and Science Study, the prevalence of arithmetic disability which is estimated to be at least 5% to 8% of the general population [1], and the current trends on the use of the different Response-to-Intervention Models as an alternative method in identifying children with special needs, prompted the researcher to conduct a study on Cross-Age Tutoring as a

prevention and early intervention model in the general education classroom prior to referral for special education.

This study established the effectiveness of cross-age tutoring in enhancing students' scholastic performance in Mathematics, their academic self-concept, and their attitude towards Mathematics. The outcome of this study are highly significant to teachers as it will provide them with an effective strategy that they may use in the classroom with diverse sets of students. The benefits derived from information about the effects of cross-age tutoring likewise provide academic administrators with an effective intervention strategy that can be adopted school-wide to generate improved attitude and performance among students as well as in developing school policy on the use of validated RTI model in identifying students with learning disabilities in Mathematics.

This study aimed to determine the effects of cross-age tutoring on high performing students and students at-risk with learning disabilities in Mathematics in Tinago National High School, Naga City, Philippines, S/Y 2012-2013.

Specifically, it sought to answer the following questions: 1) Are there significant differences between the control and experimental groups along cognitive and non-cognitive factors? 2) Is there a significant correlation between the cognitive and non-cognitive factors?

## **2. Brief review of literature**

Tutoring works on cognitive as well as on emotional and social competence of the learner.

One-to-one tutoring has long been recognized as superior to group instruction, especially for students with special needs. Tutoring can adapt instruction to the learner's pace, learning style, and level of understanding. Feedback and correction are immediate and basic misunderstandings can be quickly identified and corrected [2].

Tutoring involves one student having responsibility for assisting another student/s in the learning process. Peer tutoring is widely used as an umbrella term for tutoring, encompassing two of its three types. Gaustad (1993) defined peer tutoring as a one-on-one teaching process in which the tutor is of the same general age, grade, or academic status as the tutee. When the tutor is an older student, cross age tutoring is the appropriate term to use. The other type of tutoring is the parent/volunteer tutoring, where adults outside the school tutor students [3].

In cross-age tutoring, student pairings may include a variety of combinations such as elementary students with high school students or older students with younger students. It has been also applied to students with varying disabilities [4]. In fact, Okilwa and Shelby [5] reported that cross-age tutoring is effective for special education students in both general education and special education settings.

Tutoring has emotional as well as cognitive benefits. Kalkowski [6] pointed three commonly cited benefits of cross-age tutoring to both tutor and tutee: the learning of academic skills, the development of social behaviors and classroom discipline, and the enhancement of peer relations.

The heart of tutoring is diagnostic/prescriptive interaction — a cycle of assessment, feedback, and tailored instruction. In the one-on-one tutor-tutee relationship, learners have ample opportunities to practice vocabulary building, review, repetition, questioning, and other strategies focused on achievement without being compared to others [4].

Several types of cross-age tutoring programs has been implemented and obtained positive results. However, U.S. Department of Education stressed that a high quality tutoring program includes well-structured sessions, regular sessions, and monitoring and reinforcement of learners' progress. Considerations for developing tutoring programs includes target age groups, subject, and goals, resources (people, facilities, time, money), recruitment of tutors and matching with tutees, ongoing tutor training and support, and evaluation plan.

Wasik and Slavin as cited by Kerka [7] states that tutees whose tutors participated in ongoing, intensive training throughout their participation outperformed tutees whose tutors did not complete the ongoing training sessions. The importance of tutor training is reinforced by several other studies, which provide specific advice on the types of training that yield the best results. Jenkins & Jenkins as cited by Kerka [7] point to the importance of training in interpersonal skills so tutors do not become impatient with tutees. Furthermore, Warger in Kerka [7] says training should include strategies for reinforcing correct responses and properly correcting incorrect responses.

Rigorous evaluations of tutoring programs reported positive results for programs whose tutoring sessions ran from 10 to 60 minutes in length, although longer sessions did not necessarily result in better outcomes [7]. Tutoring programs in which tutors met with tutees at least three times a week were more likely to generate positive achievement for tutees than programs in which tutors and tutees met twice a week [7]. It is interesting to note that a meta-analysis of cross-age tutoring indicated that longer tutoring programs were not necessarily better for academic outcomes than shorter ones [3].

When a tutor knows his/her own Learning Style and the tutee's Learning Style, the tutor can better choose a modality to provide more successful tutoring. Tutors have a tendency to provide tutoring to paired students from their own perspective of how they learn. Tutors need to gear this interaction to how the student learns: Visual, Auditory, or Kinesthetic.

Rewards are a powerful motivator for student performance, especially when students feel like they have some control over their outcomes. Programs that include both rewards and autonomy (autonomy in choosing rewards and autonomy in monitoring progress) seem to be especially effective in promoting positive tutoring outcomes for tutees and tutors [3].

High quality tutoring programs provide appropriate opportunities for parents or guardians and families to get involved with student learning. Strategies for family involvement may include help for parents and/or family members to support learning at home, volunteer opportunities for families, and opportunities for families' concerns to be heard through advisory committees or group meetings [7]

### **3. Methodology and research design**

This study used both experimental method and descriptive-correlation method, involving two groups of students, the control and experimental group. The experimental and control group were composed of both fourth year high performing students and grade 7 students who are at-risk with learning disabilities in Mathematics. Cross-age tutoring program was implemented in the experimental group wherein fourth year high performing students tutored grade 7 students who are at-risk with learning disabilities in Mathematics. However, the control group went through their lessons without any involvement in the cross-age tutoring program or any other similar program.

In the experimental group, fourth year high performing students (tutors) attended a one-day orientation on how to deal with their tutees (grade 7 students) academically, psychologically, and socially. Learning styles of both the tutees and tutors was considered in their pairing in the study. Fixed schedule and venue was followed in conducting the tutoring sessions three times a week. Incentives in a form of school supplies donated by the Naga City School Board were also given to tutors and tutees who religiously attend every tutoring session. Parents permit was sought for the experimental group.

To determine the cognitive effects of the cross-age tutoring program, first to fourth quarter grades of students in the experimental and control group were compared. Similarly, first to fourth quarter examination results in Mathematics of the control and experimental group were also compared.

A pre-survey and post-survey on attitude towards Mathematics and students' level of academic self-concept was conducted to determine the non-cognitive effects of the cross-age tutoring program to fourth year high performing students and grade 7 students at-risk with learning disabilities in Mathematics.

#### **3.1 Respondents**

The respondents of the study were the fourth year high performing students and grade 7 students who are at-risk with learning disabilities in Mathematics enrolled in Tinago National High School, Naga City, Philippines during the school year 2012-2013. Mathematics teachers from the elementary grades and current teachers of grade 7 students also served as the respondents of this study in identifying students at-risk with learning disabilities in Mathematics.

The study used both probability sampling and non-probability sampling in determining the respondents and assigning members of the control and experimental groups. Purposive sampling has been used to determine the high performing students and students at-risk with learning disabilities in mathematics while, simple random sampling has been used to assign students in the control and experimental groups.

To determine the grade 7 students who are at-risk with learning disabilities in Mathematics, evaluation of educational record from the elementary to the first grading period in grade 7 were conducted. Furthermore, their scores in the National Achievement Tests and Mathematical Ability Test in school entrance examination

were also considered. The Rating Scale for Teachers (RST) on Learning Disability developed by the Special Education Division [8] of the Department of Education was utilized to establish the characteristics of the child at-risk with learning disability in Mathematics. Those who pass the screening process will be further subjected to an informal assessment in mathematics using instruments developed by the Special Education Division of the Department of Education. Grade 7 students who were considered as students at-risk with learning disabilities in Mathematics served as subjects in this study. Fifty percent (50%) of these students served as tutees in the cross-tutoring program, while the remaining fifty percent (50%) continued their studies in the usual manner in the classroom without the assistance of fourth year tutors.

Likewise, to determine the high performing fourth year students, records from first to third year high school were evaluated. Scores in Mathematical Ability Test in the National Career Assessment Examination (NCAE) was also considered. Fourth year students who belonged to the top 20 % were considered in this study. Part of these fourth year students were paired to selected tutees and served as tutors in the cross-age tutoring program, while the other part were not involved in the program.

### **3.2 Instruments**

This study used questionnaires, observation checklist, informal interviews, and some readings to verify the validity of some responses. The questionnaires used have three (3) parts, namely; Part I which solicited answers on the attitude of the respondents towards Mathematics. Part II was the questions which measured the level of academic self-concept of the respondents, and Part III determined the learning styles of each respondent.

Part I and Part II of the instrument used a 5-point Likert scale to determine points that best described the variables. For part I, the instrument of Layones [9] for the attitude towards Mathematics was adopted by the researcher. This instrument registered overall internal consistency coefficients of 0.87, which can be taken as indicating adequate reliability for the whole scale. However, the behavioral and cognitive components which were reported to have questionable and poor reliability were still adopted because the items measured psychological constructs.

For part II, The Academic Self-Concept Questionnaire (ASCQ) developed by Liu and Wang [10] was adopted in this study to measure the level of academic self-concept of the respondents. The ASCQ is composed of two 10-item subscales: students' academic confidence (10 items) and students' academic effort (10 items). The academic confidence (AC) subscale assessed students' feelings and perceptions about their academic competence, while the academic effort (AE) subscale assessed students' commitment to and involvement and interest in schoolwork. A Rasch analysis using case estimate scores based on the second binary answer of the ASCQ, shows that the academic self-concept scale has been found to be valid with students with learning disabilities. Rasch analysis of the ASCQ also confirms the unidimensionality of the instrument, which means that only a single construct is measured by items in a scale[11].

The Index of Learning Styles (ILS) was adopted and served as the Part III of the questionnaire. This instrument was created in 1991 and was revised in 1994 by Richard M. Felder and Barbara Soloman of North Carolina State University [12]. Several analyses of responses to the Index of Learning Styles have been published. The principal results that bear on the reliability and validity of the instrument are as follows [13]; test-retest correlation coefficients for all four scales of the ILS varied between 0.7 and 0.9 for an interval of four weeks between test administrations and between 0.5 and 0.8 for intervals of 7 months and 8 months. All coefficients were significant at the 0.05 level or better. Internal consistency reliability of the ILS using Cronbach's alpha coefficients were all greater than the criterion value of 0.5 for attitude surveys in three of four studies. Internal consistency reliability refers to the homogeneity of items intended to measure the same quantity, that is, the extent to which responses to the items are correlated. Tuckman as cited by Felder [13] suggests that an alpha of 0.75 or greater is acceptable for instruments that measure achievement and 0.5 or greater is acceptable for attitude assessments.

The researcher personally administered the instrument to the respondents. To establish rapport and cooperation from respondents, he was around to clarify directions in answering the questionnaire. Informal interviews were also conducted after the distribution and retrieval of questionnaires.

The Rating Scale for Teachers (RST) on Learning Disability and informal assessment in Mathematics developed by the Special Education Division [8] of the Department of Education was also utilized by the researcher to establish the characteristics of the child leading to a learning disability.

### **3.3 Statistical treatment**

The APA recommendations in reporting statistics were adopted in the research. In testing significant differences between means of both independent and dependent variables, the p-value together with its corresponding t-value was used. Effect size was also computed and reported in the results. To determine the significant correlation between the cognitive factors and non-cognitive factors in the performance of the students, Spearman's Rank Correlation Coefficient (rs) was used.

## **4. Results and discussions**

The researcher hypothesized that cross-age tutoring can be used to improve more the cognitive and non-cognitive aspects of both high performing students and students at-risk with LD in Mathematics. It is further hypothesized that cognitive and non-cognitive factors considered are significantly related.

In terms of scholastic performance in Mathematics, findings shows that final rating of the control and experimental groups of at-risk students differed significantly according to Welch's *t*-test,  $t(18) = -3.734$ ,  $p < 0.01$ . On average, the control group received a final rating of 73.15, while the experimental group got a higher final rating of 77.73 in Mathematics. The effect size is considered large based on the result of Cohen's *d* test which is equal to 1.672. However, the scholastic performance of the control and experimental group of fourth year high performing students seems to be insignificantly different due to the Welch's *t*-test result of  $t(18) = -0.514$ ,  $p > 0.05$ . The

effect size is also small based on the Cohen's  $d$  value of 0.230. However, the average final rating of the experimental group is 86.1, which is slightly higher than the 85.2 average final rating of the control group.

The scores in Mathematics quarterly tests of the control and experimental group of both high performing and at-risk students are not significantly different. Findings reveal that out of 30 items test, the control group of high performing students scored on the average of 21.55 while the experimental group scored slightly higher on the average of 22.78. Welch's  $t$ -test result is  $t(18) = -0.170$ ,  $p > 0.05$  and the Cohen's  $d$  value is 0.291 which is considered small effect. Similarly, the Welch's  $t$ -test result of  $t(18) = -1.664$ ,  $p > 0.05$  between the control and experimental group of at-risk students show that their scores in Mathematics quarterly tests are not significantly different. However, the effect size is considered medium based on the 0.744 Cohen's  $d$  result. The average score of the experimental group of at-risk students is 11.18 which is considerably higher than 9.13 average score of the control group.

Generally speaking, the significant to slightly higher scholastic performance in Mathematics and scores in Mathematics quarterly tests among the experimental participants seem to provide evidence to declare that cross-age tutoring was able to yield positive effects on the improvement of cognitive factors of both tutors and tutees. This result corroborates what previous researchers have found in terms of cognitive benefits of tutoring. The literature is replete with studies showing that one-to-one tutoring is recognized as an effective intervention to improve the academic performance of the learner (Gaustad, 1993[2]; Kalkowski, 1995[6]; Presbitero, 2002[14]; Okilwa & Shelby, 2010[5]).

Using Welch's  $t$ -test, findings reveals that the control and experimental groups of both high performing and at-risk students were not significantly different before the experiment in terms of Attitude towards Mathematics and Academic Self-Concept herein referred to as non-cognitive factors. However, the study indicates a more improved attitude towards mathematics among experimental group compared with the control group after implementing cross-age tutoring. This is borne out by the fact that  $t(18) = -2.463$ ,  $p < 0.05$  and  $t(18) = -3.152$ ,  $p < 0.01$  was computed showing significant difference between the experimental and control group of high performing students and at-risk students, respectively. Significant difference on the gains in attitude towards mathematics between the control and experimental group of high performing students was also computed as revealed by the Welch's  $t$ -test result of  $t(18) = -1.875$ ,  $p < 0.10$ . Although the gains in attitude towards mathematics was found to be insignificantly different between the control and experimental group of at-risk students, the computed Cohen's  $d$  of 0.541 shows that still cross-age tutoring has medium effect on this factor. Notwithstanding, these results supports the researcher's hypothesis.

The improvement in attitude towards mathematics among the experimental group indicates that aside from cognitive effects, cross-age tutoring has emotional benefits as well. This result substantiate what previous studies have reported (Gaustad, 1993[2]; Kalkowski, 1995[6]; Abalayan, 2006[15]). Layones [9] stressed that affective dimension in Mathematics which include beliefs, emotional reactions, and attitude plays a vital role in the teaching and learning process. Thus, improving the

emotional characteristics of the learner such as their attitude towards the subject is as important as improving their cognitive and academic traits.

In terms of academic self-concept, the control and experimental group of high performing students shown to be significantly different based on the Welch's *t*-test on post-survey and gains result of  $t(18) = -2.463$ ,  $p < 0.05$  and  $t(18) = -3.080$ ,  $p < 0.01$ , respectively. However, it is interesting to note that no significant differences were computed on the post-survey and gains in academic self concept of the control and experimental groups of at-risk students as shown by Welch's *t*-test result of  $t(18) = 0.372$ ,  $p > 0.05$  and  $t(18) = 0.128$ ,  $p > 0.05$ , respectively. This implies that cross-age tutoring significantly improved the academic self-concept of the tutors but failed to improve the same variable in the tutees. These results partially support the researcher's hypothesis.

The researcher's findings support the foregoing literature and studies that tutoring works on social competence as well (Gaustad, 1993[2]; Abalayan, 2006[15]). The work on emotional and social competence and well-being such as tutoring has wide range of educational and social benefits, including improved behavior, increased inclusion, increased social capital and improvement to mental health, to name a few [16]. Due to the significant impact of academic self-concept has on person's life; fostering positive self-concept development in children should be an important goal of any educational system.

This study also investigated on the relationship between cognitive and non-cognitive factors. As revealed, only the control group of high performing students showed a significant correlation between scholastic performance in Mathematics and Academic Self-Concept based on the computed Spearman's Rank Correlation coefficient (*rs*) of 0.67,  $\alpha = 0.05$ . However, this relationship was found to be substantial ( $rs = 0.45$ ) but not significant in the experimental group of at-risk students. Slight relationship between these variables was noticed in the experimental group of high performing students and control group of at-risk students with a computed correlation coefficient of 0.30 and 0.27, respectively. Albeit, this result partially supported the researcher's hypothesis and uphold the educators increasing awareness that a students' perception of him/herself may have a significant influence on his/her academic performance in school.

Substantial but not significant relationship ( $rs = 0.55$ ) between the variables scholastic performance in mathematics and the attitude towards this subject was found in the control group of high performing students. This relationship was found to be slight ( $rs = 0.20$ ) in the experimental group of high performing students and negligible in the control group ( $rs = -0.08$ ) and experimental group ( $rs = -0.15$ ) of at-risk students. This result did not support the researcher's hypothesis and contradicts with the findings of previous studies which shows significant relationships between scholastic performance in Mathematics and attitude towards the subject (Bare, 2010[17]; Balisoro, 2011[18]).

The relationship between scores in mathematics quarterly test and attitude towards the subject was also tested. Table 4 further reveals that the relationship between these variables was found to be substantial ( $rs = 0.53$ ) in the control group of high performing students, negligible ( $rs = 0.05$ ) in the experimental group of high

performing students and slight in the control group ( $r_s = -0.33$ ) and experimental group ( $r_s = -0.28$ ) of at-risk students. All of these computed correlation coefficient were found to be insignificant at 0.05 alpha level. Similarly, insignificant relationships were also found between the variables scores in mathematics quarterly test and academic self-concept. The computed correlation coefficient were all considered negligible in the control ( $r_s = 0.14$ ) and experimental ( $r_s = -0.08$ ) group of at-risk students. Slight relationship ( $r_s = 0.25$ ) was found in the experimental group of high performing students and a substantial ( $r_s = 0.45$ ) but not significant relationship was posted in the control group of high performing students.

Summarizing, the relationship between the scholastic performance in mathematics and academic self-concept was found to be significant among the control group only of high performing students. However, no further significant relationships were found between other cognitive and non-cognitive factors both in the control and experimental groups of either high performing students or at-risk students. These low correlation computed could be attributed to the homogeneity of the group. However, despite range restriction, the slight to substantial but not significant relationships posted between cognitive and non-cognitive factors can be considered as an encouraging results that deserve to be examined in the future.

## 5. Conclusions

On the basis of the foregoing results and interpretations, there seems to be sufficient evidence to conclude that cognitive and non-cognitive factors of both high performing students (tutors) and at-risk students (tutees) is positively affected by the implementation of cross-age tutoring. The experimental group were found to have slightly higher to significantly different improvements in scholastic performance in Mathematics, scores in Mathematics quarterly test, attitude towards Mathematics and academic self-concept. Thus, this paper suggests that schools can take concrete steps to institutionalize a program implementing cross-age tutoring involving high performing students in the upper level as tutors and at-risk students in the lower level as tutees. Authorities in the division level can initiate a division wide implementation of a program involving cross-age tutoring.

In addition, further interventions and examinations should be done to those students who will not demonstrate the same improvement shown by the experimental participant in this research since these students might be eligible to receive special education services. On the other hand, future studies that will examine further the relationship between the cognitive and non-cognitive factors should also be conducted.

## 6. References

- [1] Deborah Deutsch Smith and Naomi Chowdhuri Tyler. "Introduction to Special Education: Making a Difference," 7<sup>th</sup> ed. ( New Jersey: Pearson Education, Inc. , 2010), p. 166
- [2] Joan Gaustad, "Peer and Cross-Age Tutoring," ERIC Digest, University of Oregon, 1993
- [3] Debbie R. Robinson and Janet Schofield, "Peer and Cross-age Tutoring: Outcomes and Their Design Implications," Department of Psychology, University of Pittsburgh, 2004
- [4] The Access Center, "Using Peer Tutoring for Mathematics," The American Institute for Research, September, 2004
- [5] Nathern S. A. Okilwa and Liz Shelby, "The Effects of Peer Tutoring on Academic Performance of Students with Disabilities in Grades 6 Through 12: A Synthesis of the Literature," Hammill Institute on Disabilities and SAGE Publications, 2010
- [6] Page Kalkowski. "Peer and Cross-Age Tutoring," School Improvement Research Series, U.S. Department of Education. 1995
- [7] Sandra Kerka, "Tutoring," Learning Work Connection, The Ohio State University, 2007
- [8] Special Education Division. "Educational and Psycho-Diagnostic Screening and Assessment of Children with Learning Disabilities," Bureau of Elementary Education, Department of Education, Manila, Philippines, 2006
- [9] Romeo C. Layones. "Cognitive Apprenticeship: Its Effect on Student's Attitude Towards Mathematics and Performance in College Algebra," (Unpublished Master's Thesis, University of Nueva Caceres, March, 2009).
- [10] Liu, W. C. & Wang, C. K. J. (2005). Academic self-concept: A cross-sectional study of grade and gender differences in a Singapore Secondary School. *Asia Pacific Education Review*, 6(1), 20-27.
- [11] Joyce Bei Yu Tan & Shirley M. Yates, "A Rasch Analysis of the Academic Self-Concept Questionnaire" *International Education Journal*, 2007, 8(2), 470-484.
- [12] Richard M. Felder and Barbara A. Soloman. "Index of Learning Styles," North Carolina State University, 1994
- [13] Richard M. Felder and Joni Spurlin. "Applications, Reliability and Validity of the Index of Learning Styles," *International Journal of Engineering Education*, Vol.21, No.1, pp. 103-112, 2005

[14] Nelia Presbitero “ Peer Tutoring and Mathematics Achievement” (Unpublished Master’s Thesis, University of Nueva Caceres, March, 2002).

[15] Joseph Pepito Abalayan “ Peer Tutoring: its effectiveness in the teaching of elementary algebra” (Unpublished Master’s Thesis, University of Nueva Caceres, October 2006)

[16] Norah Frederickson and Tony Cline. “Special Educational Needs, Inclusion and Diversity,” 2<sup>nd</sup> ed. (New York: Open University Press, McGraw Hill Company, 2009) p. 455-456

[17] Arniel Cavite Bare “Non-intellective characteristics of fourth year high school students and their mathematics performance” (Unpublished Master’s Thesis, University of Nueva Caceres, October 2010)

[18] Ludovina V. Balisoro. “Cognitive and Non-Cognitive Factors: Their Relationship to Mathematics Performance,” (Unpublished Master’s Thesis, University of Nueva Caceres, October, 2011).

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*Creative Process Experiences with Digital Storytelling: A Tale of Two Engineering Students*

Rofiza Aboo Bakar\*<sup>1</sup>, Hairul Nizam Ismail\*<sup>2</sup>

\*<sup>1</sup>Universiti Teknologi MARA, Malaysia, \*<sup>2</sup>Universiti Sains Malaysia, Malaysia

0159

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Abstract

Creativity is an essential trait for engineering students to be innovative and successful in current and future global economy. Thus, it is important for their creative potential to be nurtured. Since digital storytelling has been portrayed by previous studies as being influential in enhancing creativity, the purpose of this study is to explore the creative processes of two engineering students in their development of digital stories in the English reading class. Both of them were chosen based on their reading performance in an English reading placement test. One of them was considered an above-average reader, while the other a below-average reader. The duration for the digital storytelling project was three weeks. The study employed a case study research method. Data sources included observational field notes, interview transcripts and digital stories. The findings of this study showed that both students exhibited the preparation, incubation, illumination and verification steps of the creative process as proposed by Wallas (1926). However, it was found that the above-average reader prepared extensively, wanted to be different from the other students, and was more self-critical of and not easily satisfied with his work. The below-average reader, on the other hand, completed his work through trial and error, did not worry much of the project and was generally satisfied with his work.

**Keywords:** engineering students, digital storytelling, creative process

## Introduction

To think creatively is a quality significantly needed by all university students in their collaborations, interactions and contributions of ideas (Livingston, 2010). For engineering students, creativity is also essential in their innovations and applications (Constantino, Kellam, Cramond, & Krowder, 2010). In fact, the 21<sup>st</sup> century has been named 'The Creative Economy Era' that emphasizes on creative industries, such as advertisements, software, video games, and research and design which all provide 7.3 percent of the world economy (Hawkins, 2002 as cited in Mohd Azhar Abd Hamid, 2004). Therefore, it is important for educators to prepare engineering students to not only be analytical and technically capable, but also be creative thinkers because creativity is vital to engineering and design (Constantino, Kellam, Cramond, & Krowder, 2010). Besides, creativity can be a critical factor in seeking employment and maintaining jobs in workplaces (Huber, Leigh & Tremblay, 2012).

With the globalization of industry, the Malaysian university academics in any discipline has been demanded by the Malaysian Ministry of Higher Education to provide a system that fosters creativity and this includes the ones who are involved in teaching engineering students (Norhayati M. Nor, Noraini Rajab, & Kamsiah Ismail, 2008). Unfortunately, it is not clear how creativity can be nurtured within engineering students (Baillie, 2002) and little has been done in many universities to place emphasis on the means to develop creativity in their engineering students (Liu & Schwonwetter, 2004).

To foster creativity, O'Brien (2001) proposed that educators include a multimedia project such as digital storytelling. A review of literature on digital storytelling shows that digital storytelling has enabled students to showcase their creativity (Di Blas, Garzotto, Paolini & Sabiescu, 2009; Dupain & Maguire, 2005; Genereux & Thompson, 2008; Jenkins & Lonsdale, 2007; Robin, 2008; Stuart, 2010). However, one significant gap was that the creative processes that students may undergo while creating their digital stories was not reported. Understanding about students' creative processes is necessary as it may allow educators to effectively train students to demonstrate creative thinking later.

The aim of this study was twofold: to explore the creative processes of two engineering students with different reading achievements in their development of digital stories in the English reading class and to identify the levels of creative processes among them. Ellmers (2006), Giloi (2011) and Richards (2010) have proposed that more research be carried out to understand about the creative processes because creativity is the byproduct of creative processes. Kaufman (2009) reported that people with high cognitive abilities were strongly linked to producing more creative products. In relation to this, this study aimed to find out whether a more successful reader could exhibit better creative processes than a less successful reader. This is because a more successful reader is reported to having more cognitive abilities, such as identifying main ideas in reading texts, making more inferences and making more summaries, than the less successful reader (Tatum, 2009). In other words, could a more successful reader exhibit better creative processes than a less successful reader since the latter is linked to be using less cognitive abilities (Tsai, 2012)?

## Review of Literature

### *Digital storytelling*

Digital storytelling is described as the art of telling stories or presenting main ideas in the visual form incorporating multimedia tools like graphic, images, still photographs, audio, video and animation (Dupain & Maguire, 2007; Robin, 2008; Sandars, Murray & Pellow, 2008). In this study, digital storytelling refers to the using of computer to create a story containing textual contents, images, videos and songs based on the understanding of expository texts in the multimedia form.

A significant reason for digital storytelling to be considered as a learning tool is because it addresses the 21<sup>st</sup> century literacy skills. The employment trends nowadays emphasizes on creative industries like software and research and design (Mohd Azhar Abd Hamid, 2004). Education has thus begun to focus on the teaching and learning skills which include digital, scientific, economy, technological, visual, information, multicultural and global literacies (North Central Regional Educational Laboratory, 2003). The Malaysian Ministry of Higher Education (2011) acknowledged the importance of these literacies as they are integral for students' knowledge base in order to live and work in this demanding era. Robin (2008) explained a few of these literacies and discussed their relationship to digital storytelling:

- a. Digital literacy – the ability to communicate with a large community to discuss issues, gather information and assistance;
- b. Technological literacy – the ability to use computers and other technology to improve learning, productivity and performance;
- c. Visual literacy – the ability to understand, produce and communicate through visual images;
- d. Information literacy – the ability to find, evaluate and synthesize information; and
- e. Global literacy – the ability to read, interpret and respond to messages from a global perspective.

Digital storytelling thus can act as a means that encompasses the literacies that students need to know and perform well in order to function in the 21<sup>st</sup> century.

In producing effective digital stories, there are seven elements of digital storytelling that students can follow. However, the seven elements of digital storytelling are not prescriptive (Alexander, 2011; Kajder, 2006; Lambert, 2003) but offered to encourage students to pace and express their points in their digital stories well (Lambert, 2003). The seven elements as described by Alexander (2011), Kajder (2006) and Lambert (2003) are as follows:

- a. *The point of view* – this is the main theme of the story that the creator of the story would like to communicate. This element is present from the beginning to the end of the story. As such, the creator is advised to write textual contents that are short, sharp and connected to the theme. They can be sentences, questions or proverbs. In this study, these textual contents may resemble the main ideas, summaries or syntheses of ideas that the creator made from his understanding of the reading texts he read.
- b. *A dramatic question* – this is to keep the audience's attention until the story is over. The audience can be the creator's classmates, lecturer or anybody who

watches the digital story. A dramatic question can be a question or a series of questions that are formed to build interest or suspense about the theme emphasized in the digital story. The questions will be answered as the digital story moves. When the dramatic questions are answered, the story is over. They can be written according to the theme of the digital story. For example, if the theme is 'plastic surgery', a dramatic question can be "Will one find complete happiness after a plastic surgery?"

- c. *An emotional content* – this is to highlight the challenge, frustration or any feeling that the creator associates with the theme emphasized in his digital story. It is to evoke the audience's attention. For example, in a digital story entitled 'Human Trafficking', the creator effectively contrasted a wedding scene which is supposed to depict happiness with a sad scene showing a young lady being forced into slavery after being kidnapped.
- d. *The gift of voice* – voice here does not necessarily mean the sounds produced by a person speaking. A digital story can be a story with only textual content, images, sound effects and music that portray the unspoken words of interaction, pause and response. This was the approach that this study took.
- e. *The power of soundtrack* – soundtrack may be music or sound effects that can set the mood or give an impact and embellishment to the story. It is intended to influence the audience's emotions and deepen their understanding of the visual information.
- f. *Economy* – economy refers to content that is not overloaded with too much information, words, images or special effects. Only what is necessary is included to powerfully communicate the intended meaning.
- g. *Pacing* – pacing refers to how slowly or quickly the story progresses. A good digital story breathes and moves along at an even pace; it gives some room for the audience to pause and think awhile.

Studies done by some researchers (Dupain & Maguire, 2005; Genereux & Thompson, 2008; Jenkins & Lonsdale, 2007) had shown that digital storytelling has allowed creativity to spark among undergraduates in health sciences, biology, landscape design, accountancy and sports development. Next, Di Blas, Garzotto, Paolini and Sabiescu (2009), Robin (2008), and Stuart (2010) had also reported that by doing digital storytelling, students of different ages can be creative. Despite indicating the aspect of creativity acquisition among students of various fields, these researchers made no mention of engineering students, nor had they elaborated on the creative process of the students being studied.

Since there is a dearth of research on the creative processes that may occur while developing digital storytelling, this study aimed to explore the creative processes that engineering students exhibited through their development of digital storytelling based on their comprehension of expository reading texts in the English reading classroom. This phenomenon needed a thorough understanding because a case could be made whether digital storytelling is suitable for engineering students in their creative endeavour.

## *Creativity*

Creativity is synonym to the contribution of original ideas, production of something pleasing, good and beautiful, and having fresh ways of looking at something (Torrance, 1963; 1988). With the challenges of internalization and global marketplace, students' minds need to be stimulated to think creatively. The education system has the obligation to create rich opportunities for students to be creative (Lee, 2006) so that they can make creative contributions to the society later. Creativity is critical and significant in the engineering sector especially if economic growth and competition across enterprises and industry are anticipated (Zampetakis & Tsironis, 2005).

### *Wallas' (1926) Creative Process Model*

Creativity is not only about the end product; it is also a process. Any ways of looking at problems, combinations of ideas or production of new products need a process. Torrance (1988) defined creativity as a process of sensing problems or difficulties, making hypotheses about the problems, evaluate and revise the hypotheses, convey the results and doing something about the idea. He also acknowledged Wallas' Creative Process Model (1926) as "the basis for almost all the systematic, discipline methods of training in existence throughout the world today" (p. 47). A framework of this study was the Wallas' Creative Process Model (1926). In this model, there are four steps in the creative process: preparation, incubation, illumination and verification.

- a. *Preparation* – during this stage, the creator is exploring a situation and thinking about the problem, gathering as much information as he can, becoming acquainted with innuendos and even unsuccessful answers, analyzing available materials and resources, and coming up with many possible ideas.
- b. *Incubation* – during this stage, the creator does not consciously think about the problem and goes about doing other activities. At some level, however, the creator's mind continues to consider the problem which is referred to as the unconscious or preconscious processing.
- c. *Illumination* – during this period, the creator feels that his ideas suddenly fit together and the solution to meet the requirements of the problem becomes clearer.
- d. *Verification* – during this period, the creator evaluates the solution for practicality, effectiveness and appropriateness. The solution may be elaborated and improved if necessary.

Such process flow may find embodiment in the development of digital stories by engineering students in the English reading classroom.

### *Lindstrom's (2006) Creative Process Rubric*

Another framework of this study is Lindstrom's (2006) Creative Process Rubric. This rubric can assess the creative processes that students exhibit while developing their digital stories. The creative processes which can be assessed are investigative work, inventiveness, the ability to use models and the capacity for self-assessment. The assessments range from the novice level to the apprentice, master and expert levels. The explanation of the assessment criterion for the novice and expert creators is as follows:

- a. *Investigative work* – for this criterion, a novice creator is seen as one who gives up easily, does not have ideas to complete work and only does a little of what he is required to do, whereas an expert creator is seen as one who takes much effort, drafts to develop his work and goes beyond the required elements.
- b. *Inventiveness* – for this criterion, a novice creator is seen as one who does not experiment and works in a usual way, whereas an expert creator is seen as one who experiments regularly and produces work that is brilliant and unexpected.
- c. *Ability to use models* – for this criterion, a novice creator is seen as one who shows no interest in other people's work or a model to help him in his work, whereas an expert creator is seen as one who actively searches for models to emulate and can use these models to develop a good piece of work.
- d. *Capacity for self-assessment* – for this criterion, a novice creator is seen as one who cannot identify his strengths and weaknesses in his own work, whereas an expert creator is seen as one who can clearly identify and justify his strengths and weaknesses in his work.

The creative process grading rubric adapted from Lindstrom's (2006) process criteria with rubrics with his permission (Lindstrom, personal communication, April 3, 2013) is shown in Table 1.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is partially overlaid by a large, faint, light blue circular graphic that spans across the middle of the page. There are also some faint, curved lines in shades of red and blue in the background.

**Table 1**  
*The creative process grading rubric*

No	Creative process	Scoring Marks				Marks
		Expert (4)	Master (3)	Apprentice (2)	Novice (1)	
1	<b>Investigative work</b> [similar to the <u>preparation</u> and <u>incubation</u> steps of Wallas (1926)]	Takes considerable efforts, uses a few approaches and drafts to develop work, goes beyond the required elements.	Does not give up in the face of difficulties, prefers to concentrate on a particular approach and refines it.	Demonstrates a degree of patience, thinks of solutions and approaches but does not develop them.	Gives up easily; does not have ideas for work completion, or only does a little of what the lecturer requires.	
2	<b>Inventiveness</b> [similar to the <u>illumination</u> step of Wallas (1926)]	Experiments regularly and reformulates problems set by lecturer.  Work developed in a brilliant and unexpected way.	Experiments and develops own knowledge. Work developed in a unique way with minimum support.	Shows tendency to experiment.  Work developed in a unique way, but only with guidance and encouragement.	Shows no sign of experimenting.  Work developed in a usual way.	
3	<b>Ability to use models</b> [similar to the <u>preparation</u> , <u>illumination</u> and <u>verification</u> steps of Wallas (1926)]	Actively searches out models such as pictures, images and videos to emulate and can use them in work in a multifaceted, independent and well-integrated way.	Makes active efforts to find pictures, images and videos for own work. Demonstrates an ability to select pictures, images or videos that suit intentions.	Shows an interest in other people's works, but she confines herself to copying them.	Shows no interest in other people's work and cannot benefit from them even when the lecturer has helped find them.	
4	<b>Capacity for self-assessment</b> [similar to the <u>verification</u> step of Wallas (1926)]	Clearly identifies merits and shortcomings in own work. Can justify opinions and explain why a particular result was obtained. Can produce qualified judgements of peers' work and contribute constructive criticism.	With minimal assistance, can manage to see the merits and shortcomings in own work. Can produce qualified judgements of peers' work.	With some assistance can identify own strengths and weaknesses and differentiate between good and less successful work. Views about peers' work are limited to subjective preferences (good / bad/ like / dislike)	Cannot identify strengths and weaknesses in own work or differentiate between good and less successful work. Has no views about the work of the peers.	
<b>Scale:</b>		13 - 16 Expert; 9 - 12 Master; 5 - 8 Apprentice; 1 - 4 Novice			Total marks	

*Conceptual framework*

In developing a digital story, a student or creator may consider using the seven elements of digital storytelling. While applying these seven elements, there are several creative processes that a student may exhibit. This study looked at the relationship between the seven elements of digital storytelling, Wallas' (1926) model

of creative process and Lindstrom’s (2006) creative process criteria. This relationship is summarized in Table 2.

**Table 2**  
*The relationship between the seven elements of digital storytelling, Wallas’ (1926) model of creative process and Lindstrom’s creative process.*

The seven elements of digital storytelling	Requirements	Wallas’ (1926) model of creative process	Lindstrom’s (2006) creative process criteria (selected expert criteria)
Element 1	Identify the issue wanted to be portrayed in the digital story	<ul style="list-style-type: none"> <li>- To gather as many ideas as possible from the given expository texts, experiences, additional reading texts and others</li> </ul>	<p>The preparation step:</p> <ul style="list-style-type: none"> <li>- Identify the problem</li> <li>- Clarify the problem</li> <li>- Accumulate information</li> <li>- May face unsuccessful solutions that lead to frustration</li> </ul> <p>Investigative work:</p> <ul style="list-style-type: none"> <li>- Takes considerable efforts (to solve problems)</li> <li>- Uses a few approaches and drafts to develop work (and accumulate information)</li> </ul>
Element 2	Form some dramatic questions to keep the audience’s attention	<ul style="list-style-type: none"> <li>- To make interpretations</li> <li>- To visualize ideas</li> </ul>	<ul style="list-style-type: none"> <li>- Goes beyond the required elements</li> <li>- Does not give up in the face of difficulties</li> </ul>
Element 3	Think of an emotional content to highlight the issue of the story	<ul style="list-style-type: none"> <li>- To collect images, videos, songs</li> <li>- To do a lot of imagination</li> </ul>	<p>The incubation step:</p> <ul style="list-style-type: none"> <li>- May go about doing other activities and not be thinking consciously about the problem (after acquiring possible ideas, questions, images, videos, songs)</li> </ul> <p>Demonstrates patience</p>
Element 4	Think through about the possible ideas, content, images and questions wanted to be portrayed in the digital story	<ul style="list-style-type: none"> <li>- To select important ideas and transform them into words, statements or questions called textual contents</li> <li>- To pair the textual contents with appropriate images</li> <li>- To synthesize ideas</li> </ul>	<p>The illumination step:</p> <ul style="list-style-type: none"> <li>- Experience the ‘aha’ or ‘eureka’ moment</li> <li>- May experience a change of perception, a new idea combination or a transformation</li> </ul> <p>Inventiveness:</p> <ul style="list-style-type: none"> <li>- Experiments regularly and reformulates problems set by the lecturer</li> <li>- Work developed in a brilliant and unexpected way</li> </ul> <p>The ability to use models:</p> <ul style="list-style-type: none"> <li>- Actively searches out models to emulate and can use them in work in a multifaceted, independent and well-integrated way.</li> </ul>
Element 5	Think about the suitable music / songs to accompany the digital story	<ul style="list-style-type: none"> <li>- To think about the suitable music / songs to accompany the textual contents</li> </ul>	<p>The verification step:</p> <ul style="list-style-type: none"> <li>- Check that the solution is effective and appropriate</li> </ul> <p>If the solution is not effective, the preparation and incubation steps may be repeated</p> <p>Capacity for self-assessment:</p> <ul style="list-style-type: none"> <li>- Clearly identifies merits and shortcomings in own work</li> <li>- Can justify opinions and explain why a particular result was obtained</li> </ul>
Element 6	Ensure that the content is brief and compact	<ul style="list-style-type: none"> <li>- To think about suitable textual content to accompany the images, and vice versa</li> </ul>	<ul style="list-style-type: none"> <li>- Can produce qualified judgements of peers’ work and contribute constructive criticism.</li> </ul>
Element 7	Ensure that the pace is smooth	<ul style="list-style-type: none"> <li>- To pace the story well</li> </ul>	

*a. The relationship between the preparation / investigative work and elements 1, 2 and 3 of digital storytelling*

In developing a digital story, a student must first identify the issue of the story (Element 1 of Digital Storytelling), form some questions about it (Element 2 of Digital Storytelling) and think of the emotional content to highlight the issue (Element 3 of Digital Storytelling). These require him to gather many possible ideas from the reading texts given by his lecturer and other reading texts. At this stage, he too needs to collect still images or videos from the internet which Kajder and Swenson (2004) described as the acquiring phase. This is similar to Wallas' (1926) preparation step and Lindstrom's investigative work criterion. In this step, a student needs to identify a problem, clarifies the problem, investigates the problem thoroughly, thinks about the problem, tries to accumulate information and data in order to solve the problem, and perhaps also faces unsuccessful solutions that leads to frustration (Ananda Kumar Palaniappan, 2005; Crowe, 2010; Davis, 1992; Starko, 1995) but does not give up in face of difficulties (Lindstrom, 2006).

*b. The relationship between the incubation / investigative work and elements 1, 2 and 3 of digital storytelling*

After acquiring possible ideas, questions and images for the digital story for some time, the student may not be consciously thinking about them. This is what Wallas (1926) described as the incubation period in his model of creativity. During this period, the student may go about doing other activities, while at some level, his mind unconsciously or preconsciously continues to consider the ideas (Ananda Kumar Palaniappan, 2005; Crowe, 2010; Davis, 1992; Starko, 1995) he wants to include in his digital story.

*c. The relationship between the illumination / inventiveness and ability to use models and elements 4 of digital storytelling*

After gathering all possible ideas, content, images and questions, the student needs to think through about them (Element 4 of Digital Storytelling). At this stage, Wallas described it as the phase in which the student may experience the 'aha' or 'eureka' experience which results in a change of perception, a new idea combination or a transformation that produces a clear solution (Ananda Kumar Palaniappan, 2005; Crowe, 2010; Davis, 1992; Starko, 1995). Lindstrom (2006) describes it as the criterion in which the student may search out model to emulate and develop work in a brilliant and unexpected way.

*d. The relationship between the verification / capacity for self-assessment and elements 5, 6 and 7 of digital storytelling*

In the fifth element of digital storytelling, the student thinks about the music that can accompany the digital story well and give an impact to the audience. Whereas in the sixth element, he needs to make sure that the content is brief and compact. In the last element, he needs to ensure that the pace of his story is smooth. These elements need a student to face the 'trial and error' session and always test out the practicality of an idea. This is similar to the verification stage of Wallas (1926) in which the student checks the solution for effectiveness and appropriateness (Ananda Kumar Palaniappan, 2005; Crowe, 2010; Davis, 1992; Starko, 1995). In other words, verification confirms whether an idea is acceptable and if it does not, the student goes back to the preparation and the incubation stages (Davis, 1992). Similarly, Lindstrom

(2006) described this phase as the student having the ability to identify his own shortcomings in his work and justify why it happens that way. The conceptual framework of this study is presented in Figure 1.

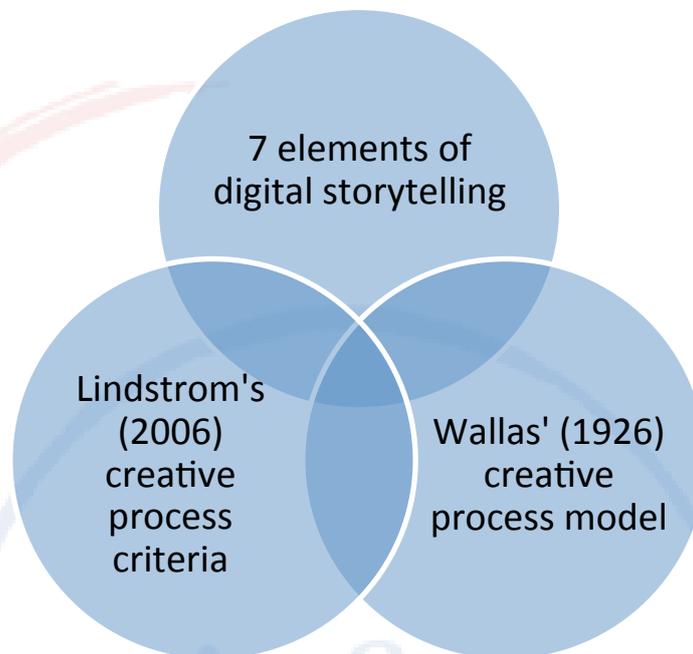


Figure 1. Conceptual framework of the study

### Methodology

This study, carried out in 2012, employed a qualitative case study research design (Bogdan & Biklen, 1992; Creswell, 2007; Merriam, 2009; Yin, 2009). It sought to understand students' creative processes so that they could be better appreciated in their endeavour to comprehend expository reading texts and henceforth develop creative digital stories. The selection of participants was based on two criteria. The first criterion was that participants were the opposite of typical or average students (Maxwell, 2005). Since the engineering diploma students were reported by the participating university's Academy of Language Studies in 2012 to be the least proficient in the English for Academic Purposes course in comparison to students from other faculties (i.e., Pharmacy, Health Sciences and Hotel and Management), a group of thirty-five engineering students were chosen to participate in this study. However, only the above-average and below-average readers identified through a reading placement test were selected to be studied closely as they were the opposite of the average readers that normally represent the average students. The second criteria proposed by Maxwell (2005) in purposeful selection of sampling is establishing comparisons between individuals. Henceforth, in this study, the above-average and below-average readers were both chosen so as to provide clarity about their similarities and differences in creative processes while developing digital stories. Their consent to participate in the study was sought. Both respondents were nineteen year-old, Malay males.

The placement test used was the university's October 2009 official English for Academic Purposes final exam for the reading component. It was categorized as a criterion-referenced standardized test because it compelled each student's score to be compared to a cutoff score set by the test authors (Wolf, 1993, as cited in Caldwell, 2002). The English language lecturers marking the reading test were expected to follow all directions for scoring the test without adapting or changing any of the procedures set. The total mark for the reading test component was set at twenty and the mean grade equivalent reading scores for the total population sitting for the paper was 11.3 marks (Akademi Pengajian Bahasa, UiTM Cawangan Pulau Pinang, 2009). Block (1986), Levin (1973) and Paris and Myers (1981) defined good or above-average readers as those with reading comprehension test scores were at or above the mean score for the total population, and poor or below-average readers as those with reading comprehension test scores below the mean score for the total population. In this study, the above-average reader scored 16.5 marks in the placement test, whereas the below-average reader scored 6.5 marks.

Data were drawn from observational field notes, interview transcripts and respondents' digital stories in three weeks of the digital storytelling project. There were three two-hour classes in each week. Prior to the project, all the students were introduced to digital storytelling, the significance of the seven elements of digital storytelling in developing a digital story, the Windows Movie Maker tutorial (a software needed to build a digital story), and some hands-on practice on Windows Movie Maker. The project sequence was planned as follows:

- Week 1: Mete out reading placement test and identify the above-average and below-average readers.
- Week 2 and 3 (six two-hour classes): Introduce students on how to utilize the seven elements of digital storytelling and Windows Movie Maker.
- Week 4 to 6 (nine two-hour classes): The students prepare and make their own digital stories.

The title of the digital story was 'Plastic surgery: the reasons, the risks and a lesson learned'. The respondents and their classmates were given two expository texts on plastic surgery from which they could find ideas for their digital stories. However, they could find other reading texts and videos to help them develop their digital stories.

### **Case study one: Mizzi**

An above-average reader, Mizzi (pseudonym), was nineteen years old and had scored 16.5 marks in the placement test taken on the 15<sup>th</sup> of June, 2012. He scored A in his English paper for the Malaysian Certificate of Education, and granted the university's dean's list award when he was in his first year. Mizzi was a composed person and did not talk much while completing his digital story project. Twice he was fifteen minutes late for class during the observations but both times he was courteous with his lecturer by apologizing before taking his seat. He paid attention to the explanation given by the lecturer and after that preferred doing his work quietly and rarely asked questions or moved around, unlike the other students in the class who were active. He was selected for case study in order to understand what creative processes such an above-average reader would exhibit while developing a digital story.

According to Mizzi, he had undergone a plastic surgery when he was five years old for tripping off an edge while reading a book. Therefore, when he was given the task to read the two reading articles on plastic surgery and develop a digital story, he immediately became very interested in the project as it reminded him of his own experience, *“I had an experience with plastic surgery, because when I was five years old, I some sort like a bookworm, I read a book while walking and on the floor there was a sharp part, I walked on it and slipped, and got this scar. That’s why I have an interest in reading the texts,”* (Mizzi, personal communication, July 25, 2012).

#### *The preparation process / investigative work*

After being told to develop a digital story on plastic surgery, Mizzi searched for some more reading articles on the topic, *“The two articles were enough but I read another four to six articles. I took them from the Google Scholar Mr. Fazrul (pseudonym) taught me,”* (Mizzi, personal communication, July 25, 2012). A few parts of the reading articles, which were sometimes referred to by him in class while doing his digital story, were underlined. He also viewed some Youtube videos on health care series, and from there formed his ideas that he wanted to include in his digital story, *“The health care series got my attention because, because of the visuals, because of the drama, they invite artists, or people that have experience, really touching experience about their body, sort of defects on the face. So, I think I’ll put the elements of suspense in my story,”* (Mizzi, personal communication, July 25, 2012). This was evident when words like ‘suspense, slow and dramatic’ were present in his digital storytelling elements worksheet (Mizzi’s digital storytelling elements worksheet, July 6, 2012). After reading some articles and viewing videos on plastic surgery, Mizzi decided that his digital story would depict plastic surgery as giving more risks than advantages. In his digital storytelling worksheet, he wrote *“There are more cons than pros in plastic surgery”* (Mizzi’s digital storytelling elements worksheet, July 6, 2012) and commented *“The society doesn’t know the risks of having plastic surgery. They only think about the beauty, the secret, they don’t think about the risks, because plastic surgery through my research, more cons than pros. For successful surgery maybe only 40% really, really successful rate,”* (Mizzi, personal communication, July 25, 2012).

#### *The incubation process / investigative work process*

According to Mizzi, a digital story was similar to movies, *“... the digital story and the movies, they have ... the same characteristics, they build up the momentum from zero to the drama and then to the ... solution,”* (Mizzi, personal communication, July 25, 2012). He was not someone who could easily feel satisfied with his work. He reported that developing a digital story needed time, concentration, and continuous revision, and when he was fatigue and running out of ideas, he *“... stepped outside for fresh perspectives. I left my stuffy workstation and let myself enjoy the warmth of sunlight, the coolness of breeze and the freshness of air which I believed could do miracles to my mind and body. I came back feeling rejuvenated and ready for my work,”* (Mizzi, personal communication, July 25, 2012).

### *The illumination process / inventiveness and ability to use models*

Mizzi regarded an example of digital story shown in class as a model that he could follow but stressed that he preferred his own ideas to shine and be different from others, “*It’s a good model, a very good model,*” but “*I like to do work with my own idea. I do not take 100% from any sources ... I combine it with my own idea to make it more interesting,*” (Mizzi, personal communication, July 25, 2012). This was also evident in his digital story when he went at length to edit several healthcare videos and news taken from several websites, and then appended them in his digital story according to the issues he highlighted. In contrast, many of his other classmates put still pictures in their digital stories. What was more important was that he was pleased with his work, “*I felt ‘Yes, this is it!’ when I filled in the final touch – the music score,*” although he voiced his little disappointment about “*the lack of variety of information materials,*” in his digital story (Mizzi, personal communication, July 25, 2012) by stating that the articles posted on the websites were mainly from the western point of view and very minimal came from the eastern point of view (Mizzi’s journal, July 11, 2012).

### *The verification process / capacity for self-assessment*

Mizzi was someone who would go beyond what was required of him. When the class was given the task to develop a digital story that contained the reasons for and risks of plastic surgery, he went further to touch on the solutions to overcome the dangers of plastic surgery, “*... people always talk about the risks, the reasons, they don’t talk about the solutions to overcome the risks,*” (Mizzi, personal communication, July 25, 2012). In his digital story, he included an excerpt from a news showing a plastic surgeon explaining that the dangers could be avoided if people who wished to undergo plastic surgery would also do some research on the surgeons they chose (Plastic Surgery: Slide 15).

### *Mizzi’s level of creative processes*

Based on the assessment of his own English lecturer for working closely with him and another English lecturer who assessed his folder containing all his preparation work (Lindstrom, 2006), Mizzi was ranked an expert in the creative processes with 14 marks. For investigative work, Mizzi was given a perfect 4 marks because he took the effort to go through each element of digital storytelling thoroughly, searched for additional reading materials, and chose appropriate videos, music and still pictures. The assessors also found that he could work with minimum support and awarded him 3 marks. In class, for his effort to find and select appropriate pictures, videos and music that depict the theme of his digital story well, he was given 3 marks. Finally, for his own identification of his merits and shortcomings in his work and others’, he was awarded 4 marks.

### **Case study two: Alif**

A below-average reader, Alif (pseudonym), was nineteen years old and scored 6.5 marks in the placement test taken on the 15<sup>th</sup> of June, 2012. He scored B in his English paper for the Malaysian Certificate of Education. Alif had two younger siblings and liked to travel and go for camping. Alif was always smiling, early for

class and paid attention well. Like Mizzi, he too preferred doing his work in class quietly although at times he consulted his friends for work that he needed help in.

#### *The preparation process / investigative work*

Alif reported that at first he found that creating a digital story was difficult. However, after learning from his friends on how to add pictures, manage the time to the music and practising on his own how to arrange all the features for some time, he found doing it was easy, *“I thought it’s difficult. But I get help from my friends. During the tutorial sessions, using Movie Maker in class, they taught me how to put pictures and music, and burn the CD. After that, I practised for an hour on my own. I can do it ... I learn a lot from my friends,”* (Alif, personal communication, July 26, 2012). To him, reading more articles on the topic of plastic surgery or doing extra research was not necessary as all important points that he wanted to convey in his digital story were already present in the given reading articles. He admitted that he did not plan ahead for his digital story but completed it through trial and error, *“No, I didn’t plan my digital story, I just did it. Like the Nike slogan – ‘Just Do It’. I read the articles and I did my digital story at the same time. By just doing it, I think we do a lot of mistakes. But it’s still okay. We learn from trial and error,”* (Alif, personal communication, July 26, 2012). However, he may have not realized that he had planned his work in advance, even if it was a little, when he wrote in his seven elements of digital storytelling: ‘I will give more pictures than words’ and ‘My music must be lively so that the audience will not be bored to watch it’ (Alif’s digital storytelling elements worksheet, July 6, 2012).

#### *The incubation process / investigative work process*

Alif was not worried about completing the digital story because he thought that he had had much information with him. He went about doing his normal daily tasks as usual, *“I don’t think I was worried because I had a lot of information before doing the digital story. I do other activities which I do normally. I play futsal or badminton in the evening. At night I go to the mosque,”* (Alif, personal communication, July 26, 2012). In class, he only had with him the expository texts given to him by the English lecturer without referring to other reading texts. While others went about the classroom to look at other friends’ work, Alif was calm and composed, and concentrated on his work.

#### *The illumination process / inventiveness and ability to use models*

Alif claimed that his digital story was *“... purely my own creativity and I didn’t take other videos to follow,”* (Alif, personal communication, July 26, 2012). His claim though may be questionable since the class lecturer had shown the entire class several examples of digital stories.

#### *The verification process / capacity for self-assessment*

Alif gave mixed opinions about the satisfaction with his digital story, *“I’m satisfied with my work generally,”* (Alif, personal communication, July 26, 2012). However, after a while, he stated a contradictory opinion, *“I think I don’t really like my work. Because I think there are many others who are better than me. I’ve seen their work,”*

(Alif, personal communication, July 26, 2012). However, he was able to judge his own digital story by stating the strength of it in comparison to other students' digital stories, "My friends can learn about bad effects of plastic surgery in my digital story. I look at their videos, the pictures we use are the same ... we take from the internet ... but my overall product of the digital story is different. The song is different, the introduction and the conclusion, all different. My introduction is like I'm teasing those who undergo plastic surgery. I put the bad images, and I put a question. I said, 'Do you want to look beautiful like them?'" (Alif, personal communication, July 26, 2012). Alif also included an element of sarcasm for those who undergo plastic surgery in his digital story, "The closing, I put a cartoon, it's about a plastic surgery on a pig. The doctor said 'Pig, after you do plastic surgery, your face will improve but you are still a pig,'" (Alif, personal communication, July 26, 2012). This was actually his response to a part of the title of the digital story: 'Plastic Surgery: The lesson learnt'. He elaborated by being philosophical, "No matter how ugly or pretty you are, it's your behaviour that is more important" (Alif, personal communication, July 26, 2012).

#### *Alif's level of creative processes*

Based on the assessment of his own English lecturer for working closely with him and another English lecturer who assessed his folder containing all his preparation work (Lindstrom, 2006), Alif was ranked a master with 11 marks in the creative processes. For all the investigative work, inventiveness and ability to use models, Alif was given 3 marks for each respective element of the creative processes. He did not give up when he found that Windows Movie Maker application was not easy to be used. He practiced hard on his own until he was satisfied that he could use it easily. Next, he planned what he wanted to include in his digital story in his digital storytelling elements worksheet although he was not really aware of the fact. What was lacking was that he did not search for additional reading materials on plastic surgery. However, his search for suitable pictures to be inserted in his digital story was excellent because these pictures explained difficult words like 'hematoma' and 'necrosis' well. Alif was philosophical in his digital story but could not give a justified view on his peers' work, and thus was awarded 2 marks.

#### **Conclusions**

The findings of this study showed that both the above-average and below-average readers exhibited the preparation, incubation, illumination and verification steps of the creative process as proposed by Wallas (1926). In addition, the below-average reader was ranked a master in his creative processes and not a novice. This could mean that with digital storytelling, a below-average reader could have exercised his cognitive ability better.

However, there were some differences between the above-average reader and below-average reader in their creative processes. The above-average reader did not need any help from his friends while making his digital story, preferring to work on his own. Whereas the below-average reader admitted that he learned a lot from his friends initially to learn to manoeuvre the Movie Maker before practising on his own the application in order to develop a digital story. Both of them exhibited the characteristics of a creative person: the above-average reader was being independent

(Montgomery, Bull, & Baloche, 1993) as well as being private (Plucker & Makel, 2010), while the below-average reader was exercising a trait called 'collaborative creative process' (Romero, Hyvonen, & Barbera, 2012). It is a trait needed as nowadays technology requires continuous learning between people sharing a situation that involves technology. Next, the above-average reader prepared extensively by reading other articles besides the given two articles, and searching for related videos on plastic surgery. This is another characteristic of creativity called inquisitiveness or idea finding (Montgomery, Bull, & Baloche, 1993). The below-average reader, however, thought that the information to develop his digital story was already adequate and concentrated more on how to have a lively digital story. This could reflect his relaxed and lively nature which is another creativity trait (Botella, Glaveanu, Zenasni, Storme, Myskowski, Wolff, & Lubart, 2013). He also reported that he completed his work through trial and error which means that he had adopted the role of a creative person by being an explorer who could embrace ambiguity and intuition (Montgomery, Bull, & Baloche, 1993). The above-average reader wanted to be different from the other students, self-critical and was not easily satisfied with his work. This shows that he was a creative individual for aiming for originality and being a non-conformist (Botella, Glaveanu, Zenasni, Storme, Myskowski, Wolff, & Lubart, 2013). The below-average reader, on the other hand, was generally satisfied with his work though he showed a tendency to doubt his own work. This skepticism is another creative characteristic that is shared by other creative people (Montgomery, Bull, & Baloche, 1993).

If data from this study can be trusted, the power of digital storytelling can be recognized. One of the significant aspects of this study was the ability of digital storytelling in helping students, be them above-average or less-average readers, to embrace creative processes and creative traits. The challenge now is to convince the educational policy maker to integrate digital storytelling in the educational process.

## References

- Alexander, B. (2011). *The new digital storytelling: Creating narratives with new media*. California: Praeger.
- Akademi Pengajian Bahasa, UiTM Cawangan Pulau Pinang. (2009). *The BEL311 report on students' grades*. Penang, Malaysia: Universiti Teknologi MARA.
- Akademi Pengajian Bahasa, UiTM Cawangan Pulau Pinang. (2012). *The BEL311 report on students' grades*. Penang, Malaysia: Universiti Teknologi MARA.
- Ananda Kumar Palaniappan. (2005). *Creativity and academic achievement: A Malaysian perspective*. Shah Alam: Karisma Publications Sdn Bhd.
- Bogdan, R. C., & Biklen, S. K. (1992). *Qualitative research for education: An introduction to theory and methods*. Boston: Allyn and Bacon.
- Block, E. (1986). The comprehension strategies of second language readers. *TESOL Quarterly*, 20(3), 79-110.
- Botella, M., Glaveanu, V., Zenasni, F., Storme, M., Myskowski, N., Wolff, M., & Lubart, T. (2013). How artists create: Creative process and multivariate factors. *Learning and Individual Differences*. 1-10. doi.org/10.1016/j.lindif.2013.02.008
- Caldwell, J. S. (2002). *Reading assessment: A primer for teachers and tutors*. New York: The Guilford Press.
- Costantino, T., Kellam, N., Cramond, B., & Crowder, I. (2010). An interdisciplinary design studio: How can art and engineering collaborate to increase students' creativity? *Art Education*, 63(2), 49-53.
- Crowe, B. D. (2010). *I ain't fattening frogs for snakes: An inquiry into the application of creativity research to teaching practice* (Doctoral dissertation). Retrieved March 8, 2012, from ProQuest Dissertations and Theses Database. (UMI 3411606).
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2<sup>nd</sup> ed.). California: Sage Publications, Inc.
- Davis, G. A. (1992). *Creativity is forever*. Iowa: Kendall/Hunt Publishing Company.
- Di Blas, N., Garzotto, F., Paolini, P., & Sabiescu, A. (2009). Digital storytelling as a whole-class learning activity: Lessons from a three-years project. In I. A. Iurgel, N. Zagalo, & P. Petta (Eds.), *International Conference on Interactive Digital Storytelling 2009* (pp. 14-25). Berlin: Springer-Verlag.
- Dupain, M., & Maguire, L. L. (2005). *Digital Story Book Projects 101: How to create and implement digital storytelling into your curriculum*. Paper presented at the 21<sup>st</sup> Annual Conference on Distance Teaching and Learning, University of Wisconsin, Madison, United States of America.
- Dupain, M., & Maguire, L. L. (2007). Health digital storytelling projects. *American Journal of Health Education*, 38(1), 41-43.
- Ellmers, G. (2006, September). *Reflection and graphic design pedagogy: Developing a reflective framework to enhance learning in a graphic design tertiary environment*. Paper presented at the Australian Council of University Art and Design Schools Conference. Retrieved January 15, 2013, from <http://acuads.com.au/static/files/assets/cdca46c4/ellmers.pdf>
- Genereux, A. P., Thompson, W. A. (2008). Lights, camera, reflection! Digital movies: A tool for reflective learning. *Journal of College Science Teaching*, 37(6), 21-25.
- Giloi, S. (2011, June). *Creating a community of assessment practice for graphic design through the use of e-portfolios*. Paper presented at the Sixth International

- Design Education Forum of Southern Africa Conference. Retrieved January 15, 2013, from <http://www.defsa.org.za/?q=taxonomy/term/169>
- Huber, A. M., Leigh, K. E., & Tremblay, K. R. (2012). Creativity processes of students in the design studio. *College Student Journal*, 903-913.
- Jenkins, M., & Lonsdale, J. (2007). *Evaluating the effectiveness of digital storytelling for student reflection*. Paper presented at the Ascilite Conference, Singapore, 2007.
- Kajder, S. B. (2006). *Bringing the outside in: Visuals ways to engage reluctant readers*. Maine: Stenhouse Publishers.
- Kajder, S., & Swenson, J. A. (2004). Digital images in the language arts classroom. *Learning & Leading with Technology*, 31(8), 18-21.
- Kaufman, J. C. (2009). *Creativity 101*. New York: Springer.
- Lambert, J. (2003). *Digital storytelling cookbook and travelling companion*. California: Digital Diner Press.
- Lee, D. W. (2006). *The impact of nurturing creativity in language arts classroom* (Doctoral dissertation). Retrieved April 12, 2012, from ProQuest Dissertations and Theses Database. (UMI 3211919).
- Levin, J. R. (1973). Inducing comprehension in poor readers: A test of a recent model. *Journal of Educational Psychology*, 65(1), 19-64.
- Lindstrom, L. (2006). Creativity: What is it? Can you assess it? Can it be taught? *The Author*, 25(1), 53-66.
- Liu, Z., & Schonwetter, D. J. (2004). Teaching creativity in engineering. *International Journal of Engineering Education*, 20(5), 801-807.
- Livingston, L. (2010). Teaching creativity in higher education. *Arts Education Policy Review*, 111, 59-62.
- Maxwell, J. A. (2005). *Qualitative research design: An interactive approach* (2<sup>nd</sup> ed.). California: Sage Publications.
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco: Jossey-Bass.
- Mohd. Azhar Abdul Hamid. (2004). *Kreativiti: Konsep, teori & praktis*. Johor: Penerbit Universiti Teknologi Malaysia.
- Montgomery, D., Bull, K. S., & Baloche, L. (1993). Characteristics of the creative person: Perceptions of university teachers in relation to the professional literature. *The American Behavioral Scientist*. 37(1), 63-78.
- Norhayati M. Nor, Noraini Rajab, & Kamsiah Ismail. (2008). *Educating the engineer of 2020: Malaysian scenario*. Paper presented at the International Conference on Engineering Education: New Challenges in Engineering Education and Research in the 21<sup>st</sup> Century, Budapest, Hungary.
- North Central Regional Educational Laboratory. (2003). *Engauge 21<sup>st</sup> century skills for 21<sup>st</sup> century learners: Literacy in the digital age*. Retrieved May 9, 2013, from [www.ncrel.org/engauge](http://www.ncrel.org/engauge)
- O'Brien, D. (2001, June). "At-risk" adolescents: Redefining competence through the multiliteracies of intermediality, visual arts, and representation. *Reading Online*, 4(11). Retrieved April 21, 2012, from <http://www.readingonline.org/newliteracies/obrien/>
- Paris, S. G., & Myers, M. (1981). Comprehension monitoring, memory, and study strategies of good and poor readers. *Journal of Literacy Research*, 13(5), 5-22.
- Plucker, J. A., & Makel, M. C. (2010). Assessment of creativity. In J. C. Kaufman & R. J. Sternberg (Eds.), *The Cambridge handbook of creativity* (pp. 48-73). New York: Cambridge University Press.

- Richards, R. (2010). Everyday creativity: Process and way of life – four key issues. In J. C. Kaufman & R. J. Sternberg (Eds.), *The Cambridge handbook of creativity* (pp. 189-215). New York: Cambridge University Press.
- Robin, B. R. (2008). Digital storytelling: A powerful technology tool for the 21<sup>st</sup> century classroom. *Theory Into Practice*, 47, 220-228.
- Romero, M., Hyvonen, P., & Barbera, E. (2012). Creativity in collaborative learning across the life span. *Creative Education*, 3(4), 422-429.
- Sanders, J., Murray, C., & Pellow, A. (2008). Twelve tips for using digital storytelling to promote reflective learning by medical students. *Medical Teacher*, 30, 774-777.
- Starko, A. J. (1995). *Creativity in the classroom: Schools of curious delight*. New York: Longman Publishers USA.
- Stuart, D. H. (2010). Cin(e) – poetry: Engaging the digital generation in 21<sup>st</sup>-century response. *Voices from the Middle*, 17(3), 27-35.
- Tatum, M. E. (2009). *Digital Storytelling as a cultural-historical activity: Effects on information text comprehension* (Doctoral dissertation). Retrieved July 17, 2011, from ProQuest Dissertations and Theses Database. (UMI 3358256).
- The Malaysian Ministry of Higher Education. (2011). *National plan for higher education 2011 – 2015*. Putrajaya, Malaysia: Author.
- Torrance, E. P. (1963). *Creativity*. Washington, D. C.: National Education Association of the United States.
- Torrance, E. P. (1988). The nature of creativity as manifest in its testing. In R. J. Sternberg (Ed.), *The nature of creativity: Contemporary psychological perspectives* (pp.43-75). Cambridge: Cambridge University Press.
- Tsai, Y. (2012). Investigating the relationships among cognitive learning styles, motivation and strategy use in reading English as a foreign language. *International Journal of Business & Social Science*, 3 (13), 188-197.
- Yin, R. K. (2009). *Case study research: Design and methods* (4<sup>th</sup> ed.). California: SAGE Publications, Inc.
- Zampetakis, L. A., Tsironis, L., & Moustakis, V. (2007). Creativity development in engineering education: The case of mind mapping. *Journal of Management Development*, 26(4), 370-380.

*A Study on India's the Right to Education Act: Overcoming Social & Economic Challenges*

Ratna Banerjee, Surbhi Arora

University of Petroleum & Energy Studies, India

0162

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Abstract

Indian governments have had to address a number of key challenges with regard to education policy as it is a crucial part of its development agenda. Education enables our children to acquire the skills, knowledge, values and attitudes necessary to become responsible and active citizens of India. The Right to Education (RTE) Act, which was passed by Indian government on 4th August, 2009, describes the modalities of the importance of free and compulsory education for children between 6 to 14 years in India. India became one of 135 countries to make education a fundamental right of every child when this Act came into force on 1st April, 2010.

But alas, reality is bitter than imagination, it is been observed generally that people are not only ignoring the RTE Act, but they are also involving children malpractices such as child labour, early marriages etc. to increase their earnings.

In this study a survey will be done to find common people's awareness of this Act and would highlight the various issues of social justice required for it. It would also focus on the pedagogy to be adopted so that the right to education becomes an actual right for all our children and not merely a right on paper.

**Keywords:** right to education, RTE Act, fundamental right, pedagogy of education, social justice, child labour

## Introduction

Education is an essential human right and to achieve this for all the children is a major challenge of the modern world according to UNESCO. The right to education is an integral part of the Organisation's constitutional mandate which expresses 'the belief of its founders in full and equal opportunities for education for all' and 'to advance the ideal of equality of educational opportunity'. The right to education is enshrined in the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights and the Convention on the Rights of the Child.

India is a signatory to three key international instruments that guarantee the right to elementary education – Universal Declaration of Human Rights, 1948, the International Covenant on Economic, Social and Cultural Rights, 1966 and the Convention on the Rights of the Child, 1989. The India also joined after 52 years of independence, the host of countries that provide for a constitutional guarantee to free and compulsory education.

In ancient times, in India the Gurukula system of education was followed where anyone who wanted to study had to go to a teacher's (Guru) house and requested to be taught. If accepted as a student by the guru, he would have to stay at the guru's house and help in all activities at his house. This created a strong bond between the teacher and the student and also taught the student about managing a house. The guru taught everything from Sanskrit to reading the Holy Scriptures and from Mathematics to Metaphysics. The students stayed with the guru as long as they wished or until the guru felt that they had been taught whatever was needed for them. Learning was linked to nature and its importance was emphasized for life. Teaching was a process of developing the personality and imparting wisdom rather than memorizing some information.

The modern school system was brought to India, including the English language, originally by Lord Thomas Babington Macaulay in the 1830s. The curriculum was confined to 'modern' subjects such as science and mathematics, and subjects like metaphysics and philosophy were considered unnecessary. Teaching was confined to classrooms and thus the link with nature was broken resulting in shattering the bond between the teacher and the students.

The first law on compulsory education was introduced by the State of Baroda in 1906. This law provided for compulsory education for boys and girls in the age groups of 7–12 years and 7–10 years respectively. The first documented use of the word right in the context of elementary education appears in a letter written by Rabindranath Tagore to the International League for the Rational Education of Children in 1908 (Commission, 1993).

A great legal breakthrough was achieved in 1992 when the Supreme Court of India held in *Mohini Jain v State of Karnataka*, that the 'right to education' is concomitant to fundamental rights enshrined under Part III of the Constitution and that 'every citizen has a right to education under the Constitution'. The Supreme Court subsequently reconsidered the above mentioned judgement in the case of *Unnikrishnan, J P v State of Andhra Pradesh*. The Court (majority judgement) held that 'though right to education is not stated expressly as a fundamental right, it is

implicit in and flows from the right to life guaranteed under Article 21... (and) must be construed in the light of the Directive Principles of the Constitution. Thus, 'right to education, understood in the context of Article 45 and 41 means: (a) every child/citizen of this country has a right to free education until he completes the age of fourteen years and (b) after a child/citizen completes 14 years, his right to education is circumscribed by the limits of the economic capacity of the State and its development' (Kashyap, 2006).

India is emerging as third largest economy of the world in terms of purchasing power parity. It had shown impressive growth in fields of science and technology, management education etc. which have a direct bearing on the economy's growth patterns. India has demonstrated exemplary capabilities of meeting the requirement of quality manpower be it for the Green Revolution of late 1960's or for the IT Revolution of the late 1990's, or for the Space Revolution of current times. India's Science and Technology manpower has stood test of time and all this is possible because the literacy levels in the country have increased.

Around 19 percent children of the world are in India and about one-third of Indian population is below the age of 18 years. The population of people in the age-group of 0-25 years is around 56 crores, which is 54 percent of the country's total population. India also has one-third of the world's illiterate population, which is a major concern for the government. If we look at the 2011 figures, 74.04 percent of people above the age of seven years are literate. The male literacy level has reached 82.12 percent, while female literacy has touched 64.46 percent. The difference between male and female literacy level is 16 percent which is considerably high. However, during the period between 2001 and 2011, the increase in male literacy was just 6.88 percent. The male and female literacy levels have increased between 1991 and 2001, i.e. male by 12 percent and female by 14.4 percent.

As per the constitution of India, school education was originally a state subject, i.e. the states had complete authority on deciding policies and implementing them. The role of the Government of India was restricted to coordinating and deciding on the standards of higher education which changed with a Constitutional Amendment in 1976 so that education now comes in the *concurrent list*, i.e. school education policies and programmes are suggested at the national level by the Government of India. The state governments will still have a lot of freedom in implementing these programmes. Policies are announced at the national level periodically. In 1935, the Central Advisory Board of Education (CABE) was set up to play a lead role in the evolution and monitoring of educational policies and programmes.

According to District Information of School Education, out of the total number of primary schools in India, 80.51 percent are government-run and 19.49 percent are private. The number of children in government schools is higher but their declining popularity and the simultaneous growth of private schools is a warning of the country's deteriorating education system. In states like Uttarakhand and Karnataka, there were even cases of the state government closing down government schools (Rai, 2012).

Early marriage, criminal tendencies, losing ethical values etc. are the major challenges being faced by the people living below the poverty levels. People who

have taken the responsibility to implement RTE have to act responsibly with ethics, and have to put their efforts in meeting the objectives of RTE. On the Right to Education website, education is represented as being:

1. **Acceptable** — this means providing quality education and quality teaching, that is relevant and pluralistic.
2. **Available** — which includes safe buildings, school in the village, sufficient numbers of teachers, free textbooks and uniforms, sanitation facilities, and appropriate transport.
3. **Accessible** — which means no child labour, no gender discrimination, no disability discrimination, affirmative action to include the most marginalized in school and schools within reachable distance.
4. **Adaptable** — which includes meeting the specific needs of the children in the local context, meeting the changing needs of society and contributing to gender equality.

The Right to Free & Compulsory Education Act, 2009 (RTE Act) became law on April 1, 2010. It fulfills the constitutional mandate for free and compulsory primary education but some of its provisions have raised debates over the years. Various challenges and issues are being faced by stakeholders in implementing this Act in the schools. Already there has been a major amendment notified by the central government to comply with the Supreme Court judgment safeguarding minority rights.

A major hurdle in the implementation of the RTE Act, as mentioned by the states, is inadequacy of funds. The Centre estimated an annual budget of Rs 231,000 crore for implementation of the RTE Act. The Expenditure Finance Committee gave it the go-ahead, with a Centre-state contribution ratio of 68:32. This was later approved by the Cabinet. Of the total amount, Rs 24,000 crore would come from the finance ministry and the remaining Rs 207,000 crore from the Centre and the states. This, the government claimed, would prevent the states from being overly burdened. Then why are the states citing lack of funds as a hindrance? (Rai, 2012)

According to the Ernst & Young report on “Right to Education: Role of Private Sector”, March 2012, India has made substantial progress in achieving its elementary education goals over the last few decades, yet there are certain sections of society that continue to remain significantly underserved. The RTE Act does not cater to the absence of pre-school education provisions for children below the age of six years. Primary research with various stakeholders in the education industry indicates the following:

- The focus of RTE is input-oriented with a miniscule focus on outcome or quality
- With many states yet to notify the rules, implementation of the Act has not been very effective and there is huge disparity across the states. Monitoring of the Act by the State Commission for Protection of Child Rights (SCPCRs) continues to be questionable.
- The Act has been a partial success and there is lack of awareness as to what it has to offer; mass mobilization and an awareness drive to increase awareness

of the RTE Act are needed. Lack of community involvement and a low level of awareness continue to hinder its implementation.

- There is a need to sensitize local authorities to play an active role in implementation of the Act.
- While some stakeholders believe that only qualified teachers (instead of ‘para teachers’) should be hired, the others feel that qualification does not signify quality and local trained teachers are a better alternative.

People from villages, semi-urban areas, slums etc. send their children to schools for satisfying one basic need, i.e. for food. Government has tried to make endless efforts see the health of these children and check for malnutrition. Government is happy to see the documents which provide evidence about the good health record of these children. For a self-sustainable approach and model in this regard, there is a need to understand the educational system and its various components in detail. The children are guided by the system and the society which comprises of each and every individual.

Education has been a major issue in our country. Rabindranath Tagore wrote articles on how the Indian education system needed a change. Since the colonial times, few things have changed. IITs, IIMs, law schools and other institutions of excellence have been established, yet students routinely scoring 90 percent marks find it difficult to get admission into the colleges of their choice.

Rote learning still is a major concern in our system and students study to score marks in exams, and to crack exams. The colonial masters had introduced education system in India to create clerks and civil servants and till date we have not deviated much from that pattern. There are centers of educational excellence but there are thousands of mediocre and terrible schools, colleges and now even universities that do not meet the minimum standards. Some things have changed but elsewhere things have sunk into further inertia, corruption and lack of ambition, creating a situation of unrest and dissatisfaction among the youth.

Establishing more schools or allowing colleges and private universities to mushroom is not going to solve the issues of education in India. India is a country where students are using their parent’s life savings and borrow money for education and not getting standard education. They are also struggling to find employment of their choice. The mind numbing competition and rote learning crush the creativity and originality of millions of Indian students every year and sometimes driving brilliant students to suicides. Education is seen as the means of climbing the social and economic ladder and if the education system is fails in its objective, it is not due to lack of demand for good education or because a market for education does not exist.

Some social and economic challenges identified in the Indian education system are:

**Shortage of qualified teachers in Indian education system:** There is an acute shortage of qualified teachers in Indian education system. Materialistic gains, incentives and opportunities entice the qualified Indian educator away from this challenging field besides facing many challenges like isolation, poor or inadequate facilities, eager but academically deprived students etc. Their ingenuity, creativity, patience and forbearance are tested in facing these and challenges. Indian education

system has to meet the needs of its students and to have sensitivity towards them. It has to be dynamic and viable and must have more qualified Indian educators.

**Insensitive school personnel:** It is seen that still insensitive school personnel exist in modern India. Many administrators and teachers do not know about the human values. If school personnel are real and true educators, they need to learn about the students whom they are teaching. This would create a bonding between the students and the educators which will facilitate the process of learning.

**Differing educational perspectives:** Generally, it is seen that the educational perspectives of the Indian are not considered. The thinking, attitudes and experiences of the non-Indians are considered as the basis of the value structure rather than considering the core aspects of Indian culture. This creates a conflict in the minds of students and confuses them.

**Lack of involvement and control:** Indians have always been shy to express their ideas on school programming or educational decision-making. Even when these are expressed, their participation has been very limited and restricted. They need to control the programs where their children are exposed to and to have a say in deciding about what types of courses are in the curriculum. They can also be involved in hiring of teachers or in establishing employment policies and practices or other responsibilities related to school administration.

**Difficulties in higher education:** Colleges and universities should establish programs which can deal effectively with the needs of the students. Students generally face adjustment problems and require financial help. It is high time that colleges and universities attempt to solve these issues and provide a more successful educational experience for the students.

**Instant-Indian education experts:** In India we have 'instant Indian education experts' who do more damage than good. These experts seem to have all the answers and appear to have completely identified the problems and formulated the solutions. These experts usually depend on some visits to a school or on few conferences. Indian education could be better off than these experts who cannot be reasoned with or who feel they know what is best.

There may be other factors which contribute to the problems of Indian education and contributing to the situation wherein Indian education is not realizing its full development. Education system in India is failing because of more intrinsic reasons. There are some inbuilt faults that do not let our demand for good education translate into a great marketplace with excellent education services.

### **Suggestions**

Education system should focus on teaching skills. It is said that 'give a man a fish and you feed him one day, teach him how to catch fishes and you feed him for a lifetime'. If a person is taught some skills, it enables him to earn for a lifetime. Generally, the knowledge gained by students in one semester is forgotten soon after the semester exam is over, still year after year, students focus on cramming and getting marks. This is one of the fundamental flaws of our education system and need

to be rectified. Exams are not the only way to judge the knowledge of the students. Education system should reward what deserves highest academic accolades. Evaluation systems need to be built to recognize original contributions, in form of creativity, problem solving, valuable original research and innovation. Computers and internet have made access to knowledge easier than ever. Using these tools, one can reach the masses in lesser time and more effectively.

The objectives of an education system should be to create independent thinking individuals in the form of entrepreneurs, innovators, artists, scientists, writers etc. These people will then establish the foundation of knowledge based economy. In India, institute of higher education should operate on a non-profit basis. This discourages the entrepreneurs and innovators who can creatively impart knowledge. Some private companies misuse this and invest in education service provider companies which in turn provide services to not-for-profit educational institutions and earn enviable profits. There is an urgent need for effective de-regulation of Indian education sector so that there is infusion of sufficient capital and those who provide or create extraordinary educational products or services are adequately rewarded.

The government cannot afford to provide higher education to all the people in the country. The central government spends about 4 percent of budget expenditure on education, compared to 40 percent on defence. Historically, the government did not have enough money to spend on even opening new schools and universities. The focus is on marketing rather than innovation or providing great educational service. Allowing profit making will encourage serious entrepreneurs, innovators and investors to take interest in the education sector and this would bring quality and accountability. If the government cannot provide sufficient money for higher education then it should not prevent private capital from venturing into the educational sector.

According to the Ernst & Young report on “Right to Education: Role of Private Sector”, March 2012, despite tremendous efforts being made on infrastructure development, some of the significant shortages in the provision of infrastructure facilities are highlighted below:

- Few classrooms available: According to the DISE Flash Statistics 2009–10 reports, there were only 3.6 classrooms per school on an average. Furthermore, almost 25% of the total enrolment in 2009–10 was in schools with a student classroom ratio >60. The average number of classes in government schools was 3.8, and this figure for private schools was more than double (7.8).
- Lack of sanitation: Only 58% the schools had toilets for girls in 2009–10.
- Lack of computer facilities: Only 39% schools have electricity connection and only 16.65% have computer facilities.
- Lack of transport facilities and safety features: Most government schools do not provide transport facilities, and therefore, students living in rural areas or difficult terrains find it difficult to commute and drop out of school. Furthermore, in such schools, admission of girls is minimal. Almost 50% of the schools do not have boundary walls.

The knowledge has descended on the strength of the power of mind, power of connectivity and the power of networking unleashed by the IT revolution sweeping across the globe for the last two decade. In this new knowledge era it is imperative for the basic education sector to innovate its curriculum so as to create self-dependency, entrepreneurial instinct and above all humanity and responsibility towards society. In southern and western part of India still the things are little positive in terms of RTE Act implementation but in northern parts effective implementation is still required.

### **Conclusion**

Energy of children and teenagers has to be channelized in positive direction with a blend of sensitivity and patience in an interesting manner. If the parents are assured about their child's overall development then only they would feel secure to send them for education willingly and they have a valid reason to think that their child has a right to be educated. There should be some counseling sessions to change the mindsets of people which are a major constraint in meeting the objectives of RTE. Education implementation pattern should be innovative, creative and focused on carrier building. Children should be made to develop interest to attend the school.

Real life projects should be inculcated in pedagogy of education to have real time learning. All academicians who feel socially responsible should come forward to take some practical session for overall growth of these children. There should associations of research scholars with these for mutual benefits. While appointing the teachers and people who are directly in contact with these children they should have strong ethics and this should be aligned with objective of RTE. Lack of good universal education denies equal opportunity.

***'Education is about more than just learning. It saves lives...'***  
***- Carol Bellamy (Former Executive Director, UNICEF)***

**References:**

1. Ahmad, Fayaz (2009) “ A Sociological Study of Primary Education Among Girls: With Special Reference to Block Hajin of District Bandipora” Dissertation, Barkatullah University.
2. Annual Status of Educational Report (2010): “Annual Status of Educational Report ( Rural) , assessed 21April 2012: [http://www.pratham.org/asr08/ASER\\_2010\\_Report.pdf](http://www.pratham.org/asr08/ASER_2010_Report.pdf)
3. Bernstein, B (1973): “Class Codes and Control: Applied Studies towards a Sociology of Language”, London, Routledge Kegan Paul.
4. Bourdieu, P (1977): “ Cultural Reproduction and Social Reproduction”, In Karabel, J and A. H, Halsey, (ed), Power and Ideology in Education.OUP
5. Economic and Political Weekly (2012): “The Right to learn: Two Years after the Right to Education Act, the government needs to focus on quality”, 16 April, Vol XLVII No 16.
6. Kumar, Krishna (2012): “Let a hundred children blossom: A classroom reflecting life’s diversity will benefit children of all strata while enriching teaching experience.” The Hindu, Delhi, 20 April 2012.
7. Madan, Amman (2003): Education as Vision for Social Change, Economic and Political Weekly May 31, 2003 pp.2135-2136, Source: <http://emotome.in>
8. Commission, P. (1993). *Elementary & Adult Education in India - Historical Perspective*. National Development Council Committee on Literacy.
9. Kashyap, D. N. (2006). *The 'Fundamental' Right to Education in India*. National Law School of India University, Centre for Child & the Law. Bangalore: United Nations Educational, Scientific & Cultural Organization.
10. Rai, R. (2012, May). *Challenges in implementing the RTE Act*. Retrieved from Infochange Education India: <http://infochangeindia.org/education/backgrounders/challenges-in-implementing-the-rte-act.html>

*The Analytic Hierarchy Process - A Survey of "The Desirable Demand" of Graduated Workers in Chiang Mai and Lamphun Province, THAILAND*

Achara Khamaksorn, Danaitun Pongpatcharatoratep, Teewara Suwan

Chiang Mai University, Thailand

0170

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Abstract

The survey of "the desirable demand" of graduated workers to meet the needs of employers is one mechanism to improve achievement and learn the characteristics of students who were identified in the quality assurance aspects of teaching and learning of Chiang Mai University (CMU). CMU determines that the graduates of higher education should possess two important qualifications of Thai Qualifications Framework for Higher Education and The Desirable Demand of graduated workers which vary according to the nature or context of the entrepreneurs. The Modern Management and Information Technology (MMIT) of College of Arts, Media and Technology (CAMT), Chiang Mai University (CMU) aims to produce graduates who have the potential for application in information systems and management of enterprises in field of manufacturing and service industries.

This research has applied the Analytic Hierarchy Process (AHP) to identify the data and support the view of employers toward "The potential of the Graduates". The purpose of this research was to study and analyze "The potential of the Graduates" and "the desirable demand" of graduated workers in view of the entrepreneurs.

The research method was a questionnaire and in-depth interviews. Also, the Analytic Hierarchy Process (AHP) was used to measure the level of the decision.

The key aptitude in information technology perspective is the use of Microsoft Office Program. Economics, production, marketing, and management are the key aptitude in Specific Aspects perspective while the key aptitude in Language and personality skill perspective is the negotiation, interaction and leadership skill.

Finally, the results have shown that 1) MMIT's course should add and focus on courses which strengthen the positive attitude and great personality for students through the practical skills in Cooperative learning or training. 2) MMIT's course should add management skills and Information Technology together as well as inclusively applied and enhanced the cognitive skills and practice. And 3) Due to the importance of English language in Asian Economics Community (AEC), bilingual courses turn to be a significant approach to improve language skill for students.

**Keywords:** Analytic Hierarchy Process, Higher Education, Modern Management, Information Technology, Graduated Worker

## **1. INTRODUCTION**

Chiang Mai University, situated in the northern part of Thailand, aspires to reach this goal by combining the best in education with the global-standardized research, encouraging its staffs and students to conduct researches in an inspiring environment as well as yielding high-quality research results and innovation creation in order to become the university of research and world-class research university. CMU determines that the graduates of higher education should possess two important qualifications of Thai Qualifications Framework for Higher Education and the Desirable Demand of a graduated worker which vary according to the nature or context of the enterprises. The Modern Management and Information Technology (MMIT) of College of Arts, Media and Technology (CAMT), CMU aims to produce graduates who have potential to apply information systems and management of enterprises in the fields of manufacturing and service sectors. Therefore, this research has used Analytic Hierarchy Process (AHP) to identify the data and support the view of employers for "The Potential of the Graduates". As a result, the research data is able to lead MMIT to the curriculum and teaching improvement.

## **2. OBJECTIVE**

The purposes of this research were to study and analyze "The Potential of the Graduates" and "The Desirable Demand" of Graduated Workers in the view of enterprises.

## **3. RESEARCH METHODS AND ANALYSIS**

### **3.1 SCOPE OF RESEARCH**

This research, the researchers will conduct research with the enterprises for the graduates who received graduate degrees in the field of Management, Business Administration (BA) and Modern Management and Information Technology (MMIT). It aims to determine the performance of the graduates in the perspective of employers by comparing the three core competencies of Information Technology, Specific Knowledge of Modern Management and Business Administration including Language and personality skills. Additionally, this study attempts to understand the three core competencies which are the most important approaches to the functioning of the enterprises and understanding the organization's criteria for selecting the personnel. Also, Quantitative and qualitative data was collected by in-depth interviews. The investigator will collect data from the enterprises covering a total of 100 enterprises in Chiang Mai and Lamphun province.

### **3.2 RESEARCH METHODOLOGY**

This study used a quantitative research and qualitative research simultaneously. The research method was a questionnaire and in-depth interviews. The Analytic Hierarchy Process (AHP) was used to measure the level of the decision. A questionnaire as a research tool to survey the variables used in the quantitative research while, the form of in-depth interviews was used to analysis of contents in order to confirm the information from the quantitative study and to discuss the findings of the clarity and accuracy.

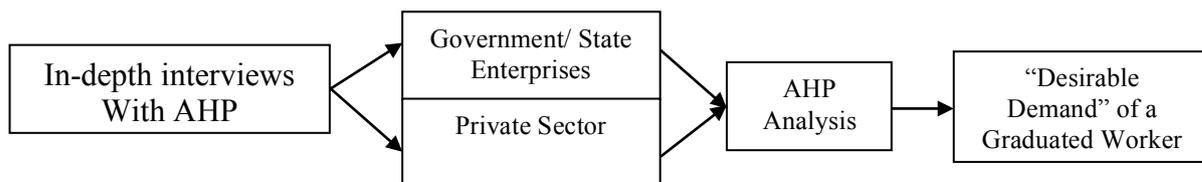


Fig. 1: Research Methodology Framework

### 3.3 RESEARCH TOOLS

In this study, the research method was a questionnaire and in-depth interviews. The Analytic Hierarchy Process (AHP) was used to measure the levels of decision-making. The content of the questionnaire was divided into 2 sections as follows;

Section 1: The general information which contains types of business or enterprises, position (respondents) and establishment.

Section 2: The query performance data of “the Desirable Demand” of a Graduated Worker in view of the enterprises who graduated in the field of Management, Business Administration and Modern Management and Information Technology.

- a) The core competency of graduated student’s comparison between Information Technology, Specific knowledge and other elements, such as language and personality skills.
- b) The competency of Information Technology perspective compared between Microsoft Office, website and multimedia and database.
- c) The competency of Specific knowledge perspective compared between 1) skills and knowledge of Accounting, Finance, Mathematics, and Statistics, 2) Knowledgeable in Economics, Marketing and Production Management and 3) Related knowledge in field of Social and Political Culture.
- d) The competency of Language and Personality perspective compared between a foreign language, Personality and Negotiation, interaction and leadership.

## 4. ANALYSIS AND RESULTS

### 4.1 ANALYSIS

The researcher analyzed the data by using the Analytic Hierarchy Process (AHP) to measure the level of the decision by comparing the "importance" criteria to find the "weight" of the "choice" to evaluate and rank the importance criteria.

Table 1: The hierarchy chart of decision making.

$X^1$	1	2	3	$X^{1'}$	1	2	3	Weight
1								
2								
3								

Table 2: The calculation table of the hierarchy chart.

$X^1$	1	2	3	$X^{1'}$	1	2	3	Weight
1	1	A	B	1	11'	21'	31'	W1
2	1/A	1	C	2	12'	22'	32'	W2
3	1/B	1/C	1	3	13'	23'	33'	W3

The method of calculation.

$$\begin{aligned}
 11' &= 1/(1+(1/A)+(1/B)) \\
 12' &= (1/A)/(1+(1/A)+(1/B)) \\
 13' &= (1/B)/(1+(1/A)+(1/B)) \\
 21' &= A/(A+1+(1/C)) \\
 22' &= 1/(A+1+(1/C)) \\
 23' &= (1/C)/(A+1+(1/C)) \\
 31' &= B/(B+C+1) \\
 32' &= C/(B+C+1) \\
 33' &= 1/(B+C+1) \\
 W1 &= (11'+21'+31')/n \\
 W2 &= (12'+22'+32')/n \\
 W3 &= (13'+23'+33')/n \\
 n &= \text{Number of factors (In this study } n=3) \\
 1, 2 \text{ and } 3 &= \text{Factor}
 \end{aligned}$$

Table 3: Scoring of factors in the hierarchy chart of decision making.

Weight	Meaning	Weight	Meaning
9	= Most important	4	= Low
8	= Nearly as possible	3	= Almost at the end
7	= Very important	2	= Least
6	= Moderate very nearly	1	= Equal
5	= Moderate		

## 4.2 RESULTS

This research collected the totally general information of 70 enterprises, which included 9 enterprises accounting for 12.86% of the government and state enterprises and 61 enterprises accounting for 87.14% of the private sector (See details in table 4.).

This study was conducted with the organizations for the graduates who received a graduate degree in the field of Management, Business Administration (BA) and Modern Management and Information Technology (MMIT). Also, it is desirable to determine the performance of graduates in the perspective of employers. For this reason, Analytic Hierarchy Process (AHP) was used to measure the levels of decision-making by comparing the three core competencies in field of Information Technology (IT), Specific knowledge and other elements, such as language and personality skills. Furthermore, this research aims to understand the three core competencies which are

most important approaches to the functioning of the enterprises and understanding the enterprises' criteria for selecting the personnel. The analysis of data by using AHP has been shown in the Table 4.

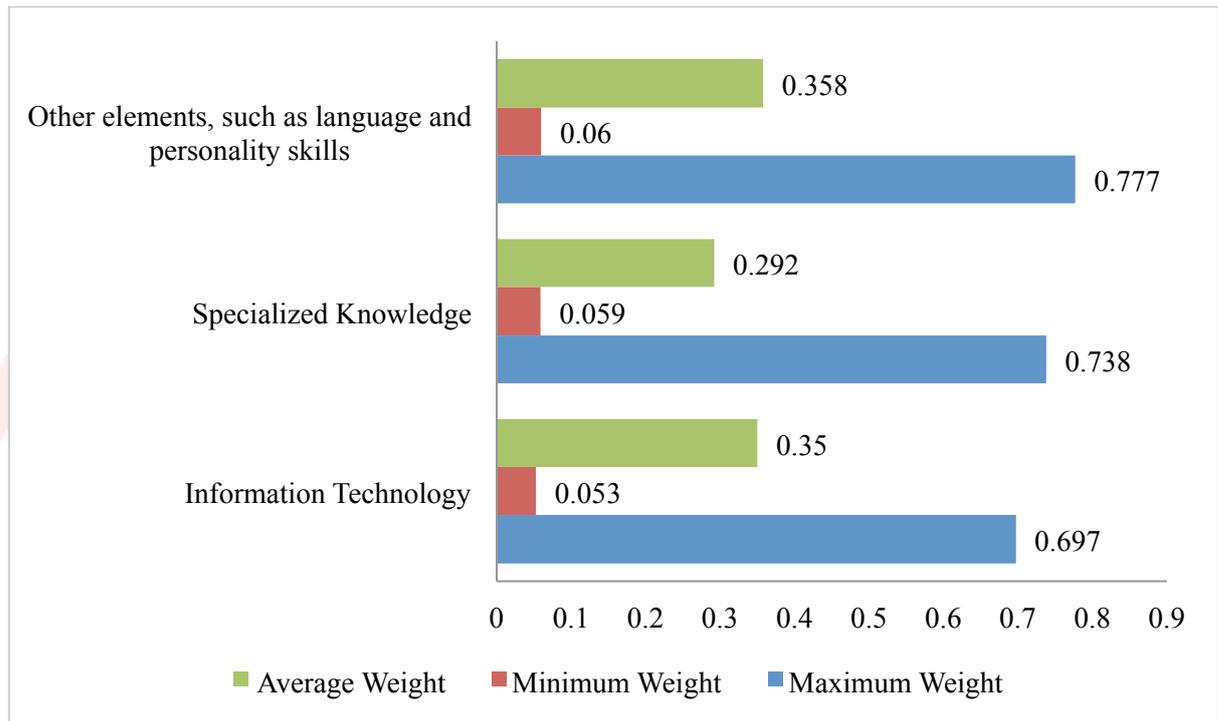
Table 4: The General Information of Respondents.

General Information of respondents.	Quantity	Percentage
<u>1. Types of Business</u>		
- Government/ State Enterprises	9	12.86
- Private Sector	61	87.14
- The manufacturing sector.	17	
- The service sector.	13	
- Unspecified.	31	
Total	70	100.00
<u>2. Jobs</u>		
- Position	40	57.15
- Secretary	1	1.42
- Research Engineer and Development	1	1.42
- Chief Operating Officer	1	1.42
- Chief of Production Technique	2	2.84
- Chief of Staff	1	1.42
- Manager	6	8.52
- General Manager	18	25.56
- Owner	1	1.42
- Product Specialist	1	1.42
- Assistant Production Manager	1	1.42
- International Department	1	1.42
- Personnel Manager	2	2.84
- Head of the Community Division of Information Technology.	1	1.42
- Sale Executive	1	1.42
- Unspecified.	30	42.85
Total	70	100.00
<u>3. The establishment.</u>		
Chiang Mai	66	94.28
Lamphun	4	5.72
Total	70	100.00

Table 5: The "Weight" of the Core Competency of Graduates.

No.	Competency	"Weight" of the decision		
		MAX	MIN	Average
1	Information Technology	0.697	<b>0.053</b>	0.350
2	Specialized Knowledge	0.738	0.059	0.292
3	Other elements, such as language and personality skills	<b>0.777</b>	0.060	<b>0.358</b>

Chart 1. Comparison of the "Weight" of the Core Competency of Graduates.



The results from Table 5 and Chart 1 showed that;

- The highest decision-making of enterprises is Language and Personality skills. The "weight" of the decision is at 0.777.
- The lowest decision-making of enterprises is Information Technology skill. The "weight" of the decision is at 0.053.

An average decision-making of enterprises is Language and Personality skills. The "weight" of the decision is at 0.358.

Table 6: The "Weight" of the Competency of Graduates in IT Perspective.

No.	Competency	"Weight" of the decision		
		MAX	MIN	Average
1	Microsoft Office	<b>0.777</b>	0.065	<b>0.530</b>
2	Website and Multimedia	<b>0.777</b>	<b>0.052</b>	0.225
3	Database Programming Systems	<b>0.777</b>	0.057	0.245

The results from Table 6 showed that;

- The highest decision-making of enterprises in Information Technology perspective are including with Microsoft Office, Website and Multimedia and Database. The "weight" of the decision is at 0.777.
- The lowest decision-making of enterprises in Information Technology perspective is Website and Multimedia. The "weight" of the decision is at 0.052.

An average decision-making of enterprises in Information Technology perspective is Microsoft Office. The "weight" of the decision is at 0.530.

Table 7: The "Weight" of the Competency of Graduates in Specific Knowledge Perspective.

No.	Competency	"Weight" of the decision		
		MAX	MIN	Average
1	Accounting, Finance, Mathematics, and Statistics	0.724	<b>0.059</b>	0.326
2	Economic, Marketing and Production management	<b>0.778</b>	<b>0.059</b>	<b>0.466</b>
3	Related knowledge in field of Social and Political Culture	0.671	0.066	0.208

The results from Table 7 showed that;

- The highest decision-making of enterprises in specific knowledge perspective of graduates is Economics, Marketing and Production Management. The "weight" of the decision is at 0.778.

- The lowest decision-making of enterprises in specific knowledge perspective of graduates are Accounting, Finance, and Mathematics, Statistics and the related knowledge in field of Social and Political Culture. The "weight" of the decision is at 0.059.

An average decision-making of enterprises in specific knowledge perspective of graduates are Economics, Marketing and Production management. The "weight" of the decision is at 0.466.

Table 8: The "Weight" of the Competency of Graduates in Language and Personality.

No.	Competency	"Weight" of the decision		
		MAX	MIN	Average
1	Foreign language	0.69	0.429	0.476
2	Personality	0.71	<b>0.34</b>	0.548
3	Negotiation, interaction and leadership	<b>0.778</b>	0.48	<b>0.607</b>

The results from Table 8 showed that;

- The highest decision-making of enterprises in Language and Personality of graduates is negotiation, interaction and leadership. The "weight" of the decision is at 0.778.

- The lowest decision-making of enterprises in Language and Personality of graduates is personality. The "weight" of the decision is at 0.34.

An average decision-making of enterprises in Language and Personality of graduates is negotiation, interaction and leadership. The "weight" of the decision is at 0.607.

Chart 2: Comparison of "the Weight" that Affecting the Decisions of Enterprises.

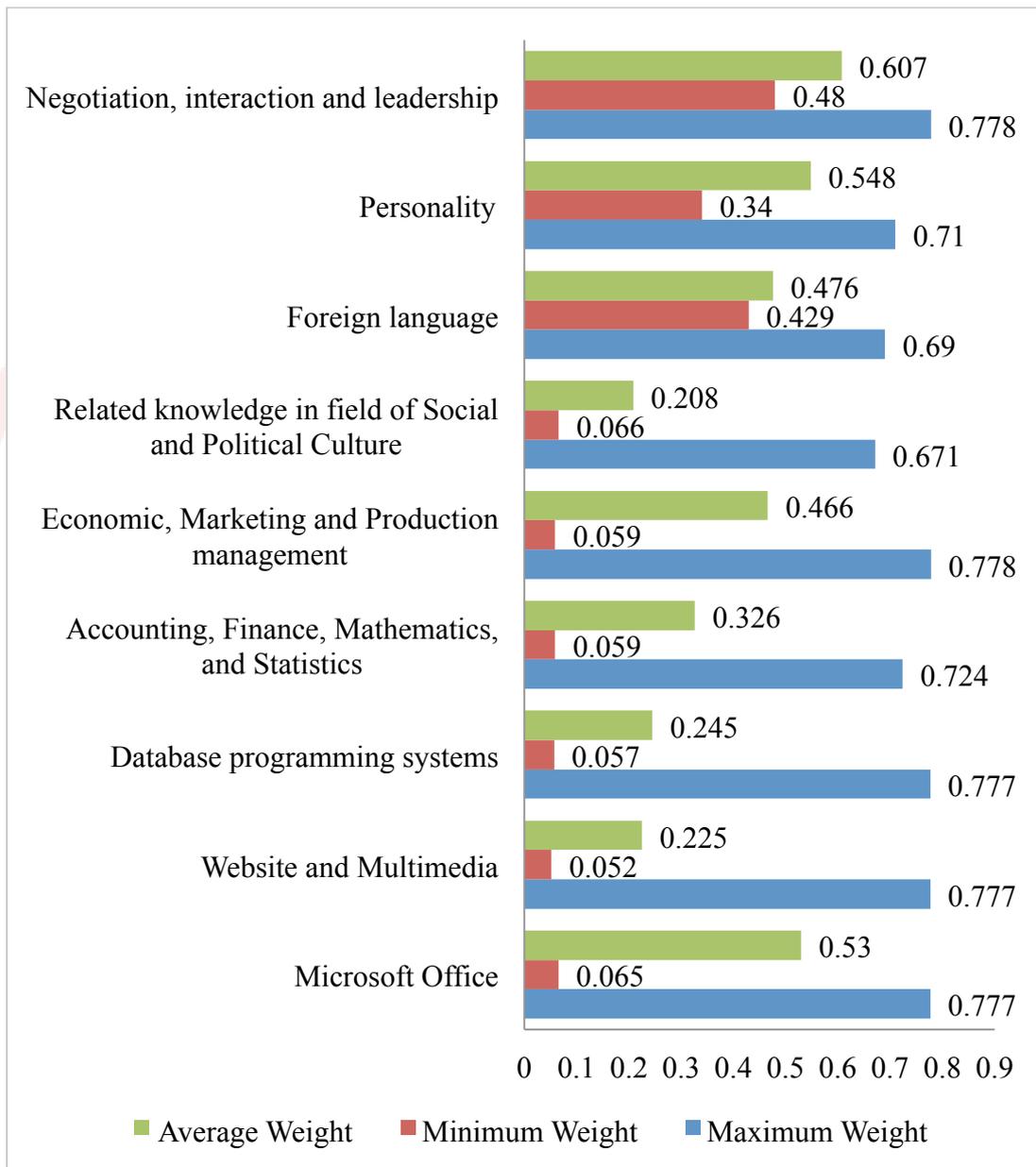


Table 9: Comparison of "the weight" that affected to the decisions of enterprises.

Competency	"Weight" of the decision		
	MAX	MIN	Average
The Core Competency of Graduates	Language and Personality	Information Technology Skill	Language and Personality
	<b>0.777</b>	<b>0.053</b>	<b>0.358</b>
The Competency of Graduates in Information Technology (IT) Perspective	Microsoft Office, Website and Multimedia and Database	Website and Multimedia	Microsoft Office
	<b>0.777</b>	<b>0.052</b>	<b>0.530</b>
The Competency of Graduates in Specific knowledge Perspective.	Economics, Marketing and Production management	Accounting, Finance, Mathematics, and Statistics and related knowledge in field of Social and Political Culture	Economic, Marketing and Production Management
	<b>0.778</b>	<b>0.059</b>	<b>0.466</b>
The Competency of Graduates in Language and Personality.	Negotiation, Interaction and Leadership	Personality	Negotiation, Interaction and Leadership
	<b>0.778</b>	<b>0.340</b>	<b>0.607</b>

The results from Chart 2 and Table 9 illustrated that the core competency of graduates which affected the decisions of enterprises is Language and Personality skill. The competency in Information Technology perspective is the use of Microsoft Office Program. Economics, Marketing and Production management are the core competency of Specific knowledge perspective while the competency in Language and Personality perspective are the Negotiation, Interaction and Leadership skill.

## 5. CONCLUSIONS AND DISCUSSIONS

According to this study, the results also showed that 1) MMIT's course should add and focus on courses which strengthen the positive attitude and great personality for students through the practical skills in cooperative learning or training, 2) MMIT should determine the admission criteria of first year students from transcript and portfolio for the higher quality of students and the courses, 3) MMIT's courses should be add the management skills and Information Technology together to enhance the cognitive skills and practice and 4) English language is essential in Asian Economics Community (AEC) and worldwide. The bilingual course is an important approach to improve language skill for students.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is surrounded by two large, overlapping circular arcs. The upper arc is light blue and the lower arc is light red, both with a soft, feathered edge.

## 6. REFERENCES

- Atthirawong, Walailak; Bart McCarthy (September, 2002). “*An Application of the Analytic Hierarchy Process to International Location Decision-Making*” In Yongjiang Shi. *Proceedings of The 7th Annual Cambridge International Manufacturing Symposium: Restructuring Global Manufacturing*. Cambridge, England: University of Cambridge. pp. 1–18.
- Berrittella, M.; A. Certa, M. Enea, P. Zito (January, 2007). “*An Analytic Hierarchy Process for the Evaluation of Transport Policies to Reduce Climate Change Impact*” Fondazione Eni Enrico Mattei (Milano).
- Bhushan, Navneet; Kanwal Rai (January 2004). *Strategic Decision Making: Applying the Analytic Hierarchy Process*. London: Springer-Verlag. ISBN 1-85233-756-7.
- Churairat Wanichkul (2004). *Factors determining the demand for graduates in the field of mineral production of Thailand*. THAILAND: University of the Thai Chamber of Commerce.
- Drake, P.R. (1998). “*Using the Analytic Hierarchy Process in Engineering Education*” *International Journal of Engineering Education* 14 (3): 191–196. Retrieved 2007-08-20.
- Grandzol, John R. (August 2005). “*Improving the Faculty Selection Process in Higher Education: A Case for Analytic Hierarchy Process*” IR Application6. Retrieved 2007-08-21.
- Karnchana Sirikulrat (2010). *User satisfaction with the performance and features of the Graduated students from Chiang Mai Rajabhat University in 2010*. THAILAND: <http://www.research.cmru.ac.th/ris/resin/acre/I-SCI-18-53.pdf>
- Panom Wongchai (2007). *The Survey of employer satisfaction with graduates in Faculty of Science, Chiang Mai University in 2007*. THAILAND: Chiang Mai University
- Saaty, Thomas L. (2008). *Decision Making for Leaders: the Analytic Hierarchy Process of Decision Making for Leaders: The Analytic Hierarchy Process for Decisions in a Complex World*. Pittsburgh, Pennsylvania: RWS Publications. ISBN 0-9620317-8-X.

*Applying the Conjoint Technique in Identifying Preschool Preference of an Ideal Game for Nutrition Literacy*

Christian Del Rosario\*<sup>1,2,3,4</sup>, Michael Joseph Diño\*<sup>1,2,3,4</sup>, Jenica Ana Rivero\*<sup>1,2,3,4</sup>

\*<sup>1</sup>The Graduate School, Philippines\*<sup>2</sup>, College of Nursing, Philippines\*<sup>3</sup>,  
Research Development and Innovation Center, Philippines,

\*<sup>4</sup>Our Lady of Fatima University, Philippines

0173

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Abstract

The advancements and innovations in the industries of healthcare and education are at the threshold of a breakthrough. The main players have increasing efforts to address the pending issues on health and health literacy. Congruent to the increasing cases of malnutrition among children due to health illiteracy is the increasing advancements in the gaming industry. Hence, many educators and game designers are looking at the potentials of computer games in addressing the piercing issues on nutrition. However, little is understood in terms of the gaming preferences of preschool children. Using card-based conjoint analysis (n=30), this paper was meritorious in uncovering the gaming preferences of these population group. Findings showed that children prefer the red color (0.97) as a dominating theme in the game. They are also in favor of the action (0.27) type of game as the genre and they prefer to play with their family members (0.26). Lastly, in designing an ideal game for preschoolers, the most important factor to consider among these attributes is the color (48.40). This paper is directed towards a future not only where children have a better experience in gaming but also where children are provided fair access to health literacy and services.

**Keywords:** Nutrition, Literacy, Game Preference, Preschool, Conjoint, Orthogonal, Card-based

## 1.0 Introduction

The penetrating issues concerning wellbeing and literacy has pushed the key players on health and education to create extensive efforts in improving their means of providing knowledge in order to achieve its goals. The latest survey by the Food and Nutrition Research Institute of the Department of Science and Technology (FNRI-DOST, 2008) presented a significant increase in the prevalence of underweight children from 24.6% in 2005 to 26.2% in 2008, and under height children from 26.3% in 2005 to 27.9% in 2008. This provides a strong evidence that in every 100 children the Philippines, there are about 27 children who lacked the necessary nutrition. Despite the initiatives created by government and private bodies, such as Philippine Plan of Action for Nutrition (PPAN) which aspired to decrease the prevalence of malnutrition among children ages 0-5 years (National Nutrition Council, 2012), the problem is still persistent in its existence.

Experts were suggesting that malnutrition is hypothetically linked with the decline in health literacy among children. For an instance, Azim, Shafi, Qureshi, Sheikh, Azim, & Hayat (2005) and Gopalan (2000) were confident that ignorance serves as an important factor in causing the problem in nutrition. Therefore, a change in attitude in health dissemination is proposed as a catalyst to produce reform (Gopalan, 2000). The focus now turns towards fighting health illiteracy.

Analogous to the piercing concerns on literacy are the advancements in the gaming industry. First world countries have been enjoying the benefits of this progress as manifested by the extensive users of computer games as well as the exceedance of the annual growth rate attained by the industry (Entertainment Software Association, 2011). However, such improvements has shed little light in the hands of third world countries. Still, many educators and game designers alike are positive about the potentials of this industry in bridging the gap on literacy.

Considering all factors conferred, it becomes important to tackle the issues on gaming preferences (Brandtzæg & Heim, 2009) among preschool children. Researchers have presented broad perspectives on the gaming preferences of school age children. However, literature gaps are still in need to be filled, specifically to the preferences of

preschool children. Using conjoint analysis, this research therefore aspired to determine the gaming preferences of preschool children. This task would be beneficial in creating a concrete pathway for the utilization of health games to directly influence pedagogical knowledge. This study would also contribute knowledge and theoretical bases for related researches and innovations in the future.

## **2.0 Background**

### *2.1 Theoretical Framework*

In order for this research to envision a tentative answer to its research goals, the researcher was guided by the Experiential Learning Theory by Kolb (1984). John Dewey (1938) and David Kolb (1984) both claimed that learning is an outcome of a person's experience, while both the quality of experience and reflection is significant to overall learning. Initially, the person grasps the experience, called prehension, then organizes the experience in order to make sense of it, and then followed by active experimentation, wherein the experience is modified as fitted from the person's preference.

There are several factors that would determine the quality learning, stemming from both experience and reflection. While experience would depend on the level of involvement of the person, reflection would rely on the tool that aids the process. This is essential in using computer games to promote learning. It is necessary to understand the characteristics of a computer game – the tool that would encourage deep involvement from players and later on would initiate a quality reflection from them.

### *2.2 Preschool as a Developmental Stage*

Preschool age varies from one theorist to another but generally, this stage is ranged at 3-7 year (Erikson, 1980). This stage presents challenges to the child, the parent and the educators. At this stage, self-expression starts to focus more towards the language of the child (Videbeck, 2008). Through play and social interactions with friends or family members, these children also develop assertion and control (Cherry, 2012).

Another development that is predominant over preschoolers is their graphical observations, wherein meanings and object classifications becomes more understandable to them through symbols, gestures and even mental images (Videbeck, 2008), specifically through the organization of these symbols in a logical fashion (Boyd, 2008). Children at this age can also get understand and follow simple directions and can learn how to manage conflicts and anxiety (Videbeck, 2008).

Such changes would be potential keys in terms of learning method and gaming. In fact, this may be a good time to present these children with educational games. Games with simple interface and mechanics would be enjoyable to children. These simple games may also offer challenges or conflicts that children may solve on their own. Winning these challenges would also be very beneficial because it would give them the feeling of management and competence (Cherry, 2012).

### *2.3 The State of Nutrition among Preschoolers in the Philippines*

By definition, nutrition is the overall process of taking in and assimilating substance that drive sustenance of life (Brookover, 2012). But simply stating it, nutrition is basically a human right (United Nations International Children Emergency Fund, 2003) and is essential for human survival and development of children (DevPulse, 2008). Nutrition has always been a point of concern among developed and developing countries because nutrition has always been associated with malnutrition, a problem more worthy of the focus.

Malnutrition is defined as the absence of the essential nutrients that a health body possesses (World Health Organization, 2011). Accompanied by its definition is an vast problem that penetrates among third world countries like the Philippines, leading UNICEF (2012) to brand it as a “invisible emergency”.

A number of data were published by local and international bodies to support the magnitude of the situation. 2.9 million families were estimated to express unintentional hunger, while 760,000 families to express severe hunger (Social Weather Station, 2008 cited in DevPulse, 2008). As to the children specifically, 26.2% were noted as underweight as of 2008 (FNRI-DOST, 2008), while 20.7% were

noted as of 2009 (WHO, 2011). Also according to the seventh National Nutrition Survey (2008), 6.1% of children 0-5 years old were wasted while 27.9% were stunted. Purely looking at the numerical data, one might not see the complications of such problems especially to the preschool population.

Various disorders or disabilities were – surprisingly – associated to malnutrition. In fact, it is the leading reason for the most imaginable diseases the world faces (Caulfield, de Ontis, Blossner & Black, 2004). Vitamin A deficiency, a representation of malnutrition (DOH, 2012) generates roughly 350,000 occurrence of blindness and partial blindness to children annually, while iodine deficiency continues to cause mental retardation (Jukes, 2007). A significant number of deaths due to diarrhea, malaria, pneumonia and measles were associated to malnutrition (Caulfield, de Ontis, Blossner & Black, 2004). Children may also become deprived from schooling or more like to become absent from school (Jukes, 2007). The lack of knowledge from schooling can even lead to more serious, cyclical, deprivation of health knowledge and nutrition.

#### *2.4 Gaming Definition and Demographics*

Games defined by Schell (2008) as a “problem-solving activity approached with a playful attitude”. Education supported with technological innovations has been seen as a new method of learning, but among these advancements, computer games are central in educating both children and teenagers (Kostkova, Farrell, de Quincey, Weinburg, Lecky & McNulty, 2010). And it is the entertainment factor that often draws people towards playing computer and video games. But despite the centrality of games as a method of education, it has been given little attention by the people (Kostokova et al, 2010), which is indirectly proportional to the number of gamers around the world.

In the US alone, 72 out of 100 American households play computer games and 18% of them are below 18 (ESA, 2011). Therefore, it is thought that an immense community of players exists within the US. Though an immense community also exists in other areas of the world, specifically the Philippines, such cannot be backed up by written validations.

## *2.5 Gaming Preference*

### *2.5.1 Genre*

With the abundant number of average people playing computer games, it becomes important to take a glimpse on the issue of gaming preferences among players (Brandtzæg & Heim, 2009). Preferences on gaming genres have been linked positively to several factors such as peer acceptance, scholastic and athletic competence, as well as levels of parental monitoring (Brandtzæg & Heim, 2009). But on a general view of the picture, it was reported in 1998 that the choice of gamers fall within the action and adventure genre of games (Media Analysis Laboratory, 1998). According to AlienwareArena on its 2011 website report, however, it is strategy genre that topped the list. On a more recent report in 2011 by Entertainment Software Association, the best-selling video and computer games by genre turned out to be action and strategy for consoles and PCs respectively. Given these reports and its timeliness, it seems that the strategy genre is currently more preferred by consumers.

In order to provide clarification, Grace (2005) has discussed the different genres in her report. Action games are unique because of the intensity of its gameplay. The main key to playing these games very well lies in the fast reflexes and skills of the players. This mainly involves the coordination of the player's sight, body and hand reflexes and their ability to remember the correct controls when needed immediately. Action games are mostly shooting, stealth and sports games.

To continue, the former mentioned that adventure games differ a lot from action because it mainly focuses on world exploration and puzzle solving. In adventure games, fast reflexes and coordination are not needed. Instead, adventure games concentrates more on the engrossing storyline and achievements.

Lastly, strategy games offer entertainment mainly through reasoning and problem solving of the players, according to Grace (2005). Strategy games differ from action and adventure alike because strategy games do not rely main on fast paced reflexes as well as an engrossing story, but on careful analysis of the situation to win.

Despite the data on gaming preference by genre, little is known specifically on the genre preference of preschoolers. The discussion lead the research to the following:

***Research Question 1:*** *Is strategy the most preferred game genre over action and adventure?*

***H<sub>1</sub>:*** *Preschoolers prefer strategy the most over action and adventure genres.*

### *2.5.2 Companion*

Games can usually be played either alone or with company. Generally, teenagers prefer playing with their friends but younger teens may prefer playing with siblings or parents (Media Analysis Laboratory, 1998), which can be explained through the Psychosocial Development by Erikson (1980). Erikson has delineated several significant persons according to age group, and according to this source, children at their younger years are more accustomed with family members than peers, and the centrality goes outward from the family to the community as the person ages. However, Media Analysis Laboratory (1998) also mentioned that heavy gamers are split between the group who plays with peers and who plays alone depending on the type of game. Yet again, sources that specifically report preschooler's preference as to playing alone or with companion/s are limited. Hence, the following argument was devised:

***Research Question 2:*** *Do preschoolers opt to play with family member rather than playing alone or with friends?*

***H<sub>2</sub>:*** *Preschoolers opt to play with a family member instead of playing alone or with friends.*

### *2.5.3 Color*

One of the top reasons concerning why players play or purchase computer games is the quality of graphics (ESA, 2011). Color preference, in particular, is very important

in directing many sides of human behavior, since it determines how people pay attention to visual environment (Adams, 1987). Colors can either be chromatic, which represent colors with hue such as red or blue, or achromatic, which represents the greys. Chroma, or hue, may have longer wavelengths of light giving a redder color, or shorter wavelengths emitting a bluer color. In terms of general color preference, boys preferred blue and green while girls prefer purple, pink and white (He, Zhang, Zhu, Xu, Yu, Chen, Liu & Wang, 2011). Putting gender aside, however, children prefer colors with long wavelengths such as red and yellow colors on top of colors with short wavelengths such as purple, blue and green (Adams, 1987; Jong, Lee, Hong, Hwang & Hao, 2009). Nonetheless, little is known about color preference as predictor directly to games and behavior intention of gamers, making the researcher to ask the following:

**Research Question 3:** *Is red the most preferred color theme instead of yellow, green, blue and violet?*

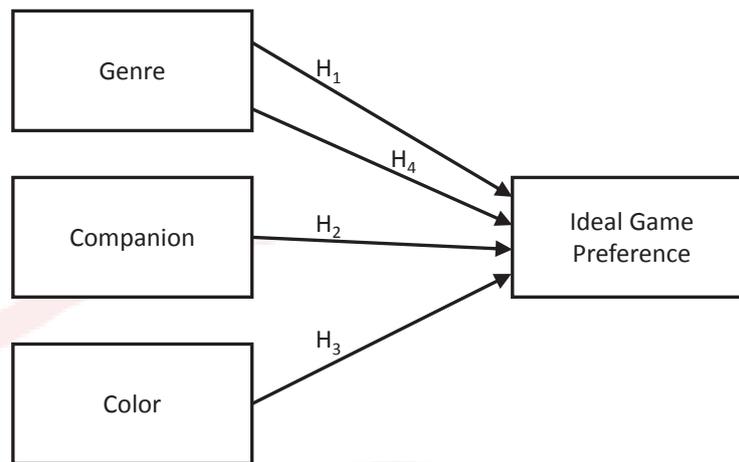
**H<sub>3</sub>:** *Red is the most preferred color theme by the preschoolers instead of other colors.*

Furthering the argument based on the foregoing discussions and in light of the personal judgement of the researcher, the study would like to advance a summative question:

**Research Question 4:** *Is genre the most preferred attribute when designing for an ideal game for preschoolers?*

**H<sub>4</sub>:** *Genre is primarily considered over color and companion when deciding for an ideal game for preschoolers.*

Upon assessing the relationships of the variables discussed, the following figure is created:



*Figure 1: Hypothesized relationship between the gaming attributes to the ideal game preference of preschoolers*

### 3.0 Methods

#### 3.1 Research Design

This paper is quantitatively approached through collection of data in numerical figures (Harrison III, 2012). Likewise, to determine the gaming preferences of preschoolers, the researcher employed conjoint analysis as method for acquiring data. Conjoint analysis has been widely used to elicit preferences through presentation of an array of attributes or profiles among specific market groups (Noguchi & Ishii, 2000; Park, 2004; Bridges, Hauber, Marshall, Lloyd, Prosser, Regier, Johnson & Mauskopf, 2011). The usage of conjoint analysis in health care has increased rapidly and so far, has been successful in determining preferences for a vast range of health applications (Bridges et al, 2011).

Specifically in this study, the researcher will utilize the orthogonal, card-based type of conjoint analysis.

Orthogonal Conjoint Analysis permits statistical testing of various factors, or attributes, without testing every combination possible (IBM, 2012). Through the exclusion of implausible combinations (ISPOR, 2012), Orthogonal Conjoint Analysis answers the core goal of conjoint analysis which is to minimize the options

presented for each respondent, while still getting good estimates of results (Dobney.com, 2010)

### *3.2 Tools and Measures*

The researcher prepared a deck of cards with each card representing 3 basic attributes that gamers find substantial namely: typological dimension, graphic dimension and social dimension. Typological dimension are specific genres of games and includes 3 types: [1] action, [2] adventure and [3] strategy. Graphic dimension involves colors and includes 5 types: [1] red, [2] yellow, [3] purple, [4] blue, and [5] green. Lastly, social dimension involves the person/s that gamers prefer to be with while playing games and this includes 3: [1] with peers, [2] with family, and [3] with self. Each card will represent a combination of the 3 attributes for a total of 45 cards. Using the conjoint analysis feature of the SPSS v21 software for Windows to elicit the orthogonal combinations, the total number of cards were reduced to 25 combinations. These cards were numbered permanently at the back. With the assistance of the researcher, respondents picked their preferred combination through sorting the cards based on their most and least preferred. The cards' corresponding numbers were recorded and were analyzed for results.

### *3.3 Study Subjects*

In this study, the researcher intended to determine the gaming preferences of preschoolers, and purposively gathered a total of 30 preschoolers from a selected preschool facility in Quezon City to undergo card sorting.

Purposive sampling was utilized to select the respondents who met a set of criteria: (1) must be a preschool student of the selected facility regardless of age, (2) must be willing to participate in the study, and (3) has consent of a parent or a guardian to participate in the study.

Likewise, the researcher was guided by the following criteria for the selection of preschool facility: (1) must be conducting normal preschool education in case the

facility is also providing special education, and (2) must have given the researcher permission to conduct the study in its premise.

### *3.4 Data Analysis*

After the order of sorted card has been recorded for each respondents, the researcher utilized a spreadsheet software to create the basic tally sheet. The file underwent statistical analysis using the conjoint analysis feature of the SPSS v21 software. Statistical Package for Social Sciences (SPSS), is a Microsoft Windows package program (Arbuckle, 2006 cited in Schreiber, 2008) that transcribes quantitative data and present results with more accuracy through a vast multivariate statistical techniques (IBM, 2012), which makes it capable of solving an extensive array of statistical problems.

## **4.0 Results**

Table 1 provides scores for the conjoint analysis as indicated by the characteristics utility estimates, standard errors, important values and p-values of each attribute. These results indicate that the action genre together with color red and family as companion scored the highest in their respective attributes.

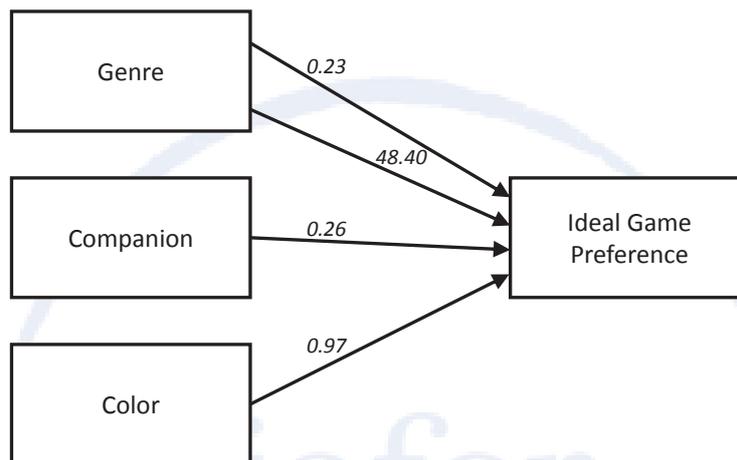
Specifically, when exploring the different scores in terms of genre, action counted the highest (0.23) followed by strategy (0.14). Not surprisingly, adventure scored the lowest (-0.41).

With regards to color characteristics, red and green attained the highest marks (0.97 and 0.65 respectively). It is followed by yellow color (0.28). Blue color had a negative score (-0.50) while purple got the lowest rank among the characteristics (-1.4).

Lastly in terms of the social dimension, playing computer games with family members got the highest rank (0.26) followed by just playing without a companion (0.15). Interestingly, playing computer games with friends ranked the lowest between the three with a negative score (-0.42).

Color has the highest important value of 48.40, which exceeded ‘social dimension’ and ‘genre’ which have relative scores of 27.04 and 24.55 respectively. The correlation between the observed and estimated preferences has a Pearson r value of 0.67 (p= 0.00).

Plotting the research data against the research arguments, the following figure is presented:



*Figure 2: Resulted relationship between the gaming attributes to the ideal game preference of preschoolers*

## 5.0 Discussion

The research findings suggest that the most important factor in designing an ideal game is the color theme that would radiate on the game interface, while the number of players and the type of game play secondary but are still important. This might be due to the fact that children at this age bracket are mostly visual (Videbeck, 2008; Boyd, 2008) in terms of acquiring information rather than instructional. Therefore, it is what they see that is more important, rather than what they play or how they play the games. This would become a very important factor when designing a computer game since children are mostly more associated with color combinations.

Interestingly, the findings in terms of specific color almost matches the literature formerly discussed in this paper. Similar to previous studies, preschoolers prefer colors with longer wavelengths such as red, than with shorter wavelengths such as blue and purple. This might be because younger people are more visually stimulated

with chromatic colors, or colors with hue, rather achromatic colors, or colors without hue such as grey or black (Adams, 1987). Children prefer hues over greys, and the more hue or wavelength the color possess, the more they are stimulated. Colors are a very prominent environmental cue, which allows people to recognize, classify and categorize objects in a highly fashioned manner (Hurvich, 1982 cited in Adams, 1987). Color discernment is a dominant characteristic of preschoolers, significant when learning how to discriminate objects.

The results shown for social dimension is very congruent with several literature. Children prefer to play with their family members such as with siblings or parents, rather than with their friends. Although preschool is a time where children go to school to learn and meet new people, it is still the family members who are central to the preschooler's development and learning of what's right and wrong, similar to the proposition of Erik Erikson (1980) in his Psychosocial Theory. Also, it would not be so surprising that preschoolers prefer to play with family members because of the social nature of Filipino families.

Finally in terms of the type of games, preschoolers prefer to play action type of games, quite dissimilar to what was previously discussed from other literature. This is significant in designing an ideal game for children because the game genre can also attract or not attract attention of children in playing games and would determine how long the children will stay interested in playing the game. However, adventure type of games unsurprisingly got the lowest score, similar to the previous discussions. This may be explained by the fact that adventure type of games suffered a significant drop in popularity during the late 1990s (Nixon, 2007). By 2010, only 7-8% of game sold were adventures games, dominated by both action and strategy games (Entertainment Software Association, 2011).

The Pearson  $r$  value shows that the presented model together with the gathered data values has significant positive relationship indicating its fitness.

## **Conclusion**

The findings of this study are very relevant not only game producers but also to the educators and healthcare team as well. The results poses as a guide for their collaborative action in order to design an ideal game for health, particularly on what aspect to focus on, and to what type of game to create.

There are limitations imposed in this study, one being the limited number of respondents. This paper recommends further studies with more respondents. Another limitation is the lack of differentiation according to demographics, however a more generalized preference is more interesting for game designers. Also, since there are limited number of studies that deal with gaming preferences for children, it would be interesting to perform similar studies in different nations or cultures. Descriptive-comparative researches in the context of culture is also a significant area of further inquiry.

Despite the limitations, the findings presented provide a new dimension for understanding the effects of games among preschoolers. It is envisioned to be the starting point in extending related researches in the future, and for the gaming developer sector to contribute to building a healthier nation.

## References

- Adams, R. J. (1987). An evaluation of color preference in early infancy. *Infant Behavior and Development*, 10(2), 143–150. doi:10.1016/0163-6383(87)90029-4
- Alienware Arena. (2010, August 6). *Top 10 most popular PC gaming genres*. Retrieved May 21, 2013, from <http://www.alienwarearena.com/articles/view/top-10-most-popular-pc-gaming-genres/>
- Azim, W., Shafi, H., Qureshi, S., Sheikh, T., Azim, S., & Hayat, F. (2005). Perceptions and Practices of Mothers Regarding Child Feeding. *Biomedica*, 21.
- Brandtzæg, P. B., & Heim, J. (2009). Children's Electronic Gaming Content Preferences and Psychosocial Factors: Is there a Connection? *Nordicom Review*, 30(2).
- Bridges, J. F. P., Hauber, A. B., Marshall, D., Lloyd, A., Prosser, L. A., Regier, D. A., ... Mauskopf, J. (2011). Conjoint Analysis Applications in Health—a Checklist: A Report of the ISPOR Good Research Practices for Conjoint Analysis Task Force. *Value in Health*, 14(4), 403–413. doi:10.1016/j.jval.2010.11.013
- Brookover, A. (2013). What Is the Definition of Nutrition? Retrieved May 21, 2013, from <http://www.healthguidance.org/entry/9975/1/What-Is-the-Definition-of-Nutrition.html>
- Caulfield, L., de Ontis, M., Blossner, M., & Black, R. (2004). Undernutrition as an Underlying Cause of Child Deaths Associated with Diarrhea, Pneumonia, Malaria and Measles. *The American Journal of Clinical Nutrition*, 80(193), 8.
- Cherry, K. (2013). Erikson's Psychosocial Stages - Preschool, Middle Childhood, and Adolescence. *About.com*. Retrieved May 21, 2013, from [http://psychology.about.com/od/psychosocialtheories/a/psychosocial\\_2.htm](http://psychology.about.com/od/psychosocialtheories/a/psychosocial_2.htm)
- Department of Health (DOH). (n.d.). *What types of malnutrition occur in the Philippines?* Retrieved March 20, 2012, from Department of Health: <http://doh-gov.indanet.com/content/what-types-malnutrition-occur-philippines>
- Department of Science and Technology. (2008). *7th National Nutrition Survey* (p. 11). Food and Nutrition Research Institute - Department of Science and Technology.

- Designing conjoint experiments: a guide to alternative strategies. (n.d.). *ISPOR*. Retrieved May 21, 2013, from <http://www.ispor.org/meetings/baltimore0511/presentations/DESIGNINGCONJOINT-ISPOR-Conjoint-ED-Task-Force-Forum-5-24-2010.pdf>
- DevPulse. (2008). Nutrition in The Philippines: A Continuing Challenge, *12*(16), 2.
- Dewey, J. (1997). *Experience and education*. New York: Simon & Schuster.
- Dobney.com. (2010). *Technical notes about the conjoint demonstration*. Retrieved May 21, 2013, from [http://www.dobney.com/Conjoint/technical\\_notes.htm](http://www.dobney.com/Conjoint/technical_notes.htm)
- Entertainment Software Association. (2011). *Essential Facts About the Computer and Video Game Industry* (p. 16). United States.
- Erikson, E. H. (1980). *Identity and the life cycle*. New York: Norton.
- Gopalan, S. (2000). Malnutrition: Causes, Consequences, and Solutions. *Nutrition*, *16*(7/8), 556–558.
- Grace, L. (2005). Game Type and Game Genre.
- Harrison, R. L. (2012). Using mixed methods designs in the Journal of Business Research, 1990–2010. *Journal of Business Research*. doi:10.1016/j.jbusres.2012.01.006
- He, W., Zhang, Y., Zhu, J., Xu, Y., Yu, W., Chen, W., ... Wang, W. (2011). Could sex difference in color preference and its personality correlates fit into social theories? Let Chinese university students tell you. *Personality and Individual Differences*, *51*(2), 154–159. doi:10.1016/j.paid.2011.03.035
- IBM. (n.d.). *IBM - SPSS Amos - United States*. Retrieved May 21, 2013, from [http://www-03.ibm.com/software/products/us/en/spss-amos?S\\_CMP=rnav](http://www-03.ibm.com/software/products/us/en/spss-amos?S_CMP=rnav)
- Jong, J.-T., Lee, Y.-W., Hong, J.-C., Hwang, M.-Y., & Hao, Y.-W. (2009). Kindergartners' Color Preference and Temperament in Embodied Interactive Video Game. In M. Chang, R. Kuo, Kinshuk, G.-D. Chen, & M. Hirose (Eds.), *Learning by Playing. Game-based Education System Design and Development* (Vol. 5670, pp. 473–478). Berlin, Heidelberg: Springer Berlin Heidelberg. Retrieved from [http://www.springerlink.com/index/10.1007/978-3-642-03364-3\\_56](http://www.springerlink.com/index/10.1007/978-3-642-03364-3_56)
- Jukes, M. (2007). Impact of early childhood health and nutrition on access to education in developing countries. *Paediatrics and Child Health*, *17*(12), 485–491. doi:10.1016/j.paed.2007.09.006

- Kolb, D. A. (1984). *Experiential learning: experience as the source of learning and development*. Englewood Cliffs, N.J: Prentice-Hall.
- Kostkova, P., Farrell, D., de Quincey, E., Weinberg, J., Lecky, D., & McNulty, C. (2010). eBug--teaching children hygiene principles using educational games. *Studies in health technology and informatics*, 160(Pt 1), 600–604. doi:10.3233/978-1-60750-588-4-600
- Media Analysis Laboratory. (1998). *Video Game Culture: Leisure and Play Preferences of B.C. Teens*. Simon Fraser University, Burnaby B.C.
- Nixon, S. (2012). Gamasutra - Features - Bring Out Your Dead! Can Nintendo Breathe New Life into Adventure Games? *Gamasutra*. Retrieved May 21, 2013, from [http://www.gamasutra.com/view/feature/130136/bring\\_out\\_your\\_dead\\_can\\_nintendo\\_.php?print=1](http://www.gamasutra.com/view/feature/130136/bring_out_your_dead_can_nintendo_.php?print=1)
- NNC - Philippine Plan of Action for Nutrition. (2013). *National Nutrition Council*. Retrieved May 21, 2013, from <http://www.nnc.gov.ph/plans-and-programs/ppan>
- Noguchi, H., & Ishii, H. (2000). Methods for determining the statistical part worth value of factors in conjoint analysis. *Mathematical and Computer Modelling*, 31(10-12), 261–271. doi:10.1016/S0895-7177(00)00095-9
- Park, C. S. (2004). The robustness of hierarchical Bayes conjoint analysis under alternative measurement scales. *Journal of Business Research*, 57(10), 1092–1097. doi:10.1016/S0148-2963(03)00039-0
- Psychiatric nursing: contemporary practice*. (2008) (4th ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Schell, J. (2008). *The art of game design: a book of lenses*. Amsterdam ; Boston: Elsevier/Morgan Kaufmann.
- Schreiber, J. B. (2008). Core reporting practices in structural equation modeling. *Research in Social and Administrative Pharmacy*, 4(2), 83–97. doi:10.1016/j.sapharm.2007.04.003
- UNICEF. (2012, May 25). *UNICEF - Nutrition - The big picture*. Retrieved May 21, 2013, from [http://www.unicef.org/nutrition/index\\_bigpicture.html](http://www.unicef.org/nutrition/index_bigpicture.html)
- Usability Resources: Usability in the Real World: Business Benefits. (n.d.). *Usability Professionals' Association*. Retrieved May 21, 2013, from

[http://www.upassoc.org/usability\\_resources/usability\\_in\\_the\\_real\\_world/benefits\\_of\\_usability.html](http://www.upassoc.org/usability_resources/usability_in_the_real_world/benefits_of_usability.html)

Videbeck, S. L. (2008). *Psychiatric-mental health nursing*. Philadelphia, PA: Lippincott Williams & Wilkins.

World Health Organization (WHO). (2011). *Malnutrition In The Philippines – How Will World Health Organization Deal With It?*. Retrieved May 21, 2013, from <http://www.who.org.ph/malnutrition.html>

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The text is enclosed within a large, stylized circular graphic composed of two overlapping, thick, curved lines. The upper line is light blue and the lower line is light red, creating a circular frame around the text.

iafor

*Nutrition-Related Computer Game Use Resulted to Improved Health Literacy among Preschoolers in the Philippines*

Christian Del Rosario\*<sup>1,2,3,4</sup>, Jenica Ana Rivero\*<sup>1,2,3,4</sup>, Michael Joseph Diño\*<sup>1,2,3,4</sup>

\*<sup>1</sup>The Graduate School, Philippines\*<sup>2</sup>, College of Nursing, Philippines\*<sup>3</sup>,  
Research Development and Innovation Center, Philippines,  
\*<sup>4</sup>Our Lady of Fatima University, Philippines

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Abstract

Health education aided with technology has been recently examined by experts as a new approach in extending universal efforts to achieve health-for-all. However, despite its outstanding potentials, sensible evaluations for health games has been given little consideration. Health Hunt (the researcher-made computer game) was developed to benefit preschool children tin understanding the concept of nutrition, specifically, the different food groups. Using one-group pretest-posttest design (n=30), the present undertaking aimed to test the effectiveness of the health game in attaining its expected goal. Data revealed significant improvement in the cognitive valuation scores ( $t = -6.50$ ;  $\alpha = 0.05$ ) from the participants' pretest scores ( $\bar{x} = 7.40$ ;  $SD = 2.14$ ) to their posttest scores ( $\bar{x} = 10.93$ ;  $SD = 2.23$ ). This indicates substantial evidence the game's effectiveness and is envisioned to contribute to the innovations in the gaming, education and health industries.

**Keywords:** Nutrition, Literacy, Game for Health, Preschool, Causal Research, One-group Pretest-posttest Design, Before-after Design

## 1.0 Introduction

Despite the advancements in the medical industry, there are still unresolved gaps that needs to be bridged, specifically on malnutrition and health literacy among children. The latest conducted by the Food and Nutrition Research Institute (FNRI) of the Department of Science and Technology (DOST) in 2008 has revealed that there is increasing occurrence of malnutrition among children in the Philippines. Several nutrition agendas and plans were delivered to eradicate malnutrition, but the problem still subsists. Studies have shown that the decline in health literacy is considered the real cause of the problem (Azim, Shafi, Qureshi, Sheikh, Azim, & Hayat, 2005). Therefore, experts started searching for new ways to provide health information to children.

Researches have been looking for the potentials of computer gaming as a way to provide health information to children. With the immense community of gamers existing Entertainment Software Association (2011), utilizing games as a method of health teaching must really be taken into consideration. A number of serious health games, or games intended to educate, produced positive results in providing health knowledge on children. One example is the eBug project that incorporated elements of a platform game in order to raise awareness of children on antibiotic resistance and respiratory hygiene (Kostkova, Farrell, de Quincey, Weinburg, Lecky & McNulty, 2010). In line with this fact and the various improvements in the methods of learning, the present study argues that computer gaming can be a potential tool to provide health information to the younger population and later help solve the issue on malnutrition.

This paper intended to determine the effectiveness of a researcher-made computer game in providing health information to preschoolers in a selected preschool institution. The health game is entitled "Health Hunt", a point-and-click adventure game that provides children information about the basic food groups. Such undertaking would be beneficial in providing a guiding light for the utilization of games in the academic environment that will directly affect didactic knowledge, as well as providing empirical evidence that would help researchers in their future undertakings.

## 2.0 Background

### 2.1 Theoretical Framework

This study propelled to contribute to the interesting phenomenon of health literacy, gaming and sustainable health among the preschoolers. This study aimed to test the effectiveness of a researcher-made health game in providing the value of nutrition among preschool children. This research, was inclined to the Relevance, Embedding, Translation, Adaptation, Immersion & Naturalisation (RETAIN) Model (Gunter, Kenny & Vick, 2007) and the Experiential Learning Theory by David Kolb (1984).

According to Gunter and her co-researchers (2007), gaming experience has three levels: (1) interacting, (2) engaged and (3) immersed. Interaction simply happens when there is information exchange between the player and the game (Salen & Zimmerman, 2004, cited in Gunter et al, 2007). At a higher level, the player decides to involve himself emotionally, intellectually or psychologically to the game (Salen & Zimmerman, 2004, cited in Gunter et al, 2007), and this is where engagement occurs. At this time, the player is willing to “play along” because there is a feeling that the elements the player is interacting with could be real (Laurel, 1993 cited in Gunter et al, 2007). Immersion, being the highest level refers to the interplay of both interaction and engagement (Gunter, et al, 2007). Such intense experiences, later on, can be transformed into learning.

David Kolb (1984) believed that experiential learning is a product of the person’s reflection of his experience. It is indicated by this process: [1] prehension wherein the person perceived the experience, and [2] transformation which is initiated by “reflective observation” where the person makes sense of the experience and then by “active experimentation” where the reflection is converted according to the likeness of the person. The quality of the experience and reflection is essential to the value of learning.

Translating this fact into the experience of the gamer, it would be necessary to provide the player a game that is enough to extract good experience and stimulate quality reflection. According to Fowler (2008), the quality of experience depends on

the degree the person is involved and the relevance of the subject matter, whereas the quality of reflection depends on what tool to aid the person's reflection and the person's behavior.

## *2.2 State of Nutrition and Malnutrition among Preschoolers in the Philippines*

Nutrition has always been a primary concern not only among developed countries but especially among the developing countries. Basically, nutrition is a human right (United Nations International Children Emergency Fund, 2012) and is important to the continuity of life and the prospering of children (DevPulse, 2008). Malnutrition, on the other hand, is the absence of the essential nutrients that a healthy body must own (World Health Organization, 2011). Malnutrition still persists to exist especially in developing countries like the Philippines, leading UNICEF (2003) to coin malnutrition as an "invisible emergency"

A number of data to support the severity of the situation were presented by local and international groups combined. Roughly 2.9 million families have subjectively expressed unintentional hunger, and about 760,000 families expressed severe hunger (Social Weather Station, 2008 cited in DevPulse, 2008). Objective surveys reported that as of the year 2008, 26.2% of children 0-5 years of age were underweight (FNRI-DOST, 2008) and as of 2009, 20.7% of the children were underweight (World Health Organization, 2011). Also according to the 7th National Nutrition Survey (2008), 6.1% and 27.9% of children 0-5 years old were known to be wasted and stunted respectively. Objective data were gathered through measurement of anthropometry, or body sizes such as weight and height and observation of clinical signs such as visible bipedal pitting edema (Walton & Allen, 2011). This does not end to such data, however, because malnutrition unseals a lot more subsequent complications to children.

A lot of impediments is surprisingly associated to malnutrition. In fact, childhood underweight is the leading reason why the world experiences most diseases imaginable (Caulfield, de Ontis, Blossner & Black, 2004). Vitamin A deficiency, which is one characterization of malnutrition (DOH, 2012), generates about 350, 000 additional occurrence of blindness and partial blindness to children every year, while

iodine deficiency still persists to cause preventive mental retardation worldwide (Jukes, 2007). Child mortality as result of many diseases has been also associated with malnutrition. Specifically, 60.7%, 52.3%, 44.8% and 57.3% of deaths due to diarrhea, pneumonia, measles and malaria respectively were linked to malnutrition (Caulfield et al, 2004). Lastly, though surely not least, is the fact that children experiencing malnutrition have higher chances of being deprived from schooling. Studies have shown that undernourished children were more likely to be absent from school or worst, not enrolling at school. Specifically, stunted children have found out to enroll later in school than other children (Jukes, 2007). Problems with schooling can lead to even more problems such as deprivation of information regarding health and nutrition.

### *2.3 Health Literacy among Preschoolers*

A few literatures link the lack of access to health information to malnutrition, but this deficiency might be the primal origin of malnutrition and why it does not cease to exist. According to Gopalan (2000), although poverty is known to be the main cause of malnutrition, the lack of adequate nutrition should also be pinpointed to ignorance, rather more on poverty. Poverty by itself does not cause malnutrition (Azim et al, 2005). Ignorance is also as significant, if not directly responsible, and must be addressed the way poverty is addressed.

The children's continuous existence has always been the goal of the government (Jukes, 2007). Thus, various initiatives were done to address the problem on malnutrition. With the commencement of the Medium-term Philippine Plan of Action for Nutrition 2008 – 2010 that intended a decrease of prevalence of underweight children, 0-5 years to 21.6% (National Nutrition Council, 2012), several health and nutrition programs emerged such as the Food Fortification Program (DevPulse, 2008). International initiatives were also developed such as the Operation Timbang (translated: Weighing Program) of the World Health Organization (2011), in association with the Department of Health (DOH). After such effort, malnutrition was still in high rates.

A heap of articles suggest that parent health literacy outcomes the health of children significantly. However, a few articles explain health literacy among children, especially the importance of improving their knowledge and self-efficacy (Abrams, Klass & Dreyer, 2009). What is known about children development as relate to literacy is that early exposure to graphics and health development programs significantly increases literacy among children, especially in developing countries wherein educational graphics are found first mostly at school (Puchner, 1993).

#### *2.4 Gaming Definition and Demographics*

Education aided with technological advancements has started to get to the senses of the people as a new method for all levels of education; but among these technological advancements, it is computer games that are central in educating children and teenagers alike (Kostkova, Farrell, de Quincey, Weinburg, Lecky & McNulty, 2010). Game, as defined by Schell (2008) is a “problem-solving activity approached with a playful attitude.” Such entertainment draws people into playing computer games. However, gaming as a method of educating has been given little attention (Kostokova et al, 2010), quite indirectly proportional to the expanse of gamers around the world.

There has been an immense community of players currently existing. In the US alone, 72 out of 100 American household play computer games, 18% of these gamers are below 18 years (ESA, 2011).

#### *2.5 Effect of Computer Game Participation to Health Literacy*

Computer games have a lot of potentials, as it can be used in a broad area of fields, specifically the medical field. After being solely an immersive diversion a few decades ago (MobiHealth News Research, 2011), it's becoming possible to use games not only for entertainment, but also for improvement of health, and education. In fact, gaming as an approach can be a simple yet effective way of conveying information and messages regarding health (Noble, Best, Sidwell & Strang, 2000). To stimulate this hype even more, the Health Games Research national program, which offers resources for a diverse group of individuals like the health care industry, the media, the game industry and the educators, awarded a total of \$4 million in 2008 and 2009

to fund researches on health games (Parker, 2012). Because of this, it can be stated that there is a “lively academic health games community” (Parker, 2012) that utilizes and researching about the subject matter.

Since games were originally intended for fun and gaming, computer games that have a primary purpose of educating were given its own name. Serious games, like commercial games, are also entertaining but they are designed predominantly with education as its intention, through the implementation of pedagogy.

With coherence on the discussions above, this research examines the effectiveness of computer games in teaching children about nutrition. Thus the following questions were raised:

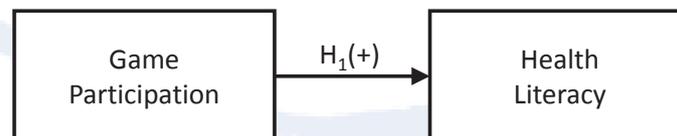
**Research Question 1:** *Is there an improvement in the cognitive valuation scores of the respondents before and after the gaming sessions?*

**Research Question 2:** *To what extent and polarity is the effect of gaming to the cognitive and valuation scores of the respondents?*

Likewise, the study argues that:

**H<sub>1</sub>(+):** *There is an improvement in the cognitive valuation scores of the respondents before and after the gaming session.*

Along with the presentation of the variables, the following figure is created:



*Figure 1: Hypothesized relationship between system participation in gaming and health literacy valuation scores*

### **3.0 Methods**

#### *3.1 Research Design*

Because of the far-reaching extent of utilization of the gaming industry to health education, the researcher used a quantitative approach in this study, where data are collected in numerical figures (Harrison III, 2012). Being a causal research, this paper also applied one-group pretest-posttest design to determine the effectiveness of the researcher-created game in teaching preschool respondents the basic food groups. One-group pretest-posttest design is also known as before-after design, wherein data are collected from the subjects before and after applying an intervention, usually used to measure changes or difference within a single group (Polit & Beck, 2003).

#### *3.2 Study Subjects and Locale*

To test the effects of a researcher-made computer game to health literacy, a total of 30 preschoolers from a selected preschool facility in Valenzuela City were employed to play a Health Hunt, researcher-made computer game. Purposive sampling was utilized in order to gather the respondents. The researcher followed this set of criteria: (1) must be a preschool student of the selected facility regardless of age, (2) has a computer at home which can play the researcher-made game with minimum requirements or higher, (3) must be willing to participate in the study, and (4) has consent of a parent or a guardian to participate in the study. Likewise, the researcher was guided by the following criteria for the selection of preschool facility: (1) must be conducting normal preschool education in case the facility is also providing special education, and (2) must have given the researcher permission to conduct the study in its premise.

#### *3.3 Study Tools*

##### *3.3.1 Basic Information Sheet*

A basic information sheet was prepared to obtain the basic demographic information from the respondents. It includes information such as the respondent's name, address,

age, and gender. It also includes the name of the institution and the parent or guardian's name. More importantly, it asks whether the participant has a working computer at home. This form is initially given to ensure that the respondent is qualified to participate in the study.

### *3.3.2 Health Hunt*

The researcher-made computer game is entitled "Health Hunt", a point-and-click type of adventure game intended to teach preschool age children the difference between energy-giving, bodybuilding and body-regulating groups of food, and the foods that belong to each group. For each stage, the player will be given a list of foods that belong to a specific food group. Different foods will fall down the screen and the player must click on the foods that are listed for the given time limit. Clicking foods from a different group will cause the timer to go down further. No penalty is given if the player clicks a food that is not in the list but is included in the food group. The game characters' expressions also changes depending on the standing of the player. For example, the character will be sleepy and tired when the player does not get the correct energy-giving food. Stars will be awarded at each stage depending on how fast the player finishes the stage. Three stages are given for each food group for a total of nine stages. Afterwards, the player wins the game and can decide to repeat the game to get used to the different food groups and get more stars per stage.

The game was prepared as a single executive file for Microsoft Windows operating system. It followed the game development process as presented by Moreno-Ger, Sierra, Martinez-Ortiz & Fernandez-Manjon (2007), consisting of the following phases: [1] Production of the storyboard, [2] Markup of the storyboard, [3] Production of art assets, and [4] Production of the videogame. The researcher utilized Game Maker 8.1 Lite software as the interface for programming language and game engine. Since the engine is incorporated with the software, the fourth phase of the game development process was done simultaneously with other phases.

### *3.3.3 Nutrition Quiz*

The nutrition quiz measures the understanding of the respondents of the different food groups and the foods that belong to them. The form is a 15-item quiz for children, consisting of 9 matching type and 6 multiple choices questions. In the matching type test, 9 different foods are drawn and the respondents need to match the foods to the correct food group. For the multiple choices, 3 questions ask what will happen if the person lacked a particular food group, and 3 ask what food to give at a certain scenario. All the items are in graphical form, and the same form was given as pretest and posttest.

### *3.4 Data Gathering Procedure and Data Analysis*

The testing spanned for 5 days total. During the 1st day, the respondents were first given an overview food groups for 15 minutes. Afterwards, they were given the nutrition quiz to provide the baseline analysis. For the 2nd up to the 4th day, the 30 respondents are given the chance to play the researcher-created computer game at their respective houses for 20 minutes in 3 days, or for a total of 1 hour playing. They must gather with the researcher on the 5th day to be given another set of nutrition quiz.

The first and second nutrition quiz were checked and the scores were transcribed using a spreadsheet software. Frequency and percentage were used to present the scores of the respondents and paired t-test were utilized to determine the changes between the two tests. The statistical analysis was done automatically using SPSS v21 software. SPSS, or Statistical Package for Social Sciences, is a Microsoft Windows package program (Arbuckle, 2006 cited in Schreiber, 2008) that calculates data from various multivariate statistical methods with more accuracy (IBM, 2012).

#### 4.0 Results and Discussion

*Table 1*  
*Cognitive Valuation Scores of Respondents*

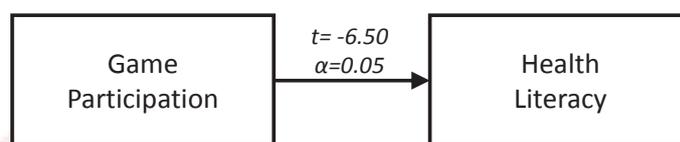
SCORE	PRETEST		POSTTEST	
	f	%	f	%
3	1	3		
4	2	7		
5	3	10		
6	3	10	1	3
7	5	17	2	7
8	9	30	2	7
9	3	10	4	13
10	2	7	2	7
11			3	10
12	2	7	5	20
13			9	30
14			1	3
X	7.40		10.93	
SD	2.14		2.23	
T-Test	-6.50*			
Tcrit (1 tail)	-1.70			

*\*Significant at 0.05*

Table 1 explicates the cognitive valuation scores of the respondents in terms of percentage. As shown on the table, 30% of the respondents got a score of 8 over 15 in their pretest and 30% got a score of 13 out of 15 in their posttest. The pretest scores of the respondents got an average grade of 7.40 while the posttest have an average score of 10.93.

The table also presents the t-test scores for the pretest and posttest. At 0.05 level of significance, the T statistics (t-value = -6.50) is greater than the critical value of -1.70

(lower tailed). Deliberating on the results as compared to the research simulacrum, the undertaking has come up with the following figure:



*Figure 2: Resulted relationship between system participation in gaming and health literacy valuation scores*

The data suggests that there is an improvement in the knowledge of the participants after the game exposure. The initial baseline of the preschool students yielded then an average score of 7.40 out of 15 items. But after the 3 days of undergoing exposure to Health Hunt, the students got a higher average of 10.93 out of 15 items. The paired t-test score indicates that this increase in cognition scores is of significance.

The data revealed in the undertaking directs that Health Hunt was successful in improving the knowledge of preschool children in terms of the different food groups, specifically the energy-giving, body-building and body-regulating foods. It also indicates understanding of the different foods that belong to each food groups and the effects of the absence of such foods to the human body.

The researcher-made computer game was successful in its intention of providing health information to the younger population. This adds up to the present researches and endeavors that believe in the potentials of computer gaming in improving health among the population, especially to the children, who are more affected by the penetrating issues in nutrition.

## **Conclusion**

Health Hunt is one of the first games in the Philippines set to provide educational support to its target consumers besides its typical entertainment purpose. In this undertaking, the researcher tested the effectiveness of this game for health in teaching preschool children the value of nutrition through the basic food groups. The data

provides evidence that the cognitive improvement among the participants is substantial.

This paper did not focus on separate items in the nutrition quiz, it did however, approached the scores in a general sense. This opens further researches to provide specific testing for health games to check the integrity its stages or levels. Also it would provide evidence more empirically if future researches are done with a higher number of respondents.

Another thing that needs to be addressed in this paper is the environment. This paper opted to let the children play the game at their most convenient hours to ensure optimal experience given that they play the game for a total of an hour. However, questions regarding internal validity are left hanging. The undertaking suggests to consider similar researches on a more structured and systematic environment, or even consider comparing structured and unstructured environments when dealing with health games.

Notwithstanding its limitations, the researcher is confident that the study goal was met. This paper is envisioned as one catalyst in establishing pragmatic solutions in health and new approaches and innovations in technology enhanced education.

## References

- Abrams, M. A., Klass, P., & Dreyer, B. P. (2009). Health Literacy and Children: Introduction. *PEDIATRICS*, *124*(Supplement), S262–S264. doi:10.1542/peds.2009-1162A
- Azim, W., Shafi, H., Qureshi, S., Sheikh, T., Azim, S., & Hayat, F. (2005). Perceptions and Practices of Mothers Regarding Child Feeding. *Biomedica*, *21*.
- Caulfield, L., de Ontis, M., Blossner, M., & Black, R. (2004). Undernutrition as an Underlying Cause of Child Deaths Associated with Diarrhea, Pneumonia, Malaria and Measles. *The American Journal of Clinical Nutrition*, *80*(193), 8.
- Department of Health (DOH). (n.d.). *What types of malnutrition occur in the Philippines?* Retrieved March 20, 2012, from Department of Health: <http://doh.gov.indanet.com/content/what-types-malnutrition-occur-philippines>
- Department of Science and Technology. (2008). *7th National Nutrition Survey* (p. 11). Food and Nutrition Research Institute - Department of Science and Technology.
- DevPulse. (2008). Nutrition in The Philippines: A Continuing Challenge, *12*(16), 2.
- Dewey, J. (1997). *Experience and education*. New York: Simon & Schuster.
- Entertainment Software Association. (2011). *Essential Facts About the Computer and Video Game Industry* (p. 16). United States.
- Fowler, J. (2008). Experiential learning and its facilitation. *Nurse Education Today*, *28*(4), 427–433. doi:10.1016/j.nedt.2007.07.007
- Gopalan, S. (2000). Malnutrition: Causes, Consequences, and Solutions. *Nutrition*, *16*(7/8), 556–558.
- Gunter, G. A., Kenny, R. F., & Vick, E. H. (2007). Taking educational games seriously: using the RETAIN model to design endogenous fantasy into standalone educational games. *Educational Technology Research and Development*, *56*(5-6), 511–537. doi:10.1007/s11423-007-9073-2
- Harrison, R. L. (2012). Using mixed methods designs in the Journal of Business Research, 1990–2010. *Journal of Business Research*. doi:10.1016/j.jbusres.2012.01.006
- IBM. (n.d.). *IBM - SPSS Amos - United States*. Retrieved May 21, 2013, from [http://www-03.ibm.com/software/products/us/en/spss-amos?S\\_CMP=rnav](http://www-03.ibm.com/software/products/us/en/spss-amos?S_CMP=rnav)

- Jukes, M. (2007). Impact of early childhood health and nutrition on access to education in developing countries. *Paediatrics and Child Health*, 17(12), 485–491. doi:10.1016/j.paed.2007.09.006
- Kolb, D. A. (1984). *Experiential learning: experience as the source of learning and development*. Englewood Cliffs, N.J: Prentice-Hall.
- Kostkova, P., Farrell, D., de Quincey, E., Weinberg, J., Lecky, D., & McNulty, C. (2010). eBug--teaching children hygiene principles using educational games. *Studies in health technology and informatics*, 160(Pt 1), 600–604. doi:10.3233/978-1-60750-588-4-600
- MobiHealth News Research. (2011). *Mobile Social and Fun Games for Health*. Chester Street Publishing, Inc.
- Moreno-Ger, P., Sierra, J. L., Martínez-Ortiz, I., & Fernández-Manjón, B. (2007). A documental approach to adventure game development. *Science of Computer Programming*, 67(1), 3–31. doi:10.1016/j.scico.2006.07.003
- NNC - Philippine Plan of Action for Nutrition. (2013). *National Nutrition Council*. Retrieved May 21, 2013, from <http://www.nnc.gov.ph/plans-and-programs/ppan>
- Noble, David Best, Clare Sidwell, J, A. (2000). Is an Arcade-style Computer Game an Effective Medium for Providing Drug Education to Schoolchildren? *Education for Health: Change in Learning & Practice*, 13(3), 404–406. doi:10.1080/135762800750059525
- Parker, S. (2011). *Advancing the Field of Health Games: A Progress Report on Health Games Research*. RWJF, Princeton, New Jersey: Robert Wood Johnson Foundation.
- Polit, D. F. (2004). *Nursing research: principles and methods* (7th ed.). Philadelphia: Lippincott Williams & Wilkins.
- Puchner, L. (1993). *Early Childhood, Family, and Health Issues in Literacy: International Perspectives*. National Center on Adult Literacy.
- Schreiber, J. B. (2008). Core reporting practices in structural equation modeling. *Research in Social and Administrative Pharmacy*, 4(2), 83–97. doi:10.1016/j.sapharm.2007.04.003
- UNICEF. (2003, May 6). *UNICEF - Nutrition - How are we combating poor nutrition?*. Retrieved May 21, 2013, from [http://www.unicef.org/nutrition/index\\_combat.html](http://www.unicef.org/nutrition/index_combat.html)

- UNICEF. (2012, May 25). *UNICEF - Nutrition - The big picture*. Retrieved May 21, 2013, from [http://www.unicef.org/nutrition/index\\_bigpicture.html](http://www.unicef.org/nutrition/index_bigpicture.html)
- Walton, E., & Allen, S. (2011). Malnutrition in developing countries. *Paediatrics and Child Health*, 21(9), 418–424. doi:10.1016/j.paed.2011.04.004
- World Health Organization (WHO). (2011). *Malnutrition In The Philippines – How Will World Health Organization Deal With It?* Retrieved May 21, 2013, from <http://www.who.org.ph/malnutrition.html>

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The text is enclosed within a large, light blue circular arc that is partially visible, suggesting a larger circle. A faint, larger red circular arc is also visible in the background, partially overlapping the blue one.

*Predictors of Nutrition-Related Game Utilization among Preschools in the Philippines*

Christian Del Rosario\*<sup>1,2,3,4</sup>, Michael Joseph Diño\*<sup>1,2,3,4</sup>, Jenica Ana Rivero\*<sup>1,2,3,4</sup>

\*<sup>1</sup>The Graduate School, Philippines\*<sup>2</sup>, College of Nursing, Philippines\*<sup>3</sup>,  
Research Development and Innovation Center, Philippines,  
\*<sup>4</sup>Our Lady of Fatima University, Philippines

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Abstract

With the pending issues on malnutrition and healthy illiteracy, the focus has been turned towards the potentials share of the gaming industry in attaining the elusive health-for-all across developmental stages. Game usability testing has yielded many positive effects for both the gaming company and the gamer, but is given little attention when it comes to games for health. This paper sought to determine the system usability of a researcher-made computer game for health and test the effect of player demographics to usability and usability to the player's intention to participate in gaming. The results showed that majority of the respondents (n=30) agreed that the game handed to them was usable ( $\bar{x}$ =5.40; SD=0.88) and that they would play the game at the soonest time possible ( $\bar{x}$ =1.43; SD=0.68). Regression analysis showed that player demographics is not a determinant of the player's perception of game usability ( $r$ =0.18;  $p$ =0.82), but usability has shown to have a significant effect of the player's intention to play the game ( $r$ =0.67;  $p$ =0.00). This paper is meritorious in providing empirical evidence of the importance of usability testing before handing down games for health to the target consumers.

**Keywords:** Nutrition, Literacy, Preschool, Usability, Behavior Intention, Regression, Game Development

## 1.0 Introduction

The multitude of malnutrition among younger population has been a perennial problem in developing countries like the Philippines. Putting into simpler words the latest survey by the Food and Nutrition Research Institute of the Department of Science and Technology in 2008, in every 100 preschool children in the country, 26 were underweight and about 28 were under height. Even though numerous health initiatives serve as primal force in attaining health-for-all, the problem persists to exist. With solutions in mind, researchers turn their attention into declining health literacy. Articles suggest that ignorance plays significantly in child malnutrition (Azim, Shafi, Qureshi, Sheikh, Azim, & Hayat, 2005), and is in fact the real cause of it (Gopalan, 2000). Therefore, a dynamic attitude on innovation and re-culturing is seen as a commendable solution (Gopalan, 2000).

The increasing cases of malnutrition are somehow parallel to the innovations and advancements in the computer gaming industry. A recent report by the Entertainment Software Association (ESA, 2011) posited that 72% of American households play computer or video games, and that the real annual growth attained by the US game software industry exceeded by 10.6% from 2005 to 2009. The positive effects of playing computer games on a person's cognition and mentality impose many opportunities. The present undertaking stands that gaming can also be a potential tool to educate preschool children on the importance of proper and balanced diet, which in return will shed light in fighting malnutrition among this critical group.

If a computer game was intended to provide health information to children in order to assist for a struggle from a critical problem, then one must be tested for quality and playability. Software usability is the degree to which a product, particularly in this study a gaming software, can be operated by target users to achieve what the product intends to attain with ease and satisfaction while exhibiting effectiveness and efficiency of use (International Organization for Standardization, 1998). Placing a software under usability testing yields several benefits not only for the creator but also to the target clients. However, despite the importance of usability testing in the context of gaming, few health games have subjected to usability testing leading to erratic results in achieving its desired outcomes.

This paper, therefore intended to test a researcher-made health game for usability and test its effect on the subjects' behavior intention to participate in gaming. The game software produced is a point-and-click adventure game that provides preschool children basic nutritional food groups. The study is intended to contribute to the interesting phenomenon of health literacy, gaming, and sustainable health among preschoolers, as well as to offer good foundation for future endeavors and studies.

## **2.0 Background**

### *2.1 Theoretical Framework*

While this study aimed to develop a standardized game and tests its usability and effects to gaming participation among preschoolers, frameworks are essential to provide strong theoretical bases that will guide the outcome of the paper. This research was inclined to the Relevance, Embedding, Translation, Adaptation, Immersion and Naturalisation (RETAIN) Model (Gunter, Kenny & Vick, 2007) and the Experiential Learning Theory by Kolb (1984).

Gunter et al (2007) believes that gaming experience has three levels: (1) interacting, (2) engaged and (3) immersed with each level specifically determines the extent of player's satisfaction. Interaction happens when there is information flow between two entities (Salen & Zimmerman, 2004 cited in Gunter et al, 2007), the game and the player in particular. As soon as the player starts the game, interaction happens. Engagement happens when there is willingness from the player to participate or "play along" due to the feeling of realism in the experience (Laurel, 1993 cited in Gunter et al, 2007). Engagement can be: (1) emotional, where the player is willing to invest emotionally in the game; (2) intellectual, where the player is willing to exert effort to think and solve the challenges on the game; or (3) psychological, where the player is willing to extend his personality when interacting with the game (Salen & Zimmerman, 2004 cited in Gunter et al, 2007). At the grandest times where interaction and engagement interplays, immersion occurs being the highest level. At this time, there is reciprocal interaction between the player and the game and such experience later on can be transposed into learning.

John Dewey (1938) and David Kolb (1984) agreed that experiential learning results from the reflection of a person's experience, and the quality of the experience and reflection is significant to over-all learning. Kolb's Experiential Learning Theory in 1984 asserts that learning is a product of "prehension" or the grasping of experience followed by "transformation". Transformation is initiated by "reflective observation" wherein the person organizes the experience to make sense out of it, followed by "active experimentation" where the reflection is modified towards the person's own accord.

Provided with such knowledge, it is understood that in order to ensure the quality of learning of an individual, one must be involved at the level of immersion. The quality of reflection would also depend on the tool to aid the person's reflection and the person's behavior (Fowler, 2008) – which is the computer game.

## *2.2 The Developmental Stage of Preschool*

Preschool stages carries out many developments in a child's physical, social, emotional and cognitive functions. At this stage, children starts to express themselves through language (Videbeck, 2008) and asserts their power and control through directing play and social interactions (Cherry, 2012). But one predominant developments among preschool children is their graphical observation. At this stage, children begin understand meaning within symbolic gestures and starts to classify objects (Videbeck, 2008) and use them in systematized and logical fashion (Boyd, 2008). Symbols not only comprises of gestures but also words and even mental images.

Such changes can open a lot of room for innovation and terms of learning methods and gaming. This must also be a beneficial time to present children with computer games that can also educate them about health. Children at this age can get simple directions (Videbeck, 2008) so simple gameplays can be learned easily. Children also learn through symbolic play (Boyd, 2008). They also tend to learn to manage conflicts and anxiety (Videbeck, 2008). Simple games often offer challenges and conflicts of many sort and children can use it to their advantage. Winning a computer game is also

beneficial to their development because they feel capable and able to lead other (Cherry, 2012).

### *2.3 State of Nutrition and Malnutrition among Preschoolers in the Philippines*

Nutrition as always been a matter of concern among all countries, particularly the developing ones. By definition, nutrition is the overall process of taking in and assimilating substances that drive cellular growth and repair in order to sustain life (Brookover, 2012). But according to the United Nations International Children Emergency Fund (UNICEF, 2003), it is basically a human right, vital in sustaining humanity. It is very important mainly to the growth and development of children (DevPulse, 2008). However, the term nutrition has been always accompanied by its negative equivalent – malnutrition.

Malnutrition is defined by the World Health Organization (WHO) (2011) as the absence of the necessary nutrients that a normal, healthy body possesses. At the back of the simplicity of its definition lies an enormous problem that enforces to the world especially to the third world countries such as the Philippines. The magnitude of this problem has led UNICEF (2012) to coin malnutrition as an “invisible emergency”. And up to this point, this emergency has not been eradicated.

A number of local and international groups support the severity of the situation through their presented data. According to Social Weather Station (2008 cited in DevPulse, 2008) roughly 2.9 million families have personally expressed unintentional hunger, while about 760,000 families expressed severe hunger. Other surveys reported that as of the year 2008, 26.2% of children 0-5 years of age were underweight (FNRI-DOST, 2008) and as of 2009, 20.7% of the children were underweight (WHO, 2011). Also according to the 7th National Nutrition Survey (2008), 6.1% and 27.9% of children 0-5 years old were known to be wasted and stunted respectively. Objective data were gathered through measurement of anthropometry, or body sizes such as weight and height and observation of clinical signs such as visible bipedal pitting edema (Walton & Allen, 2011). This does not end to such data, unfortunately, because malnutrition unseals a lot more subsequent complications to children.

Many impediments were surprisingly associated to malnutrition. In fact, childhood underweight is the leading reason as to why the world experiences most disease imaginable (Caulfield, de Ontis, Blossner & Black, 2004). Vitamin A deficiency, which is one depiction of malnutrition (DOH, 2012), generates about 350,000 additional occurrence of blindness and partial blindness to children every year, while iodine deficiency, another manifestation of malnutrition, still persists to cause preventive mental retardation worldwide (Jukes, 2007). Child mortality as result of many diseases has been also associated with malnutrition. Specifically, 60.7%, 52.3%, 44.8% and 57.3% of deaths due to diarrhea, pneumonia, measles and malaria respectively were linked to malnutrition (Caulfield et al, 2004). Lastly, though surely not the least, is the fact that children experiencing malnutrition have higher chances of being deprived from schooling. Studies have shown that undernourished children were more likely to be absent from school or worse, not to enroll at all. Specifically, stunted children have been found to enroll at school at a later time than other children (Jukes, 2007) leading to more complicated problems such as deprivation of information not only on academics but also on health and nutrition.

#### *2.4 Health Literacy among Preschoolers*

A bit of literature link the lack of access to health information to malnutrition, but this deficiency might be the primal origin of the problem and why it cannot cease to occur. According to Gopalan (2000), although poverty is known to be the principal cause of malnutrition, the lack of adequate nutrition must instead be pointed towards ignorance. Moreover, ignorance must be addressed the way poverty is addressed to achieve optimal results since poverty alone does not cause the problem (Azim, Shafi, Qureshi, Sheikh, Azim & Hayat, 2005).

The continuous existence of the younger population has always been the goal of the local and international governments (Jukes, 2007). Thus, various initiatives were done to address the problem on malnutrition, such as the Food Fortification Program (DevPulse, 2008) and the Operation Timbang of the World Health Organization, in association with the Department of Health of the Philippines. But after such effort, malnutrition still exists.

Few researches explain about health literacy among children, especially the importance of improving their knowledge and self-efficacy to their overall health status. What is known is that early exposure to health development programs significantly increases literacy among children, especially wherein educational graphics are found first mostly at school (Puchner, 1993). Therefore, in line with technological advancements in education, it might be possible to use computer games in order to educate these population about health.

### *2.5 Gaming Definition and Demographics*

Technological innovation in education has started to get to the senses of the people as new methods of learning emerges. But among these advancements, computer games are central in educating children and teenagers alike (Kostkova, Farrell, de Quincey, Weinburg, Lecky & McNulty, 2010). Game, as defined by Schell (2008), is a “problem-solving activity approach with a playful attitude.” Such entertainment draws people into playing these games. In fact, there has been an immense community of players existing. In the US alone, 72 out of 100 American household play computer games, and 18% of these gamers are below 18 years (Entertainment Software Association, 2011). Using computer games, however, as a method of educating has been given little attention (Kostkova et al, 2010).

### *2.6 Usability of the Computer System Software*

Usability had a lot of definitions, and does not have a standard meaning to it. But one, being the more well-known (Juristo, Moreno & Sanchez-Segura, 2007), pertains to the components defined by Jakob Nielsen (1993). According to Nielsen (1993), usability composes learnability, efficiency and memorability of software, as well as number of errors and subjective satisfaction of the target users. Another definition was given by International Organization for Standardization (ISO) 9241-11 (1998). According to this organization and very similar to Nielsen’s characteristics, usability is “the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.”

Learnability is the simplicity or straightforwardness of learning the software and it answers the question “How easy is it to learn the system?” (Glinert, 2012) Efficiency and effectiveness are related to the accuracy and completeness of the goal and the amount of physical effort and time for the user to use achieve the goals (ISO 9241-11, 1998). Memorability is the simplicity and the ease of remembering the controls and interface of the system (Nielsen, 1993). Lastly, satisfaction measures the extent to which users are free from discomfort, and their attitudes towards the use of the product (ISO 9241-11, 1998).

Getting into specifics, games also have sets of user requirements to render them usable. Gunter, Kenny & Vick (2007) developed Relevance, Embedding, Transfer, Adaptation, Immersion and Naturalisation (RETAIN) design and evaluation model to help designers create serious games. The model evaluates “how well academic content is endogenously immersed and embedded within the game’s fantasy and story context [and] promotes transfer of knowledge”.

According to Gunter et al. (2007): (1) Relevance is the applicability of the game, together with the learning styles incorporated, to the user; (2) Embedding is how closely the academic content merges with the story or fun content; (3) Transfer is how players would use the knowledge attained in other areas; (4) Adaptation is the change of player’s behavior as a result of playing the game; (5) Immersion is being with the gaming environment without distracting the learning process; finally, (6) Naturalisation is the spontaneous usage of knowledge outside the gaming environment.

Placing a software or system under usability testing may yield many benefits for both the creator of the software and its target users. Usability testing “improves productivity and raises team morale, reduces training and documentation costs, improve user productivity, [and] increases e-commerce potential.” (Trenner, 1998; Battey, 1999; Donahue, 2001; Griffith, 2002; & Black, 2002 cited in Juristo et al) Similarly, the Usability Professionals Association (UPA) (2012) cited the benefits of undergoing usability testing. According to Launder (1995) (as cited from UPA, 2012), the cost of productivity loss due to flawed designs can be up to 720%; but can rise from 4% to 9% annually if usability testing is applied, making usability testing

beneficial to increase of productivity. According to Diagnostic Research (1990, cited in UPA, 2012) a study found out that training time for new computer users can decrease up to 11 hours when using a more usable computer against 21 hours when using a standard computer. UPA (2012) also indicated that usability yields increases sales and revenues. Magaziner (1998, cited in UPA, 2012) indicated by statistics that IT contributes to one-third of United States' real growth. Bosert (1991, cited in UPA, 2012) also stated that the development cycle of a product, or the time spent to start and finish creating a product, can decrease by 33%-50% when usability engineering techniques were implemented. The benefits might seem overwhelming, but undergoing usability is not enough to create desired product. According to Juristo et al. (2007), "Special attention also has to be paid to other usability features with impact on both UI (user interface) and the development process." However, that portion of matter, as the researcher implies, is still open for researches.

Despite the importance of usability in the context of gaming, few researches have studies the concept with preschools and their corpus of data. Likewise, a little number of health games have undergone usability testing. Thus, this study advanced the following inquiries:

***Research Question 1:*** *What is the system usability of the researcher-developed health game as perceived by the preschool respondents?*

***Research Question 2:*** *Is there a significant difference in the usability of the research-developed health game when grouped according the respondents' profile?*

Accordingly, the research postulated that:

***H<sub>1</sub>(+):*** *Developmental stage has a significant effect on the perceived polarity of usability of the researcher-made computer game.*

### *2.7 Behavior Intention for Gaming Participation*

Playing computer games is both discipline and process. Understanding human participation in gaming and the underlying rationale for such is essential.

Entertainment Software association (2011) enumerate several reasons why children participate in gaming such as (1) entertainment, (2) level progression, and (3) goal attainment. Parents believed that computer games have positive effects on their children such as mental stimulation and learning, and enhance relationships with family and friends.

Some other factors are consequent to behavior intention, or the player's reason for participation to play a computer game, which is both technical and psychological in nature. One major factor is the software's ease of system (Baker-Eveleth & Stone, 2008), a heap component of usability. The easiness of a system is of great significance as to encouraging players to use the software and also influences self-efficacy and positive attitude towards the system (Baker-Eveleth & Stone, 2008).

Playing computer games also entails a variety of psychological effects on the brain that are necessary to ponder on before one can be able to relate it to education or to health care. These psychological effects are also the main essence of the game's entertainment value and replayability. Based on Schell's (2008) definition of a game, games – in order to succeed in them – require the player to think. Computer games produce positive effects on the body when a person is having “hard fun”, wherein during this time, the player experiences “eustress” (McGonigal, 2011). The player becomes engaged and the attention is all on the game and the player creates good decisions for the game (MobiHealth News Research, 2011). The optimism generated during eustress is mood-boosting, especially when one meets the challenge and feels interested and motivated (McGonigal, 2011). Now the player is immersed and deeply involved in the game. Over-all, the reward circuit of the player is activated (McGonigal, 2011). The results can be remarkably helpful to the player, as during the time the brain is stimulated, the player is encouraged to think creatively and adaptively, and this can be applied in real life, after playing the game (McGonigal, 2011 cited in Entertainment Software Association, 2011). The stressful situation is generated on purpose by the game developers to draw the involvement of the player.

The usability of software gives the impression that it is very significant in determining the expected outcome. However, little is known on the effects of usability on the

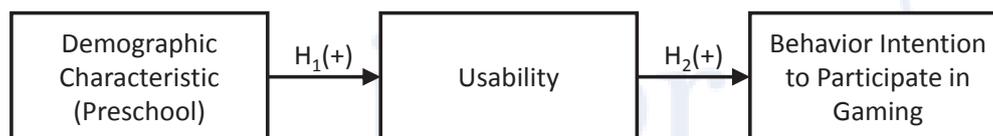
behavioral intention of preschoolers for gaming participation. Hence, the following question was raised:

**Research Question 3:** *What is the effect of usability to the behavior intention among preschoolers to participate in gaming?*

In relation to the previous, the following hypothesis is postulated:

**H<sub>2</sub>(+):** *The system usability of the computer game has a significant effect on the polarization of behavior intention to participate in gaming among preschoolers.*

Considering the relationship involved on the usability and the game, the following research simulacrum was developed:



*Figure 1: Hypothesized relationship between demographics and perceived usability and behavior intention to play the game*

### 3.0 Methods

#### 3.1 Game Development

The development of videogames has progressed creating a humongous entertainment industry; therefore, creating a game program requires substantial knowledge about computer programming (Moreno-Ger, Sierra, Martinez-Ortiz & Fernandez-Manjon, 2007). Fortunately for individuals with average computer literacy, there are typologies of software requiring no expert experience. In the study, the researcher developed a computer game using Game Maker 8.1.

A game developer shall be cognizant of the attributes in the game development process. Games are fundamentally composed of the (1) artistic elements (Moreno-Ger et al, 2007) that include graphics and sounds, (Walfisz, Zackariasson & Wilson, 2006;

Ampatzoglou & Chatzigeorgiou, 2006), (2) character programming and (3) plot (Walfisz, Zackariasson & Wilson, 2006; Ampatzoglou & Chatzigeorgiou, 2006; Moreno-Ger et al, 2007) and it is essential to integrate these components to create one (Walfisz, Zackariasson & Wilson, 2006). Game Maker software is one of the well-known initiatives that allow interested individuals or group of people to create videogames without or with little computer programming (Moreno-Ger et al, 2007).

The researcher utilized the game development process as presented by Moreno-Ger et al (2007) consisting of the following phases:

### *1. Production of the storyboard*

This details everything that players should expect to see, including design, the interface of the game, (Walfisz et al, 2006) as well as the game logic which contains the game's story and flow (Ampatzoglou & Chatzigeorgiou, 2006). For this study, the researcher also included the setting plan for the game, which includes the genre and plot. In this process, the researchers put up their efforts and ideas to come up with a game for health education.

The game is point-and-click type of the adventure genre intended to teach preschool age children the difference between energy-giving, body-building and body-regulating groups of food, and the foods that belong to each group. For each stage, the player will be given a list of a certain food group. Different foods will fall down the screen and the player must click on the foods that are listed. Clicking foods from a different group will cause the timer to go down further. Also, the characters' expressions changes depending on the standing of the player. The player is given generous time limit to finish the stage but clicking on a wrong food will cause the timer to fall down.

### *2. Mark-up of the storyboard*

The aim of this process is to translate the storyboard into a programming language or a "mark-up language" (Moreno-Ger et al, 2007). The researcher used Game Maker 8.1 Lite software to create the programming. This process was started halfway during

the storyboard production. At this point, no graphics or sounds were employed to the program. Instead, the researcher used dummy “sprites” such as boxes to represent the objects in the game. The researcher pronounced the product of this stage as pre-alpha version. The pre-alpha version cannot be played completely as the player will encounter several errors while playing. After series of debugging the game, the game was marked as alpha version. The alpha version contains minor bugs but the player can be able to finish a stage. The game needs polishing of object behaviors but in general, the game is already playable.

### *3. Production of art assets*

Graphics and audio are elements that assist the player to understand any progress in the game especially the story (Ampatzoglou & Chatzigeorgiou, 2006). After a playable alpha version of computer game has been created, the researcher started to create suitable graphics and sounds and fitted into the dummy sprites. The graphics included the different food icons the player will encounter, the buttons, the graphic interface, and the characters that will appear on the game. The sound included every sound effect audible during the game. After replacing the dummy sprites with the suitable graphics, the researcher pronounced the game at beta version.

### *4. Production of the videogame*

After the language has been created, it should undergo through an engine so that the program will take place (Moreno-Ger et al, 2007). Game Maker also has its own game engine where the researcher only needs to click on the play button to see the outcome of the language. Since the engine is incorporated with the software, this stage was done simultaneously with every stage in the game development process, practically to check whether the program created works or not.

After the beta version, the game has undergone series of improvement such as tailoring graphics and polishing object behaviors until a release version is created.

### *3.2 Research Design*

The extensive rudiments of entertainment utilization to health education has led the researcher to a positivist approach in this study. Specifically, descriptive design was utilized to determine the usability of a researcher-made computer health game. Descriptive designs aim to discuss a variable or phenomena without engaging into its relationship or causation with outside variables (Grimes & Schulz, 2002; Polit & Beck, 2003). It limits itself to descriptions, observations and documentations of said phenomenon (Polit & Beck, 2003). It answers the basic W-questions, acts as preliminary approach to new events (Grimes & Schulz, 2002) suitable for future theory creation and development (Polit & Beck, 2003).

Causal research design was also utilized to determine the effect of demographics to usability score and usability to behavior intention of the preschool respondents to participate in gaming. Causal researches focuses on the effect of one variable to another, commonly to predict hypothetical scenarios (DJS Research Ltd, 2013). Specifically, the study used the one-shot case study, which is a type of single-group or pre-experimentation design. One-shot case studies are used when there is a single group exposed to a treatment, then given a single measurement to determine the result of the exposure (Mertens, 2009).

### *3.3 Study Subjects and Locale*

There are few reports that extrapolate usability testing among children; however, involving children in testing the usability of a product intended for children would be more beneficial (Markopoulos & Becker, 2003). In this study, the researcher intended to test the usability of the computer game with selected participants. Spool & Schroeder (2001, cited in Bastien, 2010) have reported in their article that more than 5 users, preferably 15 are required to test the usability of a system. In this study, the researcher employed 30 preschoolers from a selected preschool facility in Valenzuela City to play the computer game and answer the questionnaire.

In order to gather the respondents, purposive sampling was utilized following this set of criteria: (1) must be a preschool student of the selected facility regardless of age,

(2) has a computer at home which can play the researcher-created game with minimum requirements or higher, (3) must be willing to participate in the study, and (4) has consent of a parent or a guardian to participate in the study. Likewise, the researcher was guided by the following criteria for the selection of preschool facility: (1) must be conducting normal preschool education in case the facility is also providing special education, and (2) must have given the researcher permission to conduct the study in its premise.

### *3.4 Study Tools*

#### *3.4.1 Basic Information Sheet*

A basic information sheet was prepared to obtain the basic demographic profile of the respondents. It contains the basic information about the respondent, such as its name, address, age and gender. It also contains the name of the school, and guardian's name. More importantly, it asks about the ownership of computers at home.

#### *3.4.1 Post Study System Usability Questionnaire (PSSUQ) (Lewis, 1992)*

The process of usability testing can range from complex, especially when done simultaneously with the creation of the system (Gonzales, Lores & Granollers, 2008), to a more modest method, like when utilizing the Post Study System Usability Questionnaire (PSSUQ) (Lewis, 1992). The original usability questionnaire was adapted by Diño (2012) and was tailored for usage of research respondents. The questionnaire was content validated by the author and yielded a very commendable Cronbach's Alpha score of 0.99 hence making the tool much reliable for usability testing. To enhance the suitability of the questionnaire to researcher's needs, the rating scale adapted from Diño (2012) was transformed into visual type (Hannah et al, 1997 cited in Markopoulos & Becker, 2003), which is most appropriate for children.

### *3.4.2 Behavior Participation Questionnaire (BPQ)*

Attached to the PSSUQ is a short questionnaire that asks about the intention of the respondents to play the game if given another chance. Choices include playing the game immediately, at a later time, or never again.

### *3.5 Data Collection and Analysis*

After filling up the basic information sheet and the consent forms, 30 preschool children were allowed to play the researcher-made computer game for at least 20 minutes per day for a total of 3 days, or for a total of 1 hour. After which, the same respondents were given the PSSUQ and BPQ to answer. Data were encoded using a spreadsheet software. Usability results together with the demographic profile were presented in percentage and statistical mean. Effects of demographics to perceived usability and usability to behavior intention were calculated regression analysis. Regression is used to determine the relationship between independent and dependent variable (D'Urso & Santoro, 2006), particularly to predict the effect of the independent to the dependent. SPSS v21 was utilized to automatically compute for the statistics.

SPSS or Statistical Package for Social Sciences is a Microsoft Windows package program (Arbuckle, 2006 cited in Schreiber, 2008) that calculates quantitative data for a many multivariate statistical methods (IBM, 2012). Specifically it can process and present a researcher's proposed model in more understandable interface to determine the relationship among variables (Hsu et al, 2011; IBM, 2012), may it be causal strength or direction, or direct or indirect relationships (Hsu et al, 2011).

## **4.0 Results**

Table 1 explicates the demographic profile of the respondents as to their gender and age. As shown on the table, 60% of the respondents gathered are male and 40% are female. As to their age, 43% are 6 years old, 40%, 10% and 7% are 5, 4 and 7 years old, respectively. The table also lists the respondents' answers to the Behavior Participation Questionnaire (BPQ). According to the data, 67% of the respondents

answered “play immediately”, while 23% answered “play later” and 10% answered “no play”.

*Table 1*  
*Demographic Data of the Respondents and Behavior Intention Scores*

	f	%
<b>Gender</b>		
<i>Male</i>	18	60
<i>Female</i>	12	40
<b>Age</b>		
<i>4</i>	3	10
<i>5</i>	12	40
<i>6</i>	13	43
<i>7</i>	2	7
<b>Behavioral Intention</b>		
<i>Play Immediately</i>	20	67
<i>Play Later</i>	7	23
<i>No Play</i>	3	10

*Table 2*  
*Usability and Behavior Intention Mean Scores of the Respondents*

	X	SD	I
Usability	5.40	0.88	“Agree”
Behavioral Intention	1.43	0.68	“Play Immediately”

Table 3

*Regression Analysis on Demographics, Usability and Behavior Intention*

Regression	R	P-value	
<b>Demographic</b>			
↓	0.18	0.82	Not significant
<b>Usability</b>			
↓	0.67*	0.00	Significant

\*Significant at 0.05

Table 2 presents mean scores of the respondents on usability and behavior intention. Usability representing “agree” has a mean score of 5.40 with a standard deviation of 0.88. Behavior intention representing “play immediately” has a mean score of 1.43 with a standard deviation of 0.68

Table 3 shows the regression values obtained for demographics, usability and behavior intention. On one hand, testing the effects of demographic characteristics of the respondents to their perceived usability yielded a regression value of 0.18 with a p-value of 0.82. On the other hand, testing the effects of game usability to the respondents’ intention to play the game returned a regression score of 0.67 with a p-value of 0.00.

By comparison of the research data against the researcher hypotheses, the following figure emerges:

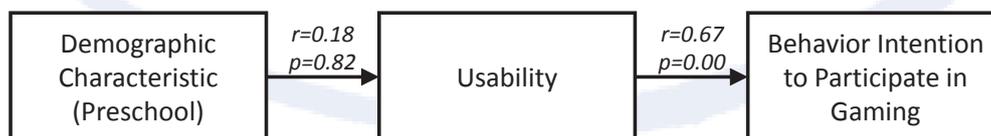


Figure 2: Resulted relationship between demographics and perceived usability and behavior intention to play the game

## 5.0 Discussion

Upon consideration of the data gathered and presented, several discussions have come up from this research. The research data suggest that majority of the respondents happened to be males who belong to age 6. This might be in relation to the higher number of male players than female players (ESA, 2011). This could be significant especially when speaking about the homogeneity of result. However, after testing its effects to the usability perception, it appears that demographic data has no significant effect on the usability of the game. It gives the implication that the usability of the game does not rely on what gender the players are or how young the players are, given they are currently at preschool stage. This is important when constructing or designing games suitable for health teaching. It would be more efficient to produce games that target a more general spectrum of players.

When it comes to the usability of the researcher-created computer game, majority of the respondents agreed that the game is usable. This means that the game created by the researcher is generally playable. Specifically, it means that the game was easy and enjoyable to play, and the information that the player needs can be easily acquired and understood in the game. It also means that the general respondents agreed that the interface is clear and that they are contented with the experience. More relevantly, this might mean that it is expected that the game would achieve what it intended to attain, though this was not measured in the PSSUQ and in this study.

The general agreement from the study participants may be the result of the thorough compliance to the step-by-step process of game development presented by Moreno-Ger et al (2007). The author – game creator – has made certain that the game elements such as the graphics and sound (Walfisz et al, 2006), the character development and story plot (Walfisz et al, 2006; Ampatzoglou & Chatzigeorgiou, 2006; Moreno-Ger et al, 2007) were carefully planned and integrated to perform smoothly before reaching the release version of the game.

Another important finding in this study is the behavior intention scores of the respondents after the game exposure. Majority of the respondents reported that after exposure to the researcher-created game, they would play the game as soon as possible. This indicates a high replay value of the game. Replay value is very

important especially on a game that intends to instill an information to the player. However, Very few have dealt with researches regarding the importance of the game's replay value.

Lastly, the data suggest that the usability of the computer game show a significant effect on the polarization of behavior intention to participate in gaming among preschoolers. This is very congruent with the report of Baker-Eveleth & Stone (2008) that the ease of system is very significant to encourage players to use the game and promotes positive attitude towards the system. This implies that the usability of computer games is a determinant for participation of the players to the game. This is vital because this provides empirical basis on the importance of testing a computer game's usability before handing it to the target consumers.

## **Conclusion**

The findings that the study presented are very appropriate for game producers as well as the healthcare team and the educators. This paper was able to generate evidence of what determines participation of players to play computer games. This information can be utilized in creating games which also focus on health teaching.

Still, there are limitations that this paper needs to address the future researchers. Future researchers can recreate this type of research to a more enclosed environment – a computer laboratory for an instance – in order to provide more reliable data. It is also recommended that future studies would extend their usability testing to measure if the game has commendable effects to health literacy among the target group, though the researcher has already conducted a separate follow-up study. Similar studies are beneficial to provide stronger evidence of these data. But regardless of limitations, this paper is exceptional in providing new understandings in order to pursue the ultimate goal of providing health-for-all.

## References

- Ampatzoglou, A., & Chatzigeorgiou, A. (2007). Evaluation of object-oriented design patterns in game development. *Information and Software Technology, 49*(5), 445–454. doi:10.1016/j.infsof.2006.07.003
- Azim, W., Shafi, H., Qureshi, S., Sheikh, T., Azim, S., & Hayat, F. (2005). Perceptions and Practices of Mothers Regarding Child Feeding. *Biomedica, 21*.
- Baker-Eveleth, L., & Stone, R. (2008). Expectancy Theory and Behavioral Intentions to Use Computer Applications. *Interdisciplinary Journal of Information, Knowledge, and Management, 3*.
- Bastien, J. M. C. (2010). Usability testing: a review of some methodological and technical aspects of the method. *International Journal of Medical Informatics, 79*(4), e18–e23. doi:10.1016/j.ijmedinf.2008.12.004
- Brookover, A. (2013). What Is the Definition of Nutrition? Retrieved May 21, 2013, from <http://www.healthguidance.org/entry/9975/1/What-Is-the-Definition-of-Nutrition.html>
- Caulfield, L., de Ontis, M., Blossner, M., & Black, R. (2004). Undernutrition as an Underlying Cause of Child Deaths Associated with Diarrhea, Pneumonia, Malaria and Measles. *The American Journal of Clinical Nutrition, 80*(193), 8.
- Cherry, K. (2013). Erikson's Psychosocial Stages - Preschool, Middle Childhood, and Adolescence. *About.com*. Retrieved May 21, 2013, from [http://psychology.about.com/od/psychosocialtheories/a/psychosocial\\_2.htm](http://psychology.about.com/od/psychosocialtheories/a/psychosocial_2.htm)
- D'Urso, P., & Santoro, A. (2006). Fuzzy clusterwise linear regression analysis with symmetrical fuzzy output variable. *Computational Statistics & Data Analysis, 51*(1), 287–313. doi:10.1016/j.csda.2006.06.001
- Department of Health (DOH). (n.d.). *What types of malnutrition occur in the Philippines?* Retrieved March 20, 2012, from Department of Health: <http://doh-gov.indanet.com/content/what-types-malnutrition-occur-philippines>
- Department of Science and Technology. (2008). *7th National Nutrition Survey* (p. 11). Food and Nutrition Research Institute - Department of Science and Technology.
- DevPulse. (2008). Nutrition in The Philippines: A Continuing Challenge, *12*(16), 2.
- Dewey, J. (1997). *Experience and education*. New York: Simon & Schuster.

- DJS Research Ltd. (2013). What is Causal Research? *Market Research World*. Retrieved May 21, 2013, from [http://www.marketresearchworld.net/index.php?option=com\\_content&task=view&id=799&Itemid=64](http://www.marketresearchworld.net/index.php?option=com_content&task=view&id=799&Itemid=64)
- Entertainment Software Association. (2011). *Essential Facts About the Computer and Video Game Industry* (p. 16). United States.
- Glinert, E. (2012). Gamasutra - Features - Upping Your Game's Usability. *Gamasutra*. Retrieved May 21, 2013, from [http://www.gamasutra.com/view/feature/132499/upping\\_your\\_games\\_usability.php?print=1](http://www.gamasutra.com/view/feature/132499/upping_your_games_usability.php?print=1)
- González, M. P., Lorés, J., & Granollers, A. (2008). Enhancing usability testing through datamining techniques: A novel approach to detecting usability problem patterns for a context of use. *Information and Software Technology*, 50(6), 547–568. doi:10.1016/j.infsof.2007.06.001
- Gopalan, S. (2000). Malnutrition: Causes, Consequences, and Solutions. *Nutrition*, 16(7/8), 556–558.
- Grimes, D. A., & Schulz, K. F. (2002). Descriptive studies: what they can and cannot do. *The Lancet*, 359(9301), 145–149. doi:10.1016/S0140-6736(02)07373-7
- Gunter, G. A., Kenny, R. F., & Vick, E. H. (2007). Taking educational games seriously: using the RETAIN model to design endogenous fantasy into standalone educational games. *Educational Technology Research and Development*, 56(5-6), 511–537. doi:10.1007/s11423-007-9073-2
- Hsu, I.-Y., Su, T.-S., Kao, C.-S., Shu, Y.-L., Lin, P.-R., & Tseng, J.-M. (2012). Analysis of business safety performance by structural equation models. *Safety Science*, 50(1), 1–11. doi:10.1016/j.ssci.2011.04.012
- IBM. (n.d.). *IBM - SPSS Amos - United States*. Retrieved May 21, 2013, from [http://www-03.ibm.com/software/products/us/en/spss-amos?S\\_CMP=rnav](http://www-03.ibm.com/software/products/us/en/spss-amos?S_CMP=rnav)
- International Organization for Standardization. (1998). *Ergonomic requirements for office work with visual display terminals (VDTs)*.
- Jukes, M. (2007). Impact of early childhood health and nutrition on access to education in developing countries. *Paediatrics and Child Health*, 17(12), 485–491. doi:10.1016/j.paed.2007.09.006

- Juristo, N., Moreno, A. M., & Sanchez-Segura, M.-I. (2007). Analysing the impact of usability on software design. *Journal of Systems and Software*, 80(9), 1506–1516. doi:10.1016/j.jss.2007.01.006
- Kolb, D. A. (1984). *Experiential learning: experience as the source of learning and development*. Englewood Cliffs, N.J: Prentice-Hall.
- Kostkova, P., Farrell, D., de Quincey, E., Weinberg, J., Lecky, D., & McNulty, C. (2010). eBug--teaching children hygiene principles using educational games. *Studies in health technology and informatics*, 160(Pt 1), 600–604. doi:10.3233/978-1-60750-588-4-600
- Lewis, J. (1992). Psychometric evaluation of the Post-Study System Usability Questionnaire: the PSSUQ. *PROCEEDINGS of the HUMAN FACTORS SOCIETY 36th ANNUAL MEETING*, 1992.
- Markopoulos, P., & Bekker, M. (2003). On the assessment of usability testing methods for children. *Interacting with Computers*, 15(2), 227–243. doi:10.1016/S0953-5438(03)00009-2
- McGonigal, J. (2011). *Reality is broken why games make us better and how they can change the world*. New York: Penguin Press. Retrieved from <http://www.contentreserve.com/TitleInfo.asp?ID={44205F90-D66A-4B2B-8483-8A0CDB6A8822}&Format=410>
- Mertens, D. M. (2010). *Research and evaluation in education and psychology: integrating diversity with quantitative, qualitative, and mixed methods* (3rd ed.). Los Angeles: Sage.
- MobiHealth News Research. (2011). *Mobile Social and Fun Games for Health*. Chester Street Publishing, Inc.
- Moreno-Ger, P., Sierra, J. L., Martínez-Ortiz, I., & Fernández-Manjón, B. (2007). A documental approach to adventure game development. *Science of Computer Programming*, 67(1), 3–31. doi:10.1016/j.scico.2006.07.003
- Nielsen, J. (1993). *Usability engineering [...] [...]*. Boston [u.a.: Acad. Press.
- Polit, D. F. (2004). *Nursing research: principles and methods* (7th ed.). Philadelphia: Lippincott Williams & Wilkins.
- Psychiatric nursing: contemporary practice*. (2008) (4th ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Puchner, L. (1993). *Early Childhood, Family, and Health Issues in Literacy: International Perspectives*. National Center on Adult Literacy.

- Schell, J. (2008). *The art of game design: a book of lenses*. Amsterdam ; Boston: Elsevier/Morgan Kaufmann.
- Schreiber, J. B. (2008). Core reporting practices in structural equation modeling. *Research in Social and Administrative Pharmacy*, 4(2), 83–97. doi:10.1016/j.sapharm.2007.04.003
- UNICEF. (2003, May 6). *UNICEF - Nutrition - How are we combating poor nutrition?*. Retrieved May 21, 2013, from [http://www.unicef.org/nutrition/index\\_combat.html](http://www.unicef.org/nutrition/index_combat.html)
- UNICEF. (2012, May 25). *UNICEF - Nutrition - The big picture*. Retrieved May 21, 2013, from [http://www.unicef.org/nutrition/index\\_bigpicture.html](http://www.unicef.org/nutrition/index_bigpicture.html)
- Usability Resources: Usability in the Real World: Business Benefits. (n.d.). *Usability Professionals' Association*. Retrieved May 21, 2013, from [http://www.upassoc.org/usability\\_resources/usability\\_in\\_the\\_real\\_world/benefits\\_of\\_usability.html](http://www.upassoc.org/usability_resources/usability_in_the_real_world/benefits_of_usability.html)
- Videbeck, S. L. (2008). *Psychiatric-mental health nursing*. Philadelphia, PA: Lippincott Williams & Wilkins.
- Walfisz, M., Zackariasson, P., & Wilson, T. L. (2006). Real-time strategy: Evolutionary game development. *Business Horizons*, 49(6), 487–498. doi:10.1016/j.bushor.2006.04.001
- Walton, E., & Allen, S. (2011). Malnutrition in developing countries. *Paediatrics and Child Health*, 21(9), 418–424. doi:10.1016/j.paed.2011.04.004
- World Health Organization (WHO). (2011). *Malnutrition In The Philippines – How Will World Health Organization Deal With It?*. Retrieved May 21, 2013, from <http://www.who.org.ph/malnutrition.html>

*Learning Management Outcome from an Integrated Instruction between Authentic Learning and Community Academic Service for Nursing Students in The Human Society Environment and Health Subject*

Suchada Wongsawat, Wareewan Sirivanij

Boromarajonani Nakhonratchasima Nursing College, Thailand

0178

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Abstract

This descriptive research aimed to study the learning outcomes from the use of a student centered instruction by mean of integration between authentic leaning and community academic service in a subject called Human Society Environment and Health run during the academic year 2011 with 100 first year students at Boromarajonani Nakhonratchasima Nursing College. The data on students' perceived learning outcomes and students' satisfaction were collected using a learning outcome questionnaire constructed under the guidelines in the Thai Qualifications Framework for Higher Education (TQF: HEd). The results revealed the followings:

1. The students' overall perceived learning outcomes according to the TQF: HEd was in the High level (mean = 4.37, SD = 0.55). Likewise, their perceived learning outcomes for all learning aspects were also at the High level, with the aspect on interpersonal skills and responsibility gained the highest mean score (mean = 4.57, SD = 0.51), followed by moral and ethic (mean = 4.43, SD = 0.52), numerical analytic, communicative, and technological skills (mean = 4.33, SD = 0.60), knowledge (mean = 4.32, SD = 0.51), and intellectual skills (mean = 4.20, SD = 0.59).

2. Students expressed their satisfaction towards the integrated instruction in the High level both overall (mean = 4.18, SD = 0.77) and in all sub items - the highest mean score was for the Teacher (mean = 4.33, SD = 0.80), followed by learning improvement (mean = 4.26, SD = 0.75), and course management (mean = 3.94, SD = 0.76).

The students also suggested that this type of integrating instruction could make them improve their learning skills with authentic problems that they could summarize their knowledge and give practical feedbacks to the community.

**Keywords:** learning, integrated, student

## 1. Introduction

Education takes important parts in human development and their survival in an ever changing world. Educational philosophy needs to be changed, and teaching and learning processes need to be reoriented – from passive into more active learning, focusing on the integration of logical thinking and team-working in a supportive atmosphere and environment that enhance interaction among learners and between related people, in the direction where effective learning can be created (Phukeat 2009). It has been claimed that authentic learning is a way of teaching that can change from “teacher-centered” into “learner-centered” learning (Suthirat 2011). Authentic learning focuses on exposing learners with real world situations, problems, and contexts, as well as encouraging cooperative learning and employing different ways of acquiring knowledge for solving those problems. Learning in the real life situations, therefore, motivate learners to be more autonomous learners who develop necessary skills for their lives (Kaewmanee 2009).

Authentic learning serves the National Education Act of B.E. 2542 which requires that learning process should fulfill individual needs and concern individual differences in learning preferences, focus on thinking skills, applying knowledge for preventing and solving problems, and make cooperation with people in the community in order to reach the learners’ maximum potential (Royal Thai Government gazette 1999). Moreover, the Higher Educational Standard B.E. 2549 requires that in the Teaching Mission, higher educational institutions must provide curriculum that emphasis the importance of developing learners’ quality using learner-centered approach by using authentic learning (Royal Thai Government gazette 2006).

Boromarajonani Nakhonratchasima Nursing College (2010), under the administration of Praboromarajchanok Institute for Health Workplace Development, has stated learning philosophy in the Nursing Curriculum (2009 edition) that the learning process focus on exchanging knowledge and expertise among instructors, learners, people in the family and community based on learner-center approach that support learners in knowledge acquiring through cognitive process enhanced by instructors’ supports, under the authentic learning environment provided by the community.

From the above mention on the importance of authentic learning and the college’s mission in transferring knowledge by mean of community academic service, the researchers were interested in planning the field experiment part of the Human, Environment and Health subject for the first year students to include authentic learning activities which were integrated with academic service at Buddhakasetwatnongmuang High School Amphoe Khamsakaesang Nakhonratchasima province. This school housed a number of underprivileged students and was one of the target schools for the college’s health strengthening project. Not only the results of this research were useful as for subject improvement, but also for the students’ learning outcomes according to the Thai Qualifications Framework for Higher Education (TQF:HEd), and a trustful source of health information that can be passed through to the community for a sustainable health promotion.

## 2. Objectives

- 1) To study students' perception on their learning outcomes through an integrated instruction between authentic learning and community academic service in the Human Society Environment and Health subject.
- 2) To study students' satisfaction on learning through an integrated instruction between authentic learning and community academic service in the Human Society Environment and Health subject.

## 3. Scope of the study

This study investigated students' perception on their learning achievement through an integrated instruction between authentic learning and community academic service in the Human Society Environment and Health Subject in the practical part (1 credit, 30 hours). The participants were 131 first year nursing students at Boromarajonani Nakhonratchasima Nursing College enrolling the subject in semester 2 academic year 2011(Oct. 2011-Jan. 2012).

## 4. Keywords

**Learning Outcomes** refer to the 5 areas of students' learning achievement in Nursing Students in the Human Society Environment and Health Subject according to the Thai Qualifications Framework for Higher Education : 1) ethics and morals; 2) knowledge; 3) cognitive; 4) interpersonal skills and responsibility; and 5) numerical, communication and information technology skills.

**Ethics and Morals Learning Outcome:** Students respect values, beliefs, and human integrity.

**Knowledge Learning Outcome:** Students have knowledge and understanding in the contents on the relationships between human, health, and environment.

**Cognitive Learning Outcome:** Students are a competent in systemic analytical thinking by applying knowledge acquired from their studies on solving health problems.

**Interpersonal Skills and Responsibility Learning Outcome:** Students can work in team, collaborate with skills in building relationship and creative interaction with others.

**Numerical, Communication and Information Technology Skill Learning Outcome:** Students are able to convert data into quality information, analytically read and transfer information to others effectively, and select and use suitable forms of technology for presenting information and communication effectively.

## 5. Methodology

### 5.1 Population and Sample

The Population consisted of 131 first year nursing students at Boromarajonani Nakhonratchasima Nursing College enrolled the Human Society Environment and Health Subject in semester 2 academic year 2011.

Study samples were 100 students randomly sampled from the population. The sample size was calculated from Taro Yamane formula  $n = N / (1 + Ne^2)$ , where 'n' represented sample size, 'N' the population, and 'e' the Confidence interval (at .05) (Karnasuta 1995).

## 5.2 Sampling method

The sampling procedures employed computerized random sampling method to choose 100 students from the population of 131.

## 5.3 Research Tools

Research tool was a three-part questionnaire.

Part 1: Respondent's general information

Part 2: Student's perceptions on learning outcomes after taking the subject instruction, consisting of 8 items.

Part 3: Student's satisfaction on the subject, containing 20 items.

Items in Part 2 and 3 were rating scales ranging from 1 to 5 (the least to the most satisfaction).

Scores from the questionnaire were averaged and analyzed according to the following categories:

Satisfaction Levels	Mean Scores
Low	1.00 – 2.33
Moderate	2.34 – 3.66
High	3.67 – 5.00

## 5.4 Research Tool Development Procedures

Research tools were constructed and tested for validity and reliability as in the following procedures.

1) Validity: The questionnaire was assessed by three experts for content validity. The researchers improved the questionnaire according to the experts' comments.

2) Reliability: The improved version of the questionnaire was distributed to 31 students who enrolled the course on Human Society Environment and Health Subject in semester 2 academic year 2011. Data from this group of students were analyzed for Cronbach's alpha coefficients. The data analysis yielded the alpha coefficient of .79 for the students' perception on their learning outcomes, and .87 on the students' satisfaction.

## 5.5 Instructional Procedures

The integrated instruction between authentic learning and community service followed the following 10 procedures.

1) The instructors informed students of the learning outcomes of the subject, learning activities in the authentic learning integrated with community service. The instructors explained how to understand the actual states of human being and the environment without personal judgment.

2) The instructors discussed with the students in order to choose a problem of interest for future study. The topic on 'microbiology in the environment and human health' was chosen.

3) The students formed groups of 10-12.

- 4) Students and instructors surveyed the surrounding environment at Buddhakasetwatnongmuang High School, Amphoe Khamsakaesang, Nakhonratchasima province, the study site.
- 5) Each group of students analyzed the data from their site surveys for problems found in each area in the site, and chose one area for further of microbiological study at their study area.
- 6) Groups planned and prepared field data collection tools.
- 7) Students collected data from the study site and brought back samples for laboratory analysis.
- 8) Each group made a summary of the data analysis and discussed effects of microbiology in the environment on human health along with some suggestions.
- 9) Students did the academic service by giving feedbacks of what they had found in their study and with some suggestions to the school in the forms of poster display and leaflet.
- 10) The instructors get the students to reflect their thinking for the subject, make a summary of the subject, measurement and evaluation student working.



Figure 1: Nursing students are collecting microbial from the environment in Buddhakasetwatnongmuang High School for laboratory analysis



Figure 2: Nursing students are giving academic service in order to reflect their findings and giving suggestions to the school in the forms of poster display and leaflets

### 5.6 Data Collection

The researchers distributed the questionnaire to the participated students and explained the instructions for completing the questionnaire.

### 5.7 Right Protection for the Samples

Before collecting the data from the questionnaire, the researcher informed the samples the objectives of the research and explained that their responses would not have any affect on their grades in the subject. The respondents need not to show their identification (name and student ID number) on the questionnaire. The data were analyzed as overall.

### 5.8 Statistical Analysis

- 1) Descriptive statistics were use for the analysis of frequency and percentage.
- 2) Data from students' learning outcomes and satisfaction were analyzed using descriptive statistics frequency, percentage, mean, and standard deviation.

## 6. Results and Discussion

### 6.1 Research Results

#### Part 1: Respondent's general information

Out of the 100 samples, 90 percent were female, 62 percent were 19 years old, 56 percent had good grade point average (2.51-3.00), and 40 percent had very good grade point average (3.01-3.50).

## Part 2: Student's perceptions on learning outcomes after taking the subject instruction

Students' overall perceived learning outcomes through authentic learning integrated with community service in the Human Society Environment and Health Subject was at 'High' level (mean = 4.37, S.D. = 0.55). The perceived learning outcomes in all sub-categories were also at 'High' levels - The interpersonal skills and responsibility (mean = 4.57, SD = 0.51), ethics and morals (mean = 4.43, SD = 0.52), Numerical, communication and information technology skills (mean = 4.33, SD = 0.60), knowledge (mean = 4.32, SD = 0.51), and cognitive skills (mean = 4.20, SD = 0.59), respectively. Likewise, students' satisfaction of all items was at 'High' levels. The top three items that had the highest average score for satisfaction were 'ability in team working' (mean = 4.63), 'skills in making relationship and interactions between persons creatively' (mean = 4.51), and 'respect the value, the belief, and human integrity' (mean = 4.43), respectively, as in Table 1.

**Table 1:** Levels of students' perceived learning outcomes according to the Thai Qualifications Framework for Higher Education (n=100)

Learning Outcomes	mean	SD	Levels of Learning Outcomes
<b>Ethics and Morals</b>			
1. Respect the value, the belief, and human integrity	4.43	0.52	High
<b>Total</b>	<b>4.43</b>	<b>0.52</b>	<b>High</b>
<b>Knowledge</b>			
2. Knowledge and understanding the key concepts of the relationships between human, health, and environment	4.32	0.51	High
<b>Total</b>	<b>4.32</b>	<b>0.51</b>	<b>High</b>
<b>Cognitive Skills</b>			
3. Ability in systematic analytical thinking by using knowledge gained from giving advices about health problems	4.20	0.59	High
<b>Total</b>	<b>4.20</b>	<b>0.59</b>	<b>High</b>
Interpersonal skills and responsibility			
4. Ability in working in team	4.63	0.48	High
5. Skills in making relationship and interactions between persons creatively	4.51	0.54	High
<b>Total</b>	<b>4.57</b>	<b>0.51</b>	<b>High</b>
Numerical, communication and information technology skills			
6. Change data from the study into quality information	4.32	0.57	High
7. Analytically read and transfer knowledge to others effectively	4.27	0.62	High
8. Select and use suitable forms of technology for presenting information and communication effectively	4.41	0.60	High
<b>Total</b>	<b>4.33</b>	<b>0.60</b>	<b>High</b>
<b>Overall</b>	<b>4.37</b>	<b>0.55</b>	<b>High</b>

**Part 3: Students' satisfaction on the authentic learning management integrated with community academic service in the Human Society Environment and Health subject**

Students had the satisfaction levels on the leaning management at a 'high' level (mean = 4.18, SD = 0.77) with all sub-categories were in 'high' levels – instructor (mean = 4.33, SD = 0.80), learning development (mean = 4.26, SD = 0.75), and learning management (mean = 3.94, SD = 0.76). The results showed satisfaction levels as follows:

**Learning Management** – Students had satisfaction on the 5 items at 'high' level, with the highest mean score at 'The opportunity for students to involve in learning plan' (mean = 4.24), the second highest mean score at 'The suitability of study site' (mean = 4.01), and 'The suitability of learning assessment' (mean = 4.24), respectively.

**Learning Development** - Students had satisfaction on the 12 items at 'high' level, with the highest mean score at 'working in team with other students' and 'having skills in building relationship and interaction with others' (mean = 4.24), the second highest mean score at 'having skills in considering the real world of human beings as it is without personal judgment' (mean = 4.31), and 'having the skills in seeing the real world of environment as it is without personal judgment' (mean = 4.30), respectively.

**Instructors** - Students had satisfaction on the 3 items at 'high' level, with the highest mean score at 'Instructors have knowledge and competent in learning management' (mean = 4.45), the second highest mean score at 'Instructors take good care of students' (mean = 4.37), and 'Instructors devote times for student counseling' (mean = 4.17), respectively, as in Table 2.

**Table 2:** Students' satisfaction levels on learning management (n=100)

<b>Items</b>	<b>mean</b>	<b>SD</b>	<b>Level of Satisfaction</b>
<b>Learning Management</b>			
1. The opportunity for students to involve in learning plan	4.24	0.80	High
2. The suitability of study site	4.01	0.66	High
3. The suitability of the duration of the study	3.78	0.67	High
4. The suitability of learning assessment	3.84	0.79	High
5. The suitability of learning evaluation	3.81	0.89	High
<b>Total</b>	<b>3.94</b>	<b>0.76</b>	<b>High</b>
<b>Leaning Development</b>			
The subject has developed students in:			High
6. thinking systemically and critically	4.13	0.68	
7. collecting information and learning by themselves	4.28	0.74	High
8. applying their knowledge from other fields of study usefully	4.27	0.76	High
9. having skills in considering the real world of human beings as it is without personal judgment	4.31	0.76	High
10. having skills in seeing the real world of environment as it is without personal judgment	4.30	0.76	High
11. analyzing the relationship between human and health and environment	4.23	0.75	High
12. having skills in autonomous authentic leaning	4.27	0.78	High
13. working in team with other students	4.36	0.76	High
14. having skills in building relationship and interaction with others	4.36	0.73	High
15. converting data into quality information	4.27	0.75	High
16. transferring knowledge to other by exchanging learning in class and the community	4.22	0.76	High
17. applying information technology to producing media for presentation	4.27	0.78	High
<b>Total</b>	<b>4.26</b>	<b>0.75</b>	<b>High</b>
<b>Instructors</b>			
18. Instructors have knowledge and competent in learning management	4.45	0.74	High
19. Instructors devote times for student counseling	4.17	0.84	High
20. Instructors take good care of students	4.37	0.82	High
<b>Total</b>	<b>4.33</b>	<b>0.80</b>	<b>High</b>
<b>Overall</b>	<b>4.08</b>	<b>0.77</b>	<b>High</b>

Student also reflected their views and recommendation about learning management in this research study as follows:

*“This type of learning management should be held again because can developed students’ skills in authentic learning on the basis of authentic problems – students can get real practice that enhance their experience (82)”.*

*“We can use what we have learned and summarized to reflect back to the community which enables us to have reasonable critical thinking (78)”.*

*“The learning project gives us more experience in academic service for the society which is the way to establish good relationship with the community. Therefore, students need to be prepared for knowledge, presenting media, and communication that suit the target group (74)”.*

*“We have learned that working in group will bring success when group members are united, plan the work together, and be responsible for the assigned tasks (68)”.*

*“This study makes us thing that learning in the classroom may get us to know and do well, but field practical work give us problems and obstacles or unpredictable conditions which are good experience for learning to solve the facing problems (68)”.*

## **6.2 Discussion**

6.2.1 The current research findings revealed that the overall students’ perceived learning outcomes from an integrated instruction between authentic learning and community academic service in the Human Society Environment and Health Subject was at ‘High’ level, with all five sub-categories had approximately similar mean scores. In the view of the researchers, this can be discussed as follows.

1) Interpersonal skills and responsibility (mean = 4.57). This may be because lesson activities were designed to have students working in group, collaboratively collecting and analyzing data, exchanging knowledge with other groups, as well as presenting and reflecting information to the community. All of these activities require good teamwork, relationship, and interaction among group members, with other groups, and students and people in the school. Therefore, this category on interpersonal skills and responsibility received the highest mean score from students.

2) Ethics and morals (mean = 4.43). This is because of that prior to the site study, instructors explained to students to see the states of human being and environment as they were without personal judgment, which was one of the topics in the subject that aimed at students respect the value, beliefs, and human integrity without bias and accept in personal differences in thoughts, beliefs, and feelings.

3) The numerical, communication and information technology skills (mean = 4.33). The high score in this category can be explained that students in each group had to make summaries, discuss the study results, exchange the findings with other groups in the class using presentation program. Students also produced other presenting media such as posters and leaflets. All these activities enhanced students’ skills in communication and computers.

4) Knowledge (mean = 4.32). Authentic learning activities in this research provided students direct experience in collecting data from the actual site that allowed students to prove with their own eyes. Additionally, students employed knowledge in the

Human Society Environment and Health subject and other skills to apply with knowledge from Microbiology and Parasitology subject for the analysis of microbes in the school environment. They use knowledge from Technology and Information subject to produce presenting media, posters, and leaflets. Moreover, they related their discussions to the relationship between microbes in the environment and human health, as well as gave suggestions to the school. As the result, learning activities from this subject provided students with long-term knowledge and understanding in the subject contents of the relationship between environment and human health.

5) Cognitive skills (mean = 4.20). Learning activities in the subject improved students' systematic analytical thinking skills through the use of knowledge from various subjects, experiment results, and information sources to provide academic service for the school by mean of giving feedbacks and recommendations that led to best practices that promote good environment and health.

The results from this study corresponded with those of Khattiyamarn (2000) who found that students had high levels of satisfaction on authentic learning in all items, Ruengsawat and Phuassawatop (2009) who discovered that using authentic learning in Communication in Nursing subject improved students' knowledge and understanding the subject contents, and that of Rakthai, Cheeprasop and Kanyook (2010) in which students expressed high satisfaction level on that doing the field practical in the Food and Health subject by giving community service developed their knowledge and communication skills.

6.2.2 As the students' satisfaction levels on the subject were high in all categories, the researchers have the following explanations.

1) Instructors (mean = 4.33). Satisfaction level of this category reflects the fact that throughout the course, instructors fully facilitated and supported students' learning, particularly, with full time counseling. Additionally, the instructors ensured students' full understanding on the subject's learning objectives and the concepts of authentic learning integrated with community academic service, as well as general background of the study site prior to their learning activities.

2) Learning development (mean = 4.26). Students satisfied their learning development because they gained experience from the field practical where real problems arose needed to be planed and solved systematically. First, students did the experiment to investigate types of microbial in the school, whether they exceeded health standard, how they affected people in the school, and how to prevent and solve those problems. Then they decided the most effective way of communicate their findings to the target group in the forms of suggestions and recommendation for the community. This process, therefore, developed students' learning as a whole.

3) Learning Management (mean = 3.94). The students participated in the process of lesson planning, which included learning assessment where not only they were assessed by the instructors, but also members of the class and themselves.

The current research findings agreed with the study of Turner, Boonprasithi and Pinyomit (2010) who claimed that mean scores for student nurses' satisfaction in

learning English 2 subject, which was integrated with a community academic service project, were at 'high' levels.

## **7. Recommendation**

### **7.1 Recommendations from the research findings are as follows**

1) In the orientation stage of the course, instructors should make sure that students have thoroughly understood the concepts of authentic learning integrated with community service, as well as learning activities, and assessment schemes. Students should also be motivated to make contribution their opinions and participate in the course planning. This might enhance better satisfaction for the subject.

2) Study site should not be too far, so that time and budgets will not wasted on travelling.

3) There should be feedbacks and advice giving to the study site, Buddhakasetwatnongmuang High School, according to the research findings. The college may also make some follow-up activities to ensure sustainable changes due to the feedbacks and advice, which is one way of strengthening and promote health in the school.

### **7.2 Recommendations for Further Studies**

1) The instructors should use students' comments as information for course improvement and do further research on the Human Society Environment and Health subject.

2) There should be some integration between authentic learning in this subject with other activities according to the educational quality assessment schemes, such as with research, cultural reservation, knowledge management, and student improvement.

## **8. Research Applications**

1) Research results are to be used for further improvement of course in order to enhance students' learning outcomes according to Thai qualifications framework for higher education.

2) The research finding can be useful guidance for the improvement of learner-centered learning model that enhance authentic autonomous learning in Human Society Environment and Health Subject.

3) Buddhakasetwatnongmuang High School, as the study site for the research, received advice on manipulating the school environment for proper hygiene, which promotes healthy living in the school.

## **9. Acknowledgement**

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## 10. References

Turner, K, Boonprasithi, T & Pinyomit, S 2010, 'Effects of an integrating academic service project into english course for nursing students', *Journal of Nursing and Education*, vol. 3, no. 2, pp. 28-43.

Suthirat, C 2011, *Authentic learning*, Sahamit Printing and Publishing, Bangkok.

Karnasuta, P 1995, *Statistics for social science research*, Chulalongkorn University Printing, Bangkok.

Rakthai, D, Cheeprasop, N & Kanyook, P 2010, *The opinion of the first nursing students in trang borommarajonani nursing college and customers to food and health training course by social academic service*, Trang Borommarajonani Nursing College, Trang.

Kaewmanee, T 2009, *Science of teaching*, Dansutta Printing, Bangkok.

Royal Thai government gazette 14 Aug. 1999, 'National education act of B.E. 2542', vol. 116, part 74.

Royal Thai government gazette 10 Oct. 2000, 'Higher education standards B.E. 2549', vol. 23, part 105.

Phukeat, L 2009, *Project base and research base teaching*, Saha and Son Printing, Bangkok.

Boromarajonani Nakhonratchasima Nursing College 2010, *Nursing science courses 2009*, B.N.N.C., Nakhonratchasima.

Khattiyamarn, V, 2000, *A proposed practical alternatives of authentic instruction in general curriculum and instruction course for the faculty of education students*. Ph.D. thesis, Chulalongkorn University.

Ruengsawat, S & Phuassawatop, P 2009, *Effect of authentic learning instruction method in communication in nursing course on the learning achievement of nursing students*, Borommarajonani College of Nursing, Suratthani, Suratthani.

Praboromarajchanok Institute for Health Workplace Development 2012, *Guide to quality assurance in education*, Praboromarajchanok Institute for Health Workplace Development, Nonthaburi.

*The Challenge of Curriculum Design in Transnational Classroom:  
Put Theory into a Practice*

Xuemei Tian

Swinburne University of Technology in Melbourne, Australia.

0181

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Abstract

This paper aims to review existing activities in the internationalisation of the curriculum at one division of a university in Melbourne, Australia. It begins by looking at the concept of internationalisation in general then refines this to consideration of its transnational dimension. This entails treatment of the challenges, issues, and opportunities facing students undertaking transnational programs leading to degrees at the university informed by the author's reflection and professional practice in the field. This includes synthesis of the results of end of semester surveys administered to 3 cohorts of students each 40 during 2011 to 2012 specifically focused on changes to a third year undergraduate eCommerce unit. The paper's findings address significant policy, behavioural and curricular issues, which are of relevance to other universities engaged in transnational education.

## ***Introduction***

Internationalisation is considered imperative in preparing graduates for participation in an increasingly globalised society. At a more focused educational level it involves the creation of an “open, tolerant and cosmopolitan university experience” (Kalantzis & Cope 2000, p.31) and on a higher, social plane, the development of “the cultural bridges and understanding necessary for world peace” (Larkins 2008, p.25). At the educational level, the agenda extends over issues of international, national, institutional and personal significance based on reciprocal relationships and a “flow of knowledge and cultures across national boundaries” (Slethaug 2007, p.5). To properly address this agenda, Knight (2003) re-defines the term internationalisation in Higher Education as the integration of international, intercultural, or global dimensions into the purpose, functions or delivery of postsecondary education.

Knight (2004) argues that internationalisation is fundamentally influencing the world of higher education. Despite Australia having about 7% of the world’s international student body (OECD 2010), the education sector is facing increasing challenges due to the state of the global economy, which may subsequently impact on international students as a revenue stream in the future. The current challenge for Australian universities is therefore, to embrace internationalisation in the face of adversity. This entails finding ways of protecting the viability of current revenue-focused approaches by balancing them with those that better address the educational and other needs of the students concerned.

## ***Methodology***

Following an in-depth review of the relevant literatures (internationalisation of the curriculum; teaching and curriculum design in the transnational classroom), a combination of quantitative and qualitative research methods was adopted. The research was conducted over a two-year period including semester 1, 2011, summer term 2011 and semester 2, 2012. Quantitatively this involved statistical analysis of the performance of three 30-40 strong student cohorts, taking the same final year of a business unit in successive years. The unit is a third year unit for students with majors in eCommerce or Business Analysis enrolled in the University’s ‘2+2 CAP’ (Collaborative Articulation Program). It is also available as an elective for local students taking accounting or management courses. Data were collected on assignments and examinations and on contributions to tutorials and online discussion threads. In the latter, marks were awarded for student contributions and their responses to the comments of others. The data under both headings (assignments/examinations and tutorials/discussion threads) were aggregated by year and simple distribution analysis was conducted. No further quantitative analysis was undertaken at this point because of concerns that any resultant findings might be skewed by differences between the three cohorts.

The questionnaire was designed to collect two types of qualitative feedback. The first was that relating explicitly to the specific changes that had been made to the unit. The second, was more implicit in nature and concerned reflection and ‘reading-between-the-lines’ analysis of the implications of the student responses for the success or otherwise of the internationalisation initiative. Participation in the survey was both voluntary and anonymous.

The major focus was on the qualitative research dimension because anticipated differences in academic standards, in spoken and written English, and in motivation and life experience between cohorts were deemed to make this a more fruitful approach. Such differences would not have mattered had the study addressed the same group of students over the two year period. However, with different cohorts involved in each of the three semesters this was a factor. Feedback from these exercises contributed to efforts at improving unit design in the search for enhanced student experience of studying in transnational classroom.

Figure 1 below presents the curriculum design framework underlying both the research and practice reported here. The purpose of the research and the associated framework was to redesign the unit so as to obtain higher value in the teaching and learning process, including improved outcomes for students. The framework depicts all relevant stakeholders and the value creation process. The value creation process depicted is underpinned by mainstream research in the areas of global professionals and citizens (Bremer & van der Wende 1995; Knight 2004; Gibson, Rimmington & Landwehr-Brown 2008; Leask 2009), transnational education (Bolton & Nie, 2010; Vignoli, 2004) and internationalisation of the curriculum (Leask 2009). These matters are treated in detail in the following section.

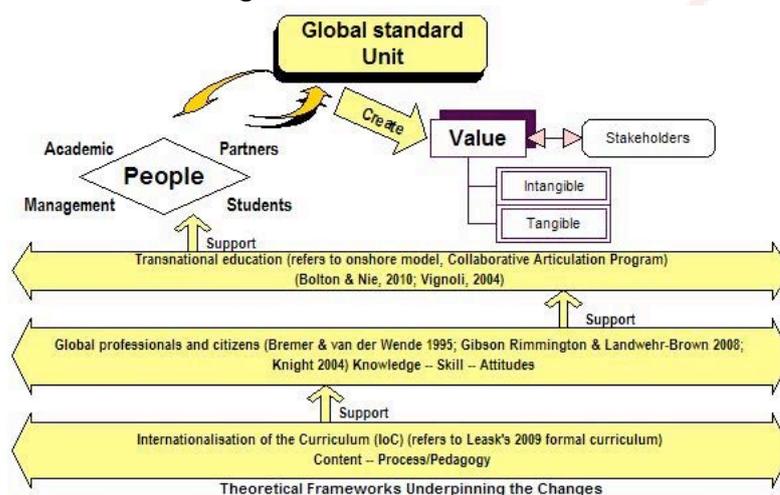


Figure 1 Outline and components of the value creation framework for internationalisation of the curriculum

### ***Internationalisation of the Curriculum***

Internationalisation can have multiple dimensions, which include academic mobility, commercial presence, cross-border delivery and consumption abroad (Salehi n.d.). Knight (2004) argues that the term 'Internationalisation of the Curriculum' means various things to different people, including:

- A series of international activities such as academic mobility for students and teachers.
- International linkages, partnerships, and projects.
- International academic programs and research initiatives.
- The delivery of education to other countries through new types of arrangements such as branch campuses or franchises, using a variety of face-to-face and distance techniques.
- The inclusion of an international, intercultural, and/or global dimension into the curriculum and teaching learning process.

Absalom and Vadura (2006) note the presence of three trends in the conceptualisation of internationalisation:

- Internationalisation as *content*: For example, an international orientation in content, aimed at preparing students for performing (professionally/socially) in an international and multicultural context, and designed for domestic students and/or foreign students (Bremer & van der Wende 1995).
- Internationalisation as a *process/pedagogy*: For example, the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education (Knight 2004).
- *Societal aspects* of internationalisation: For example, a curriculum and intercultural dimension embracing content, teaching and learning processes and support services (Leask 2009).

None of these definitions actually prescribes a means of achieving effective internationalisation. However, Leask (2009) offers two curriculum models, formal and informal, pertaining to internationalisation. The formal curriculum involves set teaching agendas based on specific content, topics and requirements where students are periodically assessed using various methods. The informal curriculum includes optional extracurricular activities that are not part of the formal requirements of the programme of study (Leask 2009). Leask (2009) makes the important point that use of these two forms of curriculum together can encourage the necessary engagement between international and local students. In this paper the focus is on the formal curriculum in a transnational context.

### ***Transnational education***

Transnational education programs are an established and integral part of the internationalisation activity of many Australian universities. Leask (2004) argues that

'Transnational' equates to an 'offshore' program delivered by academics at the overseas venue. Dunn and Wallace (2006) describe two of the different transnational teaching models adopted by Australian universities as follows:

- *Full delivery model*: where the Australian universities provide all curriculum/notes and resources to overseas partnership universities, but where the teaching is basically delivered by the overseas university (Debowski 2003; National Tertiary Education Union (NTEU) 2003; Castle & Kelly 2004). Swinburne's Sarawak program is an example of this model.
- *Block teaching model*: where programs are delivered by local academics, bolstered by periodic block teaching by Australian counterparts (Debowski 2003). The Swinburne Kaplan program in Singapore is an example of this model.

These models present various challenges and opportunities to those offering transnational higher education (TNHE) programs including the potential refinement, redefinition and alignment of value propositions for all stakeholders (Bolton & Nie 2010). An alternative is the *onshore transnational model* in which learners are located in a country different from the one where the awarding institution is based" (UNESCO/CoE 2000).

This paper is based on experiences with an *onshore transnational model* at an Australian university. The focus is on onshore overseas students in what is known as the 2+2 CAP (Collaborative Articulation Program) program whereby students from partner universities in China study for two years at their home university and then come to Australia for a further two years to complete their degree. On completion of the program, the students receive degrees from both their original university and the university in Australia.

### ***The implications for teaching and curriculum design practice in the transnational classroom***

Curricula are prescriptive and general in nature, basically specifying the topics that must be understood and to what degree in order to achieve a particular grade or standard. The Australian Curriculum Assessment and Reporting Authority (*The Australian Curriculum* 2011) define the purpose of a curriculum as designed to develop successful learners, confident and creative individuals and active and informed citizens. This includes both the range of courses from which students choose their study subjects, teaching, learning and assessment materials and a specific learning program (Biggs & Tang 2007; Kelly 2009). Researchers, such as Biggs (2003), Brabrand and Andersen (2006) and Prideaux (2003) also argue that the curriculum should be inclusive and respond to graduate capabilities frameworks. In a transnational situation, curriculum design should consider student requirements on a truly transnational basis, applying both to students from home and from overseas.

## **The practice context**

The context in which this paper is set is that of a transnational, face-to-face undergraduate Business Analysis and eCommerce course taught mainly to international students (mostly Chinese students from partner institutions) along with a smattering of local students. In essence this was a program providing students with a globally-relevant education drawing widely on a diversity of mutually sustaining cultures and values.

## **The re-design process for the unit**

The research reported here is based on a three-year cycle of change to teaching and learning practices in the 2+2 CAP (Collaborative Articulation Program), business unit. It must be cautioned that in this case, the 'transnational' unit was comprised overwhelmingly of Chinese students from partner institutions, leavened with a smattering of local students.

Following what was in many ways an unsatisfactory experience with the first year of this unit, both in terms of student performance and student and staff satisfaction, considerable thought was given to finding ways to improve it. This largely entailed a search for accommodation between two elements essential for curriculum design: alignment and innovation:

- **Alignment:** Occurs when students understand "why" they are learning as well as acquiring specific knowledge. This is likely to enhance student motivation, but it requires having clear aims, objectives and outcomes for units, preferably based on the use of alignment models such as those of Biggs (2003) and Blumberg (2009). These models enable the linking of aims and objectives to content, activities and assessments, and the mapping of links between them leading to successful achievement of the overall learning objectives.
- **Innovation:** Whether in terms of attempts to improve student behaviour in class or enhance their motivation, innovation in content and in delivery mechanisms is important in achieving the best outcomes.

Apart from the specifics of teaching and learning approaches, a clear objective in the reforms was achievement of a genuine dimension of internationalisation to the program. The focus was on the formal aspect of Leask's (2009) proposed curriculum for developing the international and intercultural perspectives of students as global participants. It also involved the use of a set teaching agendas based on specific content, topics and requirements where students were periodically assessed (Leask 2009). The focus was sufficiently inclusive to span all three of the trends in conceptualisation identified by Absalom and Vadura (2006).

## **Transnational curriculum design**

In a transnational situation, curriculum design must take account of students wants and needs for employment in a global/international environment. Gibson, Rimmington & Landwehr-Brown (2008) identify the key effects of globalisation as being increased interdependence, interconnectedness and cultural diversity. They draw on the literature to identify a set of key elements of global citizenship which include:

- Knowledge (e.g. understanding of diversity, peace and conflict, social justice, etc.)
- Skills (e.g. research and enquiry skills, communication skills, cooperation and conflict resolution skills, etc.) and
- Attitudes (e.g. appreciation of human dignity, empathy towards other cultures and viewpoints, commitment to sustainable development, etc.).

The design of the unit pays particular attention to vocational outcomes as key elements of global citizenship, with a cultural dimension additional to those emerging from the specific cultural backgrounds of students. There are two reasons for this. First, is that technological and business specialisations can have their own peculiar cultures. Elements of global citizenship can better equip learners to work in a global environment. Second, in the context of the unit -Deriving Business Value, it can reasonably be expected that an international element will arise e.g. in the case of organisational networks that span national boundaries, organisational culture influences, dealing with stakeholders of the networks from diverse backgrounds, global information systems management, social capital and business sustainability in dynamic global economy. Finally, deep learning behaviour is important for graduates who will work in complex global environments (Marton & Sljo 1976, 1984; Dahlgren 1984; Gibbs 1992; Ramsden 1992, cited by Rust 2002 and Biggs 1999). Consequently the author followed the advice of Gibbs (1992) and included the following characteristics in the re-design of the unit:

- Embedding student motivation to the extent that students want and need to know
- Learning activities
- Engagement with others
- Having a suitably constructed knowledge base, whereby content is taught in integrated wholes and knowledge is connected to other knowledge

## **Specific challenges addressed in the unit**

In attempting to enhance the international characteristics of this unit, the following issues needed to be addressed:

- Language: Most students' English level was not high, which made it difficult for them to grasp certain theoretical concepts and discuss these in class.

- Cultural background: Significant differences between western and eastern culture influenced the nature of materials chosen for class use, for example business cases.
- Learning practices: In China, teachers tell students what to do and the students follow. The practice is to memorise and not to ask questions. This proved problematic in an environment that was based on a Western model of teaching where research skills and independent learning were central to success.
- Decision making: Most Chinese students came from backgrounds where much of the decision-making had been undertaken by teachers and parents, and faced with choices in class often had difficulty in responding effectively.
- Work experience: Most Chinese students lacked work experience and were unfamiliar with even the broadest aspects of organisational behaviour and culture.
- Lack of online communication skills: Most of the Chinese students had come through a traditional education system which lacked a facility that allowed online interaction.

The overall change process is captured in Figure 2 below:

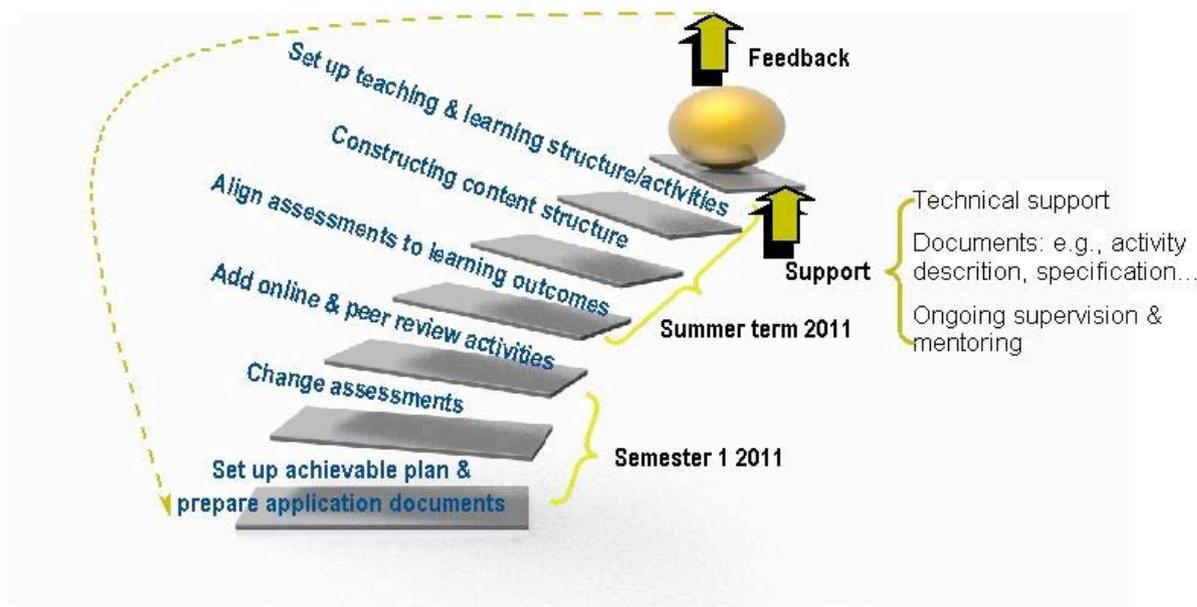


Figure 2 The change process for the unit

### Learning Objectives

The first step in the internationalisation of the unit curriculum should be to introduce an explicit internationalisation objective(s), which could be followed through with appropriate teaching/learning activities, support mechanisms and assessment tasks

(Leask 2009). The first revision of learning objectives in preparation for the second iteration of the unit did not include an international objective. It had been mistakenly assumed that all that was necessary was to amend unit content and delivery methods to achieve the internationalisation dimension. This oversight has since been recognised and the learning objectives for this annual unit have been expanded to include an internationalisation objective.

Although the changes to learning objectives might have appeared to be modest, they nonetheless served to clarify unit scope and extend it to the global environment. This automatically imbued the revised learning objectives with an international dimension that ensured that perspectives on global citizenship aligned with vocational outcomes for all students seeking to pursue a career in business, information systems or management within a global organisational environment.

### **Curriculum Content**

The changes to unit content have been substantial, with a complete rewriting of material from the first and second iterations. The six key topics covered included: concepts of value, value propositions, value networks, value from organisational design, value creation through IT/IS, and the measurement of organisational value and sustainability. The resulting changes linked these topics to the global level in three ways:

- *Overview of topics:* Including global trends, global networked economies, and global information systems management, the differences between national and international organisations, their business models and responses to issues of value creation, management and measurement. When discussing the topic of business models, we selected Google, Amazon, the Chinese online search company Baidu and the Australian online company, Forest Auction. The purpose was to help students understand the fundamental business needs and operating differences between national and international companies.
- *The cultural dimension:* By including both national and corporate business cultures, the new material covered issues of cultural understanding and conflict (Katz & Townsend 2000; Leidner & Kayworth 2006) while the use of case studies required students to relate cultural issues to value creation and management practices.
- *The social and community dimension:* Finally, we included coverage of the themes of corporate social responsibility and organisational and environmental sustainability.

For Chinese students in particular, the knowledge contained in this additional material was deemed especially important in regard to broadening both their international outlook and their understanding of the global business world.

### **Teaching and Learning Structures**

These changes to learning objectives, content and delivery mechanisms marked a further transition, one from the traditional face-to-face teaching and learning model to a blended model combining traditional teaching and learning approaches with use of advanced information and communication technologies. The main online activities included 1) Accessing and utilising online course material (lessons, learning objects, virtual lectures and assessments) via the Blackboard learning environment, 2) Participating in online discussion through Blackboard discussion threads, and 3) Completing quizzes online.

As participation in the unit occurred in both on and off-campus mode, students were required to take control of their own learning processes. While teaching staff were available to assist when required, the onus was on students to contact lecturers or tutors by email or via online discussion threads should a particular problem arise. It was expected that students would explore all the resources available online, and undertake the preparatory reading and exercises outlined in the unit learning materials. This latter activity was particularly important as there were no longer any formal lectures in this unit. While challenging to Chinese students, largely unfamiliar with online learning and self-study, this mode of delivery nonetheless helped them build-up their self-management and independent learning skills.

As the unit included many changes, it was considered essential to explain the new structure and its ramifications clearly at the outset of the semester. A weekly newsletter was circulated in advance to remind students of the prior preparation required and as a means of nurturing and sustaining their engagement with the unit.

### **Teaching and Learning Activities**

The changes to format, content and delivery methods called for consequent changes in levels of student participation and engagement, as follows:

**Personal reading and reflection:** Students were required to read the relevant textbook chapters in the Study Schedule, then answer a series of review questions and watch a related video before attending the class. They were then required to make a note of anything they did not understand for clarification and discussion during the face-to-face classes. They were also encouraged to undertake additional reading and research in order to gain a deeper understanding of the topics under consideration. Finally, they were encouraged to maintain personal reflective study journals as a means of self-monitoring of progress in the unit.

**Attending Face-to-face classes:** Although there were no longer any traditional lectures in this unit, students were required to attend a 3 hour face-to-face session that was separated into several sections:

- Q&A: Where students raised questions about issues that they were unsure of, allowing other students and lecturers to discuss and answer the questions together.
- In-depth exploration of topics: With staff providing additional examples or cases to help explain key themes.
- Group discussion: Each week the class (divided into groups) discussed a business case provided in advance.

Online Discussion Threads: Learning to work in teams in a virtual community is one of the essential generic skills in the global environment. Participation in online activities was intended not only to help students become familiar with distance learning and working within a virtual team, but also to give them this life skill.

All these activities were designed to helping students build their ability to be self-directed and self-motivated learners.

### **Assessment**

Assessment for the unit took a variety of forms and comprised: a group assignment, combined with 2 short individual essays, 3 online quizzes and a final examination. The group assignment and essays embodied an internationalisation dimension, and students were required to take account of different cultures, markets, stakeholders, organisational structures and business networks in completing the work.

The group assignments were consciously designed to result in learning outcomes corresponding to the skills required for global citizenship (Gibson et al. 2008). This required collaboration within the group in the choice of an industry within which the group would write a proposal for a value-creating business operating in a cross-cultural, global market. This assignment was intended to encourage students to assess their own capabilities and potential for setting up a global business and had to:

- Include the performance of various tasks empowering individual group members to incorporate aspects of their own cultural background into the assignment process. Because in the unit, the great majority of students were from China, there was a requirement that they select at least two countries from which to run their proposed business. They had to compare and contrast the differences and set-up strategies most suited to the markets in the respective countries.
- Ensure that the set tasks are seen by the students as being relevant and important, reinforcing the link between theory and practice and the assignment itself.
- Involve continual and effective supervision of students to ensure that they were able to benefit and learn from working together.

In this latter context, the group assignments were predicated on recognition of the need for deep learning behaviour on the part of the students preparing for work in complex global environments.

Biggs and Tang (2007) emphasize the importance of taking account of student perceptions with regard to the relevance and importance of the set tasks. They argue that ‘what’ and ‘how’ students learn depends to a major extent on how they think they will be assessed. Similarly, Newstead (2002), indicates that assessment is one of the major determinants of how students approach their study. He argues that assessment is not just simply a means of determining whether students have acquired the knowledge and skills we are endeavouring to impart, but also play an important role in motivating students. Researchers, such as Biggs and Tang (2007), Rust et. al (2005), Blumberg (2009) and Nicolettou (2009) indicate that curriculum alignment is the foundation for designing suitable assessment tasks. Unfortunately, mistakes made during the curriculum design process can result in misalignment between the cognitive process dimension and learning objectives/outcomes, teaching/learning methods and activities and assessment task requirements (Blumberg 2009). Blumberg (2009) introduced a graphic tool which revised the Course Alignment Table based on Anderson et al.’s taxonomy, to determine if a course was aligned (objectives, outcomes, contents and assessment). Employed in Figure 3 this demonstrates an example of misalignment, because the first learning objective/outcome depicted has no assignment link to it. This method has been applied to the re-design of all activities and assessment tasks of the unit.

What level is each of the following?	Not Incl.	The Cognitive Process Dimension (according to Anderson et. al. 2001)				
		1. Remember (recognize, recall)	2. Understand (interpret, exemplify, summarize, infer, compare, explain)	3. Apply (execute, implement)	4. Analyze (differentiate, organize, attribute)	5. Evaluate (check, critique)
Objectives/outcomes		Describe the nature and purpose of a range of business systems.	<ul style="list-style-type: none"> <li>Explain how organisations have adapted to operate in the digital economy.</li> <li>Understand the relationship between strategy, models and infrastructure.</li> </ul>		Outline the process of deriving business value in relation to a range of business systems.	Take a management view of information technology in relation to the derivation of business value.
Teaching/learning methods and activities		Lectures 6, 7, 8 and 9 introduced briefly on some business systems, such as ERP, DSS, CRM, BPR, SCM...	Tutorial activities: Case analysis on CRM and SCM	Self-study activities <ul style="list-style-type: none"> <li>Read learning material</li> <li>Prepare answers to self-assessment questions</li> </ul>		
Assessment task requirements	X	Task 1: Individual Assignment on value proposition (individual report 2000 + words; 20%)  Note: This report requires students to explain the concept of a business model and describe the main forms utilised in the context of eCommerce.	Task 2: Group Assignment on designing for value creation (group report 3000 + words; 30%)  Note: This report has two requirements. 1) Demonstrate your ability to analyse each of these models at a variety of levels, gradually increasing the depth of your understanding; 2) Outline the challenges of the modern competitive environment and the many ways business enterprises can respond to these challenges	Final Exam: Individual (50%)  Note: the requirements include: 1) Understand how each of the commonly used models enable enterprises to generate profitable outcomes using electronic commerce; 2) Describe the challenging roles of intermediaries and the nature and importance of the growth of strategic relationships and collaboration in eCommerce; 3) Extend your knowledge into the models of eFinance and		

Figure 3: An example of misalignment problem in the previous the unit design

### Support

It was understood from the start that both staff and students might require additional support to be able to successfully tackle the proposed internationalisation initiative. While Leask’s (2009) definition uses ‘support’ with respect to students in a more

generic sense, here the concern is with support directly related to the unit content, teaching and learning activities and assessment tasks; and in particular the (arguably more demanding) modifications. Therefore, the staff were prepared to offer reviews of student draft work around assessment tasks if requested, and had on-hand strategies for collaboration and conflict resolution within groups.

Marking criteria and the arrangements for the moderation of student work were also developed collaboratively by staff, to ensure that everyone was comfortable with how to assess and provide feedback. This process included familiarisation of all staff with the modified content.

### ***Evaluation of changes in light of student feedback***

All changes were introduced incrementally during the 2 years - 3 semesters. The improvement in the final results achieved by students can be seen quite clearly in Table 1, which compares student performance in assignments and the final examination between semester 1 and summer 2011. Apart from a quite dramatic improvement, the total of students failing the unit dropped 19 % (from 22 % to 3 %). The overall Grade Point Average (GPA) increased by 0.379.

Table 1 Comparison of Students' Overall Results between semester 1 2011 and summer 2011

Level Grade	Semester 1, 2011 (Total 32 Students)		Summer, 2011 (Total 35 Students)		Improvement
	Total Students	%	Total Students	%	
High Distinction	0	0	2	6	6%
Distinction	3	10	0	0	-10%
Credit	9	28	17	48	20%
Pass	13	40	15	43	2%
Fail	7	22	1	3	-19%
Overall GPA	1.250		1.629		0.379

Despite increasing the standards required to succeed in the assignments and final examination paper, results continued to improve. Table 2, which compared students' overall results between Summer 2011 and Semester 2 2012, shows that although there were no further increases in the incidences of Higher Distinction and Distinction passes, more students achieved credit level and none failed. The overall Grade Point Average (GPA) increased by 0.012.

Table 2 Comparison of Students' Overall Results between summer 2011 and semester 2 2012

Level Grade	Summer, 2011 (Total 35 Students)		Semester 2, 2012 (Total 39 Students)		Improvement (%)
	Total Students	%	Total Students	%	
High Distinction	2	6	0	0	6
Distinction	0	0	2	6	-6
Credit	17	48	21	54	6
Pass	15	43	16	41	-2
Fail	1	3	0	0	0
Overall GPA	1.629		1.641		0.012

In semester 1 2011, of the 32 students enrolled, 18 (56.1 %) participated in the end-of-unit survey. Following the summer study period of 2011, 32 students (of 35 enrolled) completed the end of term questionnaire, and Semester 2 2012, saw 35 students (89.5% of 39 enrolled) complete the end-of-semester questionnaire. In all three semesters, the students completed a 20 question questionnaire survey with sufficient open-ended questions to allow for additional comment and suggestions. For reasons of space, this feedback is reported as four key basic themes:

1. Aspects that students liked about the unit.  
 Survey responses indicated that there was much to like about the unit. This included its open and friendly environment, the global and international character of the content and the experience of working in teams, on cases drawn from the real world of business. Students welcomed the exposure to entirely new concepts such as intangibles and social capital and saw value in taking the unit, even as a complement to other units, for example management and IT units. As much of what they liked had in fact emerged from the changes made to the unit, it can be reasonably concluded that the changes were successful. This also matches with the improvements in students overall results.
2. Areas which students thought could be improved.  
 Students indicated that comparatively minor adjustments were required to improvement the unit. One common suggestion was that more time was needed to complete assignments and the final examination. Another had to do with levels of student involvement, for example, the need for increased participation in discussion threads and more equitable involvement in group work. Perhaps most interesting, was a comment to the effect that greater diversity in the student body would have made for a more interesting study experience. This was interesting both because of the largely homogeneous nature of the student body and the widely perceived value of diverse student cohorts to the transnational education process.
3. How students compared the teaching approach (informal and interactive) to that of formal lectures?

Survey respondents provided overwhelming support for the new approach to content delivery, reporting only minor reservations related to time pressures and language difficulties. Students indicated that they found the unit interesting and stimulating and most enjoyed the opportunities for discussion and presentation of findings, including the opportunity to improve their written and spoken English. The author was especially pleased to find that students cited the area of critical thinking as one where they had gained skills as a result of taking the unit, given that this is not a characteristic widely associated with Chinese students. In China, the traditional teacher-dominated, passive learning techniques are prevalent in learning institutions (Wang, 2006). Again, the research reported here reinforced indications from the wider literature that in China, teachers will tell students what to read, what is important, how to find resources and what examples to follow. Students will quite slavishly obey and then memorise the content. They are not encouraged to ask questions and tend to lack both the knowledge of how to study independently or adopt necessary research skills to do so. The experience of this research project has been that Chinese students in particular, regularly ask questions such as “which book(s) should I read”, “what I should do for my assignment”, “do you have examples”.... so we often found that these students are lacking critical thinking skills.

4. What could be done in the future to help increase the level of student motivation for learning?

The responses from students relating to this theme was again, overwhelmingly positive, with the most common suggestions being to continue the practices adopted during semester 2 2012. A number of students suggested that more essays be set and model answers to questions provided, which was not altogether unexpected in a largely Chinese cohort, as in China, the teaching and learning process tends to be more heavily orientated towards what in the West might be regarded as ‘spoon feeding’. Other suggestions included holding debates in class and the arrangement of class visits to businesses.

Overall the responses indicated that the amended unit was well designed and was providing sound learning practices and opportunities.

The broader context for the teaching and learning experiences reported here was that of a second-tier, Australian university where the quality of teaching and learning in courses designed for market relevance were major selling points in the higher education marketplace. Accordingly, the search for constructive alignment and engagement with students who were highly motivated and open to knowledge and ideas that crossed boundaries and cultures, was something of an act of faith. The ideals of transnational education with students living and learning in at least two academic jurisdictions while acquiring knowledge and life skills is rarely pursued by formal subject-focused curricula underpinned by an entire infrastructure of course and unit operation and development. All this notwithstanding however, so far as the unit in Creating Business Value was concerned, there was considerable variance between

widely accepted and indeed, validated theory and the practical learning outcomes obtained.

### **Conclusion**

The modifications made to this unit were driven by the desire to truly internationalise both the content and process pedagogy in a unit 'Deriving Business Value' that not only was new to the curriculum, but also was something completely different to the overwhelmingly Chinese student cohort. The aim was to combine the themes of value creation and globalisation in an international teaching and learning environment that provided a personal and experiential way of engaging with the curriculum.

There were gains from the reforms to the unit – both in a marginally enhanced level of student-staff interaction and an overall improvement in the grades achieved. One remains convinced of the fundamental importance of alignment, active learning and student motivation, while acknowledging the need for more attention to be paid to cultural, international and transnational issues when designing curricula. In seeking to identify the different factors that make up these cultural, international and transnational dimensions, questions need to be asked not only about student motivation both as regards participation in academic life, but also the reasons for course selection and indeed, for moving abroad for this purpose. Otherwise, the implication is that there will be few real winners in such international educational enterprises. Host universities are unlikely to achieve significant gains, other than in terms of increased fee income, while overseas students are likely to acquire only a superficial level of education. This draws us back to figure 1 outlined at the beginning of this paper and to the message that when engaging in curriculum design, it is necessary to consider all stakeholders, and consider the value that can be offered to all parties involved?

## References

Absalom, M & Vadura, K 2006, 'Student perceptions of internationalization of the curriculum: An Australian case study', *Arts and Humanities in Higher Education*, Vol. 5, No. 3, pp. 317–334.

Anderson, LW, Krathwohl, DR, Airasian, PW, Cruiskshank, KA, Mayer, RE, Pintrich, PR 2001, *A taxonomy for learning, teaching, and assessing*, Longman, New York.

Biggs, J 1999, What the student does: teaching for enhanced learning, *Higher Education Research and Development*, Vol. 18, No. 1, pp. 57-75.

Biggs, J 2003, *Teaching for quality learning at university*, The Society for Research in Higher Education/Open University Press, New York.

Biggs, J & Tang, C 2007, *Teaching for Quality Learning at University*, 3rd edn., Open University Press, New York.

Blumberg, P 2009, 'Maximizing learning through course alignment and experience with different types of knowledge', *Innovation in Higher Education*, Vol.34, pp.93–103.

Bolton, D & Nie, R 2010, 'Creating Value in Transnational Higher Education: The Role of Stakeholder Management, Academy of Management Learning & Education', Vol. 9, No. 4, pp.701-714.

Brabrand, C & Andersen, J 2006, *Teaching teaching and understanding understanding*, Aarhus University Press, University of Aarhus, Denmark, <<http://www.daimi.au.dk/~brabrand/short-film>> (External web site with ordering details for a DVD and an option to watch the DVD for free via Google or embedded in the website.)

Bremer, L & van der Wende, M (eds.) 1995, *Internationalising the curriculum in higher education: experiences in the Netherlands*. The Netherlands Organisation for International Co-operation in Higher Education, The Hague.

Castle, R & Kelly, D 2004, 'International education – quality assurance and standards in offshore teaching: Exemplars and problems'. *Quality in Higher Education*, Vol. 10, No. 1, pp. 51-57.

Dahlgren, LO 1984, 'Outcomes of Learning', in F. Marton, D. Hounsell & N. Entwistle (eds), *The Experience of Learning*, Scottish Academic Press, Edinburgh.

Debowski, S 2003, Lost in internationalised space: The challenge of academics teaching offshore. Proceedings of the IDP Conference 'Securing the Future for International Education: Managing Growth and Diversity', IDP Education Australia, Melbourne, viewed 2<sup>nd</sup> March 2012, <[http://www.aiec.idp.com/pdf/DebowskiFri0900\\_p.pdf](http://www.aiec.idp.com/pdf/DebowskiFri0900_p.pdf)>

Dunn, L & Wallace M 2006, 'Australian academics and transnational teaching: an exploratory study of their preparedness and experiences', *Higher Education Research & Development*, Vol. 25, No. 4, pp. 357-369.

Gibbs, G 1992, *Improving the Quality of Student Learning*, TES, Bristol.

Gibson, KL, Rimmington, GM & Landwehr-Brown, M 2008, 'Developing global awareness and responsible world citizenship with global learning', *Roeper Review*, Vol.30, No.1, pp.11-23.

Kalantzis, M & Cope, B 2000, 'Towards an inclusive and international higher education', in R. King, D. Hill and B. Hemmings (eds) *University and Diversity: Changing Perspectives, Policies and Practices in Australia*, pp. 30-53, Keon Publications, Wagga Wagga.

Katz, J & Townsend, J 2000, 'The role of information technology in the "fit" between culture, business strategy and organizational structure of global firms', *Journal of Global Information Management*, Vol.8, No.2, pp. 26-37.

Kelly, AV 2009, *The curriculum: theory and practice*, 6<sup>th</sup> edn. SAGE Publications Ltd., London.

Knight, J 2003, *Updating the definition of internationalisation*, International Higher Education, Centre for International Higher Education, Boston.

Knight, J 2004, 'Internationalization remodeled: Definition, approaches, and rationales', *Journal of Studies in International Education*, Vol. 8, No. 1, pp. 5-31.

Larkins, 2008, 'Higher Education Supplement', *The Australian*, 23 April, p. 25.

Leask, B 2004, *Transnational education and intercultural learning: Reconstructing the off-shore teaching team to enhance internationalisation*, Proceedings of the Australian Universities Quality Forum, AUQA Occasional Publication, Melbourne.

Leask, B 2009, 'Using formal and informal curricula to improve interactions between home and international students', *Journal of Studies in International Education*, Vol.13, pp. 205-221.

Leidner, DE & Kayworth, T 2006, 'A review of culture in information systems research: Toward a theory of information technology culture conflict', *Management Information Systems Quarterly*, Vol. 30, No. 2, pp. 357-399.

Marton, F & Saljo, R 1976, 'On Qualitative Differences in Learning - 1: Outcome and Process', *British Journal of Educational Psychology*, Vol. 46, pp. 4-11.

Marton, F & Saljo, R 1984, 'Approaches to Learning', in F. Marton, D. Hounsell & N. Entwistle (eds), *The Experience of Learning*, Scottish Academic Press, Edinburgh.

National Tertiary Education Union (NTEU), 2004, *Excess baggage: Australian staff involvement in the delivery of off-shore courses*, NTEU, Melbourne.

Newstead, S 2002, 'Examining the examiners: Why are we so bad at assessing student?', *Psychology Learning and Teaching*, Vol. 2, No. 2, pp. 70-75.

Nicolettou, A 2009, *5 Stages of Educational Design*, LTS503 Curriculum, Swinburne University, Melbourne.

OECD 2010, *Education at a Glance*, OECD, viewed 2<sup>nd</sup> March 2012, <[http://www.oecd.org/document/0,3746,en\\_2649\\_39263238\\_45897844\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/0,3746,en_2649_39263238_45897844_1_1_1_1,00.html)>

Prideaux, D 2003, ABC of learning and teaching in medicine, *British Medical Journal* 326 pp.268-270, viewed at 3<sup>rd</sup> March 2011, <<http://www.bmj.com/cgi/content/full/326/7383/268>>

Ramsden, P 1992, *Learning to Teach in Higher Education*, Routledge, London.

Rust, C, O'Donovan, B & Price, M 2005, 'A social constructivist assessment process model: how the research literature shows us this could be best practice', *Assessment & Evaluation in Higher Education*, Vol. 30, No. 3, pp. 231-240.

Salehi, K n.d., 'Definitions, rationales and expectations, global and local environments', LTS505 Course Material Online, Swinburne University.

Slethaug, G 2007, *Teaching abroad: international education and the cross-culture classroom*, Hong Kong University Press, Hong Kong.

*The Australian Curriculum* 2011, Links, The Australian Curriculum Assessment and Reporting Authority (ACARA), viewed 05 March 2011, <<http://www.australiancurriculum.edu.au/Home>>

UNESCO/Council of Europe, 2000, *Code of good practice in the provision of transnational education*, UNESCO-CEPES, Bucharest.

Vignoli, G 2004, 'What is transnational education?' *Compiler: Gabriel Vignoli - Rome*, viewed 4 January 2013, <[http://www.cimea.it/files/207\\_114.pdf](http://www.cimea.it/files/207_114.pdf)>.

Wang, HD 2006. 'Teaching Asian students online: What matters and why?'. *PAACE Journal of Lifelong Learning*, Vol.15, pp. 69-84.

*The Role of Imagination in Motivating EFL Learning*

Chih-cheng Lin\*<sup>1</sup>, Fang-rong Kuo\*<sup>2</sup>

\*<sup>1</sup>National Hsinchu University of Education, Taiwan,

\*<sup>2</sup>National United University, Taiwan

0183

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Abstract

Engaging and motivating students is always a key factor for successful learning. In educational systems where English is compulsory, such as the case in Taiwan, learners may struggle hopelessly for the duration of their academic lives. Dornyei (2005) builds on the psychological theory of possible selves to develop a new conceptualisation of L2 motivation, the 'L2 Motivational Self System', with the central concept of the ideal self, which refers to the representation of the attributes that someone would ideally like to possess. While Ryan (2009) reported in his quantitative study that the ideal L2 self had the more direct relationship with motivated behavior, this study aims to conduct a qualitative study emphasizing the power of imagination in potentially motivating EFL (English as a Foreign Language) learners in the pursuit of the ideal L2 self. The pedagogical implications from this study were discussed as well.

## **Introduction**

English is considered the most widely used international language of the world in which learners' capability benefit them for effective communication in international contexts. In addition to the native speakers, many more learners are using it as a second language (ESL) or foreign language (EFL).

According to the context in Taiwan, English is learned as a foreign language (EFL) and has been a compulsory subject in junior and senior high schools for decades. It has then been mandated as a regular subject taught to grade five and six students in elementary schools since 2001, and advanced to the lower grades since 2005. Besides the formal education, many students have spent extra hours studying English at language programs.

However, in spite of the significant progression to English education, it is commonly taken as a subject to study rather than a foreign language to learn. As the consequences of the examination-orientated education system and the lack of language contact in EFL context, students study hard on this subject mainly for the purpose of entrance examinations for senior high schools and colleges.

Moreover, the methods in the classroom are still conventional such as teacher's lectures and students' note-taking. Such traditional teacher-student relationship leads to domination and oppression through silencing students' knowledge and experiences (Freire, 2000; Sawyer, 2006; Vygotsky, 2004; Wenger, 1998). The teacher in the classroom is the figure of authority to transfer the knowledge of language on the surface structural level instead of the social and cultural levels. In this aspect, students tend to learn English passively by rule-bounded rote learning.

This study aims to explore whether interactive classroom activities can foster learners' imagination and motivation in English learning or not.

## **L2 Motivation**

Motivation "energizes" human behavior and "gives it direction" (Dornyei, 1998, p.

117) and is a significant dimension in language learning (Gardner, 1985; Gardner et al. 2004). A large spectrum of theories covers many variables that affect student motivation in the second language (L2) classroom. In the field of second and foreign language education, Gardner and Lambert's (1972) social psychological model served as a dominant framework for investigating L2 learners' motivation for some decades. In the 1990s, core issues during the process-oriented period on motivation research increasingly turned to practical questions of how motivation might be initiated, influenced, supported, or sustained. Attention has focused on the interaction between the learning situation (e.g., instructional techniques, classroom environment, interpersonal relations), and individual motivational cognitions and behaviors (e.g., goals, attitudes, beliefs, processing of experience, self-regulatory strategies) (Dörnyei, 2002).

In recent years, research on language learning motivation has shown a growing interest in the close relationship between learners' motivational experiences and identity processes, and the non-linear, relational view of motivation, self and context (Dörnyei & Ushioda, 2011; Ushioda, 2009). There is increasing recognition in L2 research that mixed methods approaches can help to capture more of the complexity and dynamic of the issues under investigation (Dörnyei, 2007). In particular, the investigation of contextual factors and individual-contextual interactions is likely to entail triangulation of multiple forms of data from diverse points of view with current moves toward more socio-dynamic perspectives on motivation. Therefore, in order to obtain a rich holistic analysis of motivation-in-context, interviews with teachers and students, classroom observations, classroom interaction data, focus group discussions, learner journals, written narratives, etc., have received more and more attention.

Motivation researchers view possible selves as future self-guides that reflect "a dynamic, forward-pointing conception that can explain how someone is moved from the present to the future" (Dörnyei, 2009, p. 11). Future self-guides act as powerful motivators for L2 learning (Csizér and Kormos, 2009; Ryan, 2009; Taguchi et al., 2009). They further believe that people are motivated to fill the gap between their actual, ideal, and ought-to selves (Higgins, 1987). Drawing from possible selves theory (Markus & Nurius, 1986) and self discrepancy theory (Higgins, 1987), Dörnyei (2005, 2009) developed the concept of the L2 Motivational Self System. The framework is composed of three components, namely the ideal L2 self, the ought-to L2 self, and the L2 learning experience. The L2 selves have a future dimension in that

they embody an image of oneself in a future state. This future image guides present actions and is considered a powerful source of motivation. The other component in this theory is L2 learning experience. This component concerns factors related to the immediate learning environment and experience and is thus more situation specific. The L2 self model presents a rethinking of the notions of integrative and instrumental motivations and allows a more situated approach to the complexity and diversity of L2 learners' motivational orientations and learning contexts.

Ryan (2009) proposed an interpretation of L2 motivation based on the concept of the ideal L2 self as a possible means of developing an understanding of language learning motivation that is comprehensive and robust enough to be applicable to a wide range of language learning contexts yet with the capacity to remain sensitive to specific situations and individual idiosyncrasies. The findings in his study provide strong empirical backing for calls to reinterpret L2 motivation from a self perspective. The ideal L2 self variable demonstrates itself to have the more direct relationship with motivated behavior. Integrativeness may exist in many contexts but it does so as part of a broader concept of ideal L2 self, which is proved to be a more precise measurement. For those involved in learning contexts where the function and purpose of second language education is not always about communication with the L2 community, this represents an important breakthrough.

Csizér and Kormos (2009) investigated the effects of the ideal and ought-to L2 selves on Hungarian foreign language learners' motivated learning behavior by means of structural equation modelling. The models indicated that motivated learning behavior was partly determined by the ideal L2 self, i.e., the extent to which students could imagine themselves as competent language users in the future. The other important determinant of language learning effort was the dimension of language learning experiences, which finding suggests that motivational forces originating from the language classroom have great influence on how much effort students are willing to invest in language learning, and highlights the importance of motivational teaching practice (Dörnyei, 2001a). The main determinants of the students' self-concept were international posture, knowledge orientation, language learning experiences and parental encouragement. Students' ought-to L2 self was found to be socially constructed as parental encouragement was the only factor with a significant contribution towards this type of self. The role of the ought-to L2 self seemed to be marginal because of the weak contribution to shaping students' learning behavior. The

students' idealized images of themselves were influenced by language learning experiences and their attitudes towards English as an international language. This research underlines the importance of self-concept in affecting motivated behavior and shows that self-regulated learning is hardly possible unless students have a positive image of themselves as users of another language.

Cheng and Dörnyei (2007) conducted a large-scale empirical survey by a modified replication of the Dörnyei and Csizér's study in 1998. 387 Taiwanese teachers of English were asked to rate a list of comprehensive motivational strategies in terms of (1) how much importance they attached to these and (2) how often they implemented them in their teaching practice. The results in this study show that there is a certain amount of resemblance to the list of motivational macrostrategies generated by Dörnyei and Csizér's survey among Hungarian English teachers, indicating that some motivational strategies are transferable across diverse cultural and ethnolinguistic contexts. Warden and Lin (2000) reported a "required motivation", reflecting culturally valued and internalized motivation to meet social and parental expectations.

It has been increasingly recognized that traditional, quantitative approaches to research on L2 motivation may not effectively capture this dynamic and complex construct. Thus a number of researchers (e.g. Lamb, 2009; Spolsky, 2000; Ushioda, 2001, 2009) advocate the use of qualitative approaches to data collection and analysis. For example, Ushioda's (2001, 2009) cross-sectional study of university learners of French explored qualitative changes and development in learners' thoughts and beliefs and how they shaped learners' engagement in their language learning activity. Ushioda concluded that motivation changes can be the result of both internal and external factors to the individual, and other elements of the language learner's reality should be considered alongside the language learning.

## **Social Constructivism in EFL Education**

Education deals with multilayer learning which are contextual. Learning is a matter of creating meaning, and the important thing is to be sensitive to the context. During the 1980s and early 1990s social constructivism proposed enhancing discursive interaction and dialogue within the classroom context and emphasized the importance of focusing instruction on the learner's cognitive, emotional and social

meaning-making processes (Cobb, 1994; Karagiorgi & Symeou, 2005; Pedersen & Liu, 2003; Tobin, 1993). It has contributed to more student-centered classrooms in which instruction strategies from teachers can enhance students' engagement in reflective thinking, experiential learning, collaborative learning, open-ended inquiry, rich-task activities and problem-posing-and-solving approaches in the learning process. Meaning is waiting to be discovered by the learner's employment of interpretative procedures, in which knowledge is constructed. Knowledge constructed this way is in accordance with Vygotsky's approach which emphasizes personal sense and the creative process of knowledge construction.

According to Vygotsky (1986), language is a tool one uses in collaboration with other individuals to shape his/her world. It is used for social and meaning-making activities, through which we reflect our thoughts, identities and selves. In a social constructivism language classroom, learners are granted a greater chance to experience, interpret, and use language in its more creative aspects. They are also more likely to discover the connection between language and emotions, language and culture, language and themselves (Carter, 2007; Hewitt, 2008; Karagiorgi & Symeou, 2005). In the field of foreign language learning, in which affective variables and cross cultural factors are diverse, the learning process becomes more complex. According to Gardner and MacIntyre (1993), affects such as self-esteem, inhibition, anxiety, and motivation, are emotionally relevant characteristics of the individual and may influence how he/she will respond to any situation. Among the affective factors, learners' motivation is regarded as the most influential factor in their ability to go through the process of foreign language learning.

Dewey (1938) promoted a model of education premised on the belief that students become more engaged in meaningful learning if their individual interests and real life experiences are reflected in the curriculum. In addition, new learning theories emphasize the importance of learners' participation and engagement in activities of communities of practice (Sawyer, 2006; Wenger, 1998). The central goals of these practices are to afford learners the chance to participate actively rather than receive knowledge passively, and to create environments where learners may increase interaction and control over their learning, and that in turn makes the learning personally meaningful. Through the active participation and meaningful engagement, learners can learn deeper knowledge when they engage in activities that are related to the everyday activities. Therefore, teaching and learning would tend to be

constructive and collaborative—very different from the traditional approach which positions the teacher as the transmitter of knowledge and students as receivers in a hierarchical framework.

While English is considered the most widely used international language of the world in which learners' English capability benefits them for effective communication in international contexts, what would the learning situations be like in an English classroom, especially when English is learned as a foreign language (EFL)?

## **Imagination in Language Classroom**

Imagination is the capacity to invent new realities, perhaps new worlds. It is the ability to look at things as if they could be otherwise. Earlier studies in the field of education appreciated the value of imagination (Egan, 2005; Greene, 1995; Heath, 2008; Vygotsky, 2004). It is one of the most important cognitive capacities for learning in that it permits us to give credence to alternative realities (Greene, 1995; Harris, 2000; Heath, 2008). Trotman (2006) explained that imagination is an essential human capacity in various activities such as the pursuit of creativity and innovation, the symbolic expression of ideas, and critical thinking.

Van (2009) reviewed six approaches of literary analysis, in which reader-response approach encourages students to draw on their personal experiences, opinions, and feelings in their interpretation of the literary text. The reader-response approach emphasizes the reader's active rather than passive involvement in the task of text reading. It makes an important contribution to learning by activating students' background knowledge so they can better predict and decode the language and themes of texts. The other advantage of the reader-response approach is that emotional reactions and the imagination as well from reading a story, poem, or play can be harnessed for classroom instruction.

Savvidou (2004) proposed the personal growth model of teaching literature to fit in an EFL/ESL program. This model has the potential to meet the goals of enhancing language learning and cultural awareness, and to bring about personal development

through the learner's imagination and interaction with the text, feelings, ideas and opinions. As Cadorath and Harris pointed out (1998, p.188) "text itself has no meaning, it only provides direction for the reader to construct meaning from the reader's own experience". Thus, learning is to take place when learners are able to interpret text and construct meaning on the basis of their own experience. Such learning process makes connections between learners' personal and cultural experiences and those expressed in the text, thus encourages imagination and creativity.

Ishiki (2011) collected and analyzed EFL learners' metaphors with participant observation and interviews in order to better understand their rationales behind. The results of the study revealed that the imagined self has a great impact upon learners' metaphors as it serves as a driving force to master English. All participants of the study regard learning English as hardship or challenge. However, by setting a goal of how they want to be in the future, they strive to master English since they see it as a pre-requisite for their future success. Students' notion of imagined self serves as a catalyst to challenge and cope with their metaphors.

## **The Study**

### **Participants**

Fifty two students taking the Freshman English offered by the second author were participating in the study. Freshman English is a required course for all students and lasts for two consecutive semesters. It is scheduled for three hours every week. Curriculum details such as the course content, textbook selection, and assessment procedures are designed by the instructor. The students have been learning English as a foreign language (EFL) for at least eight years of formal education, starting at the fifth grade in the elementary schools.

However, as the results of the long history of the examination based education system in Taiwan and the lack-of-environment EFL context, students do not learn English in environments where it is used as the medium of everyday communication; rather, it is studied for examination. Exam requirements appear to motivate Taiwanese EFL learners more effectively than other orientations (Warden & Lin, 2000).

Satisfying a requirement becomes a major reason for students to participate in the language classroom (Chang, 2001). 'Dullness' is a major characteristic of the typical language classroom due to the 'parrot learning' and grammar-translation instruction (Wang, 2002).

## **Method**

The research method was qualitative, using classroom observations, documents, and journal entries as tools. In addition, open-ended questions and interviews with the focal students were conducted to gather more specific information on their experiences and perceptions of motivation and EFL learning experience.

Among the four approaches to interview, namely informal interviewing, unstructured interviewing, semistructured interviewing, and structured interviewing, semistructured interviewing is considered the most appropriate type. It is based on the use of an interview guide (Bernard, 2000). The advantage of an interview guide is that the interviewer can make the best use of the limited time available in an interview situation (Patton, 1990).

The semi-structured interview consisted of the following guiding questions: (a) the students' motivation perception in EFL learning, (b) personal learning experiences and evaluation of class activities, (c) the impact of the imagination stimulation on their learning motivation, (d) suggestions for the teacher in the program. Interviews were conducted individually and took place in the teacher's office, lasting about half an hour for each interview. To facilitate students' expression, the interviews were conducted in Chinese.

## **Data Collection and Analyses**

In this study, data were collected in several ways, including students' responses to questionnaires, interviews, performances in class, as well as the researchers' observation (Creswell, 2002; Johnson and Onwuegbuzie, 2004). By answering the questions in the questionnaire, students could also reflect and evaluate their own learning processes and the extent of motivation effect on learning.

Furthermore, researchers could explore and clarify hidden or unclear information based on the answers to the open-ended questions when further interviewing the focal students in order to precisely discover their perceptions and experiences. The teacher-researcher also kept a teaching journal to record her observation about the class activities, e.g., students' participation, interaction, collaboration, and the contingencies. To ensure the credibility of the research, the strategies of triangulation from multiple sources, prolonged engagement, and persistent observation were applied in this study. To protect the respondents' identities, pseudonyms were created for use throughout the study.

## **Key Findings**

This study conducted a qualitative study emphasizing the power of imagination in potentially motivating EFL learners in English classroom. Various activities were designed, including group performance and discussion, pair practice, individual reflection, and class discussion.

### **More Interaction with Peers and Instructor**

The study stressed on the aspect of interpersonal relations by providing students the chance to design their group show, which engaged each member in the group to brain-storm and collaborate with each other in order to conjure up unique ideas for their show. In this way, not only can students improve their relations with each other, but the instructor also keep good relationship with the students by showing respect and receptiveness. One of the students responded as below,

*I like the atmosphere in English class. The teacher is very nice and active. She always encourages us to express ourselves. We have a lot of chances to talk, discuss with our members. We not only know each other better, but also learn from each other. I feel like learning English more and more.*

It was a showcase of mutual understanding as the students perceived the climate and the interaction with peers and the instructor in the classroom as friendly and encouraging, which enabled them to adapt their normal fears and decrease their

anxiety. This interactive environment also allowed the students to collaborate, share responsibility to achieve common goals, and take the responsibility for their own learning.

Dörnyei (2003) noted that “a positive interpersonal/affective disposition toward the L2 group, and the desire to interact with . . . to be the primary force responsible for enhancing or hindering intercultural communication and affiliation” (p. 5). This interactional focus considerably influenced students’ attitudes and behavior. While students were encouraged to interact with their peers, the researchers observed that they could relieve their anxiety with the help from their members. They seemed more excited and started sharing their thoughts on what they had learned during the class. English was considered less a subject and score-orientation but a tool through which they used to achieve their goals.

*I am thankful that my group members help me a lot. Before, I studied English all by myself for taking so many tests. I put all my attention on questions and answers. Now I learn English with my friends and I know there are not just the standard answers but many possibilities. I can imagine the possible situations in real life and learn to make a decision through them. And I can imagine my future with positive ideas.*

Dörnyei, and Csizér (1998) reported commandments for motivating language learners, including a personal model of the teacher, relaxed and pleasant class atmosphere, proper tasks, good teacher-student relationships, increasing learners’ confidence, and so on (p. 215). Taking care of all the commandments contribute to learners’ positive experiences in learning a foreign language impacts their confidence in using it.

## **The Power of Imagination and Creative Learning**

The researchers utilized various activities and materials to elicit students’ imagination. For instance, the instructor designated the group show with the guiding description as “Please use your imagination, creativity, enthusiasm....., to make a unique, marvelous, outstanding, terrific....., group show. My only requirements are: use at least some English in your show and inspire us to learn more. Thank you!” Unlike the conventional guidance which sets distinct rules, the description of this activity tended

to place the least restriction so the students could activate their extreme imagination and came out of all possible creativity.

*These activities motivated me to learn and challenged me to think in more creative ways and stimulate my imagination. I like this way of learning. At first, I was shy because my English is very poor. But I found I could use many simple sentences to communicate with my classmates. We even used a lot of body language. It's interesting. And one group even wrote an English song with Chinese melody and they sang it so well. It is fantastic.*

Although the students' English proficiency seemed limited, their willingness to communicate was not deterred in the process of group performance and discussion. MacIntyre et al. (1998) confirmed that the behavior of one's willingness to communicate might be influenced by a number of learner and situational factors such as communication anxiety, personality trait of introversion and extroversion, and interactional contexts, and so on. The group works in this study proved to bring positive effect to the learners that they could lower down their anxiety and raising confidence in using English. Cooperative learning enables students to polish their imagination and creativity in the caring and supportive learning atmosphere and also increases the learning motivation accordingly.

The researchers also applied movies to stimulate students' imagination and reflection. For example, after watching "Peaceful Warrior", the students were encouraged to activate their imagination to play the roles and rewrite part of the plot in the movie. In their journal they also reflected they were inspired and encouraged by the actors. They learned a lot from the movie and learned to know themselves better, which projected to the transitions to new life phases.

*I never seriously think about who I am. What am I going to do? I just studied so hard for so many years and kept this learning in the college. But now I start to think about "me" and my future. I know it might be very difficult for me to reach the goals, but I learn from the movie that it is the journey, the process, that I can grow to be more mature.*

Williams (1994) argued that learning a foreign language involves far more than simply skills or a system of rules, or a grammar. In addition, it involves an alteration in self-image, the adoption of new social and cultural behaviors and ways of being

and, therefore, has a significant impact on the social nature of the learner.

## **Autonomous Learning and Deeper Meaning in Learning**

Students were encouraged to keep journals because they could not only reflect upon but also internalize what they had learned and how they learned it in the class. Dörnyei (2001b) suggested that internalised motives are more likely to have a long term impact on L2 learning. Watkins (2000) argued that reflection may enhance learning by providing learners with the chances to check and evaluate what they have done and it should be a skill to be developed over a period of time. It is true that not many students could write good journals. During the course of the study the researchers noticed that most of the students were not used to this practice. But for those who did keep doing this, they became more conscious of what is happening to them through dialoging with their inner selves.

*When I read my journal and recall all the memories I recorded during this semester, I was so surprised and excited about what I have done and thought. Just like the sentences I wrote here from the movie "Peaceful Warrior"--- "This moment is the only thing that matters. The journey is what brings us happiness not the destination." I am very happy with all these moments in my journal and I know I will be more focused in learning.*

Her experience brought to light an important fact that the effect of reflecting upon one's learning can be prolonged by keeping a journal. Students could also evaluate their own learning needs and determine practical learning goals, facilitated by their teacher and peers. Moon (2004) proposed that reflection fosters deeper learning and achievement of more complex and integrated knowledge structures. In a context where the educational system provides very little opportunities for student reflection, we would suggest that the students should be provided with more opportunities to reflect upon their learning experiences from the class and writing them down. Engaging in such meaning-making practices may nurture students' development of personal identity and empower them as a unique individual.

## **Ideal Self and Ideal L2 Self**

In answering to questions of how they perceive their EFL learning motivation and the relationship between their English proficiency and their future life, most students replied that English was a subject they were required to study and they could not relate it for the future use. However, data collected from classroom observation of students' participation, journal reflection, and interviews reveal the change of some students' thought, attitude, and behavior. The results show that motivation is defined not in terms of measurable attitudes, effort or behavior, but in terms of how learners think about their relevant learning experience, and how their thinking affects their motivation and engagement in the learning process. Qualitative interview studies by Williams et al. (2001), and Ushioda (1996a, 2001), for example, have also provided a rich source of insights into causal attributional processes shaping learner motivation—that is, how L2 learners make sense of positive or negative outcomes in their learning experience, and how their thinking then shapes subsequent motivated engagement in learning.

Our results reveal that how students see themselves as future language users might change through the period of time. In line with Dörnyei and Otto's (1998) process model of motivation, we should bear in mind that both the ideal and ought-to L2 self might also be subject to changes in students' language learning history. We also call for a need for a more education centered approach, examining classroom reality and identifying classroom specific motives.

## **Conclusion**

The EFL learners in Taiwan have limited contact with native English users and almost no need for English proficiency for daily communication. The researchers in this study aimed to explore whether interactive classroom activities can stimulate learners' imagination and foster their motivation in English learning or not.

The study has identified many instances when students benefitted individually as well as collectively from their engagement with various activities applied in the class. The key findings from students' learning process include more interaction with peers and

instructor, creative thinking and imagination, autonomous and deeper meaning in learning, and the future image of ideal self and ideal L2 self. The findings also revealed that these activities and materials in the class were effective and successful in generating students' imagination in EFL learning by calling their attention to the multiple perspectives of the imagined future selves, fostering the interaction, interpersonally and intrapersonally, and motivating learners in the process of learning.

In addition, certain aspects of teacher behavior and teacher–student relations were identified as significant in shaping students' intrinsic motivation. For example, the instructor adopted a supportive communicative style and provided informational feedback on students' learning, which was likely to reinforce students' enjoyment of learning. This finding has been mirrored in research exploring connections between L2 motivation and learner autonomy (Ushioda, 1996b, 2003). More generally, these may serve for implications of relevant theory and research on L2 motivation.

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## References

- Bernard, H. B. (2000). Interviewing unstructured and semistructured. *Social Research Methods – Qualitative and Quantitative Approaches* (pp. 189-224). California: SAGE.
- Cadorath, J. & Harris, S. (1998). Unplanned classroom language and teacher training," *ELT Journal*, 52(3), 188-196.
- Carter, R. (2007). Response to special issue of applied linguistics devoted to language creativity in everyday context. *Applied Linguistics*, 28 (4), 597-609.
- Chang, S. M. (2001). Learning motivation in the EFL classroom. *Pai-sha English Education Review*, 1, 119—131.
- Chen, J. F., Warden, C. A., and Chang, H. T. (2005). Motivators that do not motivate: The case of Chinese EFL learners and the influence of culture on motivation. *TESOL Quarterly*, 39, 609–633.
- Cheng, H.-F., and Dörnyei, Z. (2007). The use of motivational strategies in language instruction: The case of EFL teaching in Taiwan. *Innovation in Language Learning and Teaching*, 1, 153–174.
- Cobb, P. (1994). Where is the mind? Constructivist and sociocultural perspectives on mathematical development. *Educational Researcher*, 23(7), 13-20.
- Creswell, J. W. (2002). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (2nd ed.). Thousand Oaks, CA: Sage.
- Csizér, K. and Kormos, J. (2009). Learning experience, selves and motivated learning behaviour: A comparative analysis of structural models for Hungarian secondary and university learners of English. In Z. Dörnyei and E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 98–119). Bristol: Multilingual Matters.
- Dewey, J. (1938). *Experience and Education*. New York: Macmillan.
- Dörnyei, Z. (1990). Conceptualizing motivation in foreign-language learning. *Language Learning*, 40, 45–78.
- Dörnyei, Z. (1994a). Motivation and motivating in the foreign language classroom. *The Modern Language Journal*, 78, 273–284.
- Dörnyei, Z. (1994b). Understanding L2 motivation. On with the challenge! The

- Modern Language Journal*, 78, 515–523.
- Dörnyei, Z. (1998). Motivation in second and foreign language learning. *Language Teaching*, 31, 117-135.
- Dörnyei, Z. (2000). Motivation in action: Towards a process-oriented conceptualisation of student motivation. *British Journal of Educational Psychology*, 70, 519–538.
- Dörnyei, Z. (2001a). *Motivational Strategies in the Language Classroom*. Cambridge: Cambridge University Press.
- Dörnyei, Z. (2001b). *Teaching and Researching Motivation*. Harlow: Longman.
- Dörnyei, Z. (2002). The motivational basis of language learning tasks. In P. Robinson, (Ed.), *Individual Differences and Instructed Language Learning* (pp. 137–158). Amsterdam: John Benjamins.
- Dörnyei, Z. (2003). Attitudes, orientations and motivations in language learning: Advances in theory, research and applications. In Z. Dörnyei (Ed.), *Attitudes, Orientations, and Motivations in Language Learning* (pp. 3–32). Oxford: Blackwell.
- Dörnyei, Z. (2005). *The Psychology of the Language Learner*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford: Oxford University Press.
- Dörnyei, Z. (2009). The L2 motivational self system. In Z. Dörnyei and E. Ushioda (Eds.), *Motivation, Language Identity and the L2 Self* (pp. 9–42). Bristol: Multilingual Matters.
- Dörnyei, Z. and Csizér, K. (1998). Ten commandments for motivating language learners: Results of an empirical study. *Language Teaching Research*, 2, 203–29.
- Dörnyei, Z. & Csizér, K. (2002). Some dynamics of language attitudes and motivation: Results of a longitudinal nationwide survey. *Applied Linguistics*, 23, 421–62.
- Dörnyei, Z., Csizér, K., & Németh, N. (2006). *Motivation, Language Attitudes and Globalisation: A Hungarian Perspective*. Clevedon, UK: Multilingual Matters.
- Dörnyei, Z., & Otto, I. (1998). Motivation in action: a process model of L2 motivation. *Working Papers in Applied Linguistics*, 4, 43-69.
- Dörnyei, Z., & Ushioda, E. (2011). *Teaching and Researching Motivation* (2nd

- ed.). Harlow: Longman.
- Egan, K. (2005). *An Imaginative Approach to Teaching*. San Francisco, CA: Jossey-Bass.
- Freire, P. (2000). *Pedagogy of the Oppressed* (30th anniversary ed.). New York: The Continuum International Publishing Group Inc.
- Gardner, R. C. (1985). *Social Psychology and Second Language Learning: The Roles of Attitudes and Motivation*. London: Edward Arnold.
- Gardner, R.C. & Lambert, W.E. (1972). *Attitudes and Motivation in Second Language Learning*. Rowley, MA: Newbury House.
- Gardner, R. C., & MacIntyre, P. D. (1993). On the measurement of affective variables in second language learning. *Language Learning*, 43(2), 157-194.
- Ghaith, Gh. (2003). The relationship between forms of instruction, achievement and perceptions of classroom climate. *Educational Research*, 45 (1), 83 – 93.
- Greene, M. (1995). *Releasing the Imagination: Essays on Education, the Arts, and Social Change*. San Francisco, CA: Jossey-Bass Publishers.
- Greene, M. (2005). Teaching in a moment of crisis: The spaces of imagination. *The New Educator*, 1, 77-80.
- Harris, P. L. (2000). *The Work of the Imagination*. Malden, MA: Blackwell Publishing.
- Heath, G. (2008). Exploring the imagination to establish frameworks for learning. *Studies in Philosophy and Education*, 27, 115-123.
- Hewitt, H. (2008). Literature as language and language as culture: the implications for literature in language teaching. *Language Teaching*, 41(4), 587-588.
- Higgins, E.T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94(3), 319-340.
- Ishiki, N. (2011). Trajectories of English learning: Through the use and analysis of EFL students' metaphors. *The 3rd International Conference on Humanities and Social Sciences*. Retrieved June, 2013 from <http://sv.libarts.psu.ac.th/conference5/proceedings/Proceedings3/article/1pdf/004.pdf>
- Johnson, R.B. & Onwuegbuzie, A.J. (2004). Mixed Methods Research: A Paradigm Whose Time Has Come. *Educational Researcher*, 33(7), 14-26.

- Karagiorgi, Y., & Symeou, L. (2005). Translating constructivism into instructional design: Potential and limitations. *Educational Technology & Society*, 8, 17–27.
- Lamb, M. (2009). Situation the L2 self: Two Indonesian school learners of English. In Z. Dörnyei, & E. Ushioda, (Eds.), *Motivation, Language Identity and the L2 Self* (pp. 229-247). Bristol: Multilingual Matters.
- Macintyre, P. D., Clément, R., Dörnyei, Z., & Noels, K. A. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *The Modern Language Journal*, 82(4), 545-562.
- Markus, H. & Nurius, P. (1986) Possible selves. *American Psychologist*, 41(9), 954-969.
- Moon, J. A. (2004). *Reflection in Learning and Professional Development*. New York: Routledge.
- Patton, M. Q. (1990). Qualitative interviewing. *Qualitative Evaluation and Research Methods* (2nd ed). California: SAGE Publications, Inc.
- Pedersen, S., & Liu, M. (2003). Teachers' beliefs about issues in the implementation of a student-centered learning environment. *Education Technology Research & Development*, 51(2), 57-76.
- Ryan, S. (2009). Self and identity in L2 motivation in Japan: The ideal L2 self and Japanese learners of English. In Z. Dörnyei and E. Ushioda (Eds.), *Motivation, Language Identity and the L2 Self* (pp. 120–143). Bristol: Multilingual Matters.
- Savvidou, C. (2004). An integrated approach to the teaching of literature in the EFL classroom. *The Internet TESL Journal*, 10(12). Retrieved June, 2013 from <http://iteslj.org/Techniques/Savvidou-Literature.html>
- Sawyer, R. (2006). Introduction: The new science of learning. In RK Sawyer, (Ed.), *The Cambridge Handbook of the Learning Sciences* (pp.19-34).
- Spolsky, B. (2000). Language motivation revisited. *Applied Linguistics*, 21, 157-169.
- Taguchi, T., Magid, D., & Papi, M. (2009). The L2 motivational self system among Japanese, Chinese and Iranian learners of English: a comparative study. In Z. Dörnyei, & E. Ushioda, (Eds.), *Motivation, Language Identity and the L2 Self* (pp. 66-97). Bristol: Multilingual

Matters.

- Tobin, K. (1993). *The Practice of Constructivism in Science and Mathematics Education*. Hillsdale, NJ: Lawrence Erlbaum.
- Trotman, D. (2006). Evaluating the imaginative: Situated practice and the conditions for professional judgment in imaginative education. *International Journal of Education & the Arts*, 7(3). Retrieved January 25th, 2010, from <http://ijea.asu.edu/v7n3/>
- Ushioda, E. (1996a). *Learner Autonomy: The Role of Motivation*. Dublin: Authentik.
- Ushioda, E. (1996b). Developing a dynamic concept of motivation. In T. Hickey & J. Williams, (Eds.), *Language, Education and Society in a Changing World* (pp. 239-45). Clevedon: Multilingual Matters.
- Ushioda, E. (2001). Language learning at University: Exploring the role of motivational thinking. In Z. Dörnyei & R. Schmidt, (Eds.), *Motivation and Second Language Acquisition* (Technical report #23) (pp. 93-125). Honolulu, HI: University of Hawaii, Second Language Teaching and Curriculum Center.
- Ushioda, E. (2003). Motivation as a socially mediated process. In D. Little, J. Ridley, and E. Ushioda (Eds.), *Learner Autonomy in the Foreign Language Classroom: Teacher, Learner, Curriculum and Assessment* (pp. 90–102). Dublin: Authentik.
- Ushioda, E. (2006). Language motivation in a reconfigured Europe: Access, identity and autonomy. *Journal of Multilingual and Multicultural Development*, 27, 148–61.
- Van, T.T.M. (2009). The relevance of literary analysis to teaching literature in the EFL classroom. *English Teaching Forum*, 3, 2-9.
- Vygotsky, L. S. (1986). *Thought and Language*. Cambridge, MA: MIT Press.
- Vygotsky, L. S. (2004). Imagination and creativity in childhood. *Journal of Russian and East European Psychology*, 42(1), 7-97.
- Wang, C.C. (2002) Innovative teaching in foreign language contexts: The case of Taiwan. In S.J. Savignon (Ed.) *Interpreting Communicative Language Teaching: Contexts and Concerns in Teacher Education* (pp. 131-165). New Haven, CN: Yale University Press.
- Warden, C. A. & Lin, H. J. (2000). Existence of Integrative Motivation in an Asian EFL Setting. *Foreign Language Annuals*, 33(5), 535-547.

- Watkins et al., (2000). *Learning about learning: Resources for Supporting Effective*. London: Routledge
- Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.
- Williams, M. (1994). Motivation in foreign and second language learning: An interactive perspective. *Educational and Child Psychology, 11*, 77 – 84.
- Williams, M., Burden, R. L., and Al-Baharna, S. (2001). Making sense of success and failure: The role of the individual in motivation theory. In Z. Dörnyei and R. Schmidt (Eds.), *Motivation and Second Language Acquisition* (pp. 171–184). Honolulu, HI: University of Hawaii Press.
- Zurher, L. A. (1977). *The Mutable Self." A Self-concept for Social Change*. Beverly Hills: Sage

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*Non-verbal Communication Training with an Interactive Multimedia Application*

Hiroki Tanaka, Sakriani Sakti, Graham Neubig, Tomoki Toda, Satoshi Nakamura

Nara Institute of Science and Technology, Japan

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## 1. Introduction

Socialization and communication are important factors influencing human social life. People who have trouble with social skills and communication have recently been increasing due to environmental and/or inherent reasons [1]. Some papers mentioned the extreme case of these traits is autism [2], a set of neurodevelopmental conditions characterized by social interaction and communication difficulties, as well as unusually narrow, repetitive interests [3]. Given the impact of these problems on every-day life, there has been considerable interest in tools to both identify the degree of these difficulties and allow for training tool to improve social and communication skills [4].

One of the central psychological themes in autism is empathizing. Empathizing is a set of cognitive and affective skills we use to make sense of and navigate the social world. It is well established that empathy, particularly as manifested in emotion recognition and mental state recognition, are core difficulties in people with Autism Spectrum Disorders (ASD).

There have been a number of studies on tools to train and test empathizing [5, 6]. In particular, we have proposed a tool a NOCOA (NONverbal COMMunication for Autism), which is communication aid application to help test and train the above skills [7]. NOCOA was designed according to several principles:

- The diagnosis criteria of autism includes a “marked impairment in the use of nonverbal behaviors, such as eye-to-eye gaze, facial expression, body posture, and gestures to regulate social interaction [8].” Fujisaki [9] uses the term “non-verbal” to refer to not only emotion, but also partner information, intention, situation, age, sex and other factors. Thus, the application should cover both emotion and other non-verbal behaviors.
- One of the factors influencing the ability to empathize is the severity of ASD. Autism is a spectrum condition [10] that has a broad range of clinical characteristics ranging from mild to severe. There are several methods such as the Autism Spectrum Quotient (AQ) for measuring a person’s position on the autistic spectrum in both people with and without autism [11]. Thus, non-verbal behaviors as tested by NOCOA should have correlate with Autism Spectrum Quotient, and we have used this to guide our design.
- While, individuals with ASD have difficulty in socialization and communication, they also show good and sometimes even superior skills in “systemizing[2].” Systemizing is the drive to analyze or build systems, to understand and predict the behavior of events in terms of underlying rules and regularities. The use of systematic computer soft- ware for individuals with ASD can take advantages of this fact [12, 13]. Thus, NOCOA was designed to include a systematic training method.

However, while the overall design of NOCOA has proven advantages in our previous research, NOCOA used only speech data for testing and training non-verbal behavior. In contrast, previous research has found that communication difficulties have been found across different sensory modalities, both visual and auditory. Some reports mentioned both visual and audio information is important to recognize basic and complex emotion [14, 15]. In this paper, we expand upon the NOCOA framework, incorporating not only audio data, but also movie data. We include movies of the speaker. We refer to this updated application as NOCOA+.

## 2. NOCOA

In this section, we explain the design of NOCOA framework.

### 2.1. Assessment of Communication Skills and Socialization

Non-verbal behaviors include various factors (e.g., emotion, situation, and age). The objective of our previous work is to confirm the important non-verbal factors contributing to communication skills as measured by using AQ.

To do so, we used factor analysis, which is commonly used to elucidate the factors contributing to scores on a psychometric test. To collect data, we first asked 21 Japanese students to take the English version of the AQ to measure two of the original five areas: social and communication skills (with a total of 20 statements).

Next, we performed a factor analysis using individual responses to each question on the AQ questionnaire to determine several important factors for social and communication skills. Based on an analysis using principal component analysis (PCA) and the promax method we finally found 5 factors:

1. intention and interest
2. politeness or impoliteness as well as new friends.
3. social places and situations.
4. chit-chat and feelings.
5. other factors.

To confirm the degree to which each factor contributes to evaluating communication and social skills, we calculate Pearson's  $r$  value between each factor's total score. This revealed that the first five factors are sufficient to measure social and communication skills. Finally, we selected the first two factors (intention & interest, and politeness/impoliteness & new friends) as the non-verbal information to be trained and tested by NOCOA. These represent intention and partner information. The detail of categorization procedure is written in [7].

### 2.2 Structure

Once we had identified the important non-verbal factors that those with communication difficulties have trouble identifying we next had to design a systematic application to test and train those factors. To do so, we adopted a quiz format, where the user of the application must choose from several categories of intention and partner information.

There are two modes in NOCOA, Listening mode and Test mode. In listening mode, users touch the screen to choose the content, choose from two types of partner information, and then choose from three types of intention. Finally the user can see the result they chose on the play screen, and can listen to the appropriate sound. The maximum number of sounds in each category is 4, and the sound is played randomly.

NOCOA also has a test mode, which is able to measure users' intention and partner information cognitive skills. The user listens to the voice, and then chooses the appropriate intention and partner. The test mode score is calculated by using agreement in each category with the general population. The intention category's score penalty for mistakes between derisive and social is higher than for those between social and friendly because these are critical misses in a social situation. In both partner information and intention the maximum score of each question is 5. The

test mode score is calculated after answering 10 questions, so 100 is the best score. The 10 question sets are chosen at random each time.

### 3. Movie Data

As mentioned in the previous section, NOCOA uses only audio data, but this is potentially limiting, in that both audio and visual information are important in real communication. NOCOA+ uses not only audio data but also movie data. In this section, the procedure of data collection and annotation are described.



Figure 1: Screenshot of NOCOA+.

#### 3.1. Movie Recording

We designed our movie recording scenario so it would be easy to collect the non-verbal behaviors defined in the previous section in as natural a manner as possible. For intention, we would like to ensure that we can collect video samples of “derisive”, “social”, “friendly” speech. To do so we had each subject. Following procedure is implicated; 1) read the sports section of the newspaper, 2) converse about the content of the article for 10 minutes, 3) read the society section of the newspaper, 4) converse for 10 minutes. In addition, to make it easier to collect two types of partner information, we had each subject converse with both their good friend and their teacher.

In this study, 4 students (mean age 23.7) acted as subjects scored under 32 of AQ total (cut-off value of ASD). A video camera (SONY HDR-CX560) is used, and placed in the middle of the two conversants to take frontal shots. A pin microphone (Olympus ME52W) was used for recording a person’s speech data. Movie data and speech data are synchronized using Windows Movie Maker, and each speech interval (utterance) is detected using the power value extracted by Snack Tcl/Tk [19]. Detected utterances automatically divided into speech, movie, and audiovisual. We also created utterances including context information, the 5s and 10s prior to the actual utterance.

#### 3.2. Classification

In movie recording, a total of 1200 audiovisual utterances are prepared. 3 annotators

who scored under 16 on the AQ test label the utterances through a web site. Sum of their AQ subareas scores for communication and social skills are each 1, 1, 1. Thus, the annotators likely have good social and communication skills. The annotators labeled each utterance into friend, teacher, or others for partner information and into derisive, social, friendly, or other for intention respectively. A total of 109 utterances were chosen for which all 3 annotators agreed for use in NOCOA+.

#### 4. Design Modifications for NOCOA+

The iPad application NOCOA+ was developed towards social and communication skill support in real situations. Alike NOCOA, NOCOA+ has two modes, training mode and test mode. In this section, the main modifications to NOCOA implement in NOCOA+ are explained.

##### 4.1. Training mode

Training mode is designed to enhance user's socialization and communication skills. Some papers speak of the extreme male brain theory of autism, which means that people with autism prefer a systematic experience [2]. A system is defined as something that takes input, which can then be operated on in a variety of ways, to deliver different outputs in a rule-governed way. Thus, we expanded training mode to provide two types of training, "listen to a large number of examples" and "check the rules". The former is developed to enable user to learn using a statistical-based training regimen, and the latter is a learning module using rules. The user can select the prefer one from the training menu.

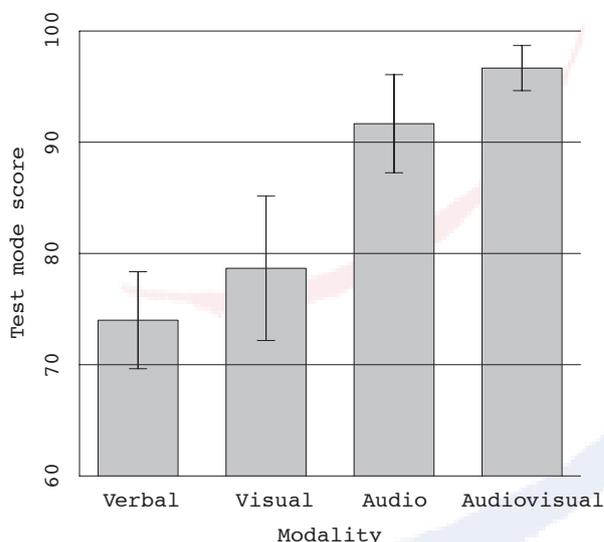


Figure 2: Score difference of each modality. Error bar shows standard error.

##### 4.2. Test mode

In the test mode quiz, 10 questions for measuring user's non-verbal communication skills are provided. It has 2 types of generalization levels shown below:

- Closed: testing is performed using data that were included in the training mode
- Open: data is not included in the training mode

To show the previous annotation is valid, the three annotators take the test mode. The

annotators answer ten questions, which include four modalities, audiovisual, speech, movie, and verbal (where the first author of this paper transcribed the speech in the movie data and read it in a flat tone without emotion). The closed data was used, and scores were averaged. Figure 2 shows the result. The maximum score of test mode is 100, and in case of audiovisual, averaged score is above 95, indicating that the previous annotation is reliable. However, scores of speech, movie, and verbal are decrease compared to audiovisual. In both movie and verbal, it is significantly different comparison with audiovisual. In case of movie, relatively a large number of errors are found in politeness category, and in case of verbal, a large number of errors are found in intention category. Thus we can see that both audio and visual data are useful for identifying the non-verbal behaviors, and thus audiovisual is used for further investigations of test mode.

We further expand NOCOA by setting a difficulty level in test mode. We do this by having ten people other than the annotators use test mode. Three types of difficulty level is set; easy-normal-hard according to their accuracy rate. Accuracy rate of each difficulty level is as follows; easy: 81-100%, normal: 51-80%, hard: 0-50%. All utterances are classified into each difficulty level, and in the future if test mode results are sent to server, difficulty level is automatically updated according to accuracy rate. For further experiments, we use difficulty levels, easy and normal.

## 5. Experiment1: Measuring Non-verbal Communication Skills

### 5.1. Method

The purpose of Experiment 1 is to investigate the relationship between AQ score and non-verbal communication skills using NOCOA+ among members of the general population, and efficacy of movie data. First, eleven Japanese students (mean age: 23.3, 10 male and 1 female) enter a laboratory with little external stimulus, receive an explanation by the first author, perform each difficulty level: easy and normal in closed data one time, and the averaged score of two difficulty level is calculated. Finally, eleven students take Japanese version of AQ [20] (available at <http://www.autism-communication.com/%7Ehiroki-tan/AQsub.html>), and the sum of the two AQ subareas (communication and social skill) is measured.

### 5.2. Result

Figure 3 shows relationship between sum of social and communication scores and test mode score of NOCOA+. Maximum score of test mode is 100, and a high score indicates high non-verbal communication skills. The maximum social and communication scores are each 10, and a high score indicates a high level of autistic traits. As Figure 3 shows, the correlation between sum of AQ subareas and averaged test mode score is high, with a correlation coefficient of 0.85 ( $p$ -value  $< .01$ ). This reveals that large variations in the ability to recognize intention and partner information exist in the general population, and that these are significantly related to autistic traits. Note that despite the fact that the participants had not been diagnosed with Asperger syndrome or high-functioning autism, and have average or above average IQ, their range of AQ scores was wide and well correlated with test mode score. Because in previous work with NOCOA, correlation coefficient was 0.71 ( $p$ -value  $< .01$ ) [7], by incorporating movie data, the improvement of correlation is confirmed.

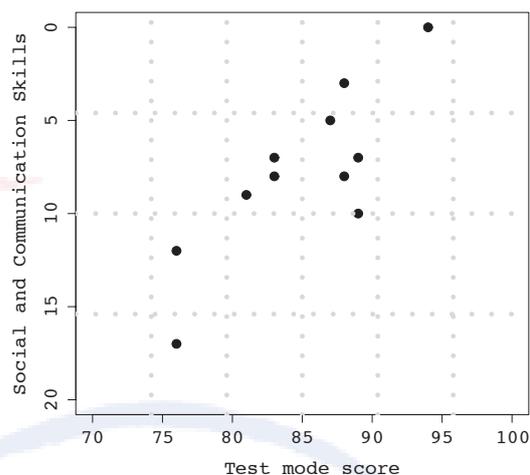


Figure 3: Relationship between sum of social communication score and test mode score of NOCOA+.

## 6. Experiment2: Effectiveness of Computer-Based Training

### 6.1. Method

The purpose of Experiment 2 is to investigate the efficacy of training mode among member of the general population. Maintaining high scores even in unseen open questions is also investigated. We recruited six students (mean age: 23, 5 male and 1 female). First, six students enter a laboratory, receive an description by first author, per- form each difficulty level: easy and normal in closed data one time. Then half of students who are randomly selected use training mode for 20 minutes, and the other half of students waited for the same 20 minutes. The training group is instructed to first use rule-based training and then use statistic-based training. Almost all students were able to complete all utterances in 20 minutes. After 20 minutes both the groups use test mode with both closed data and open data. The improved score between before and after 20 minutes of training or waiting is tested by Student's t-test.

### 6.2. Result

Figure 4.2 shows the improvement of test mode score before 20 minutes and after 20 minutes. In terms of difficulty level easy (left side of Figure 4.2), the improvement in score is 7.66 in training group and -2.33 in non-training group respectively. Improvement in score on open data, which means score between before 20 minutes on training set and after 20 minutes on test set, is 9.66 in the training group and -1.33 in the non-training group respectively. In terms of difficulty level normal (right side of Figure 4.2), the improvement in score 12.00 in training group and -3.00 in the non-training group respectively. The improvement on open data is 7.33 in the training group and 5.66 in non-training group respectively.

The result shows that in terms of difficulty level easy, 20 minutes training is effective with both closed data and open data, and in both audio data and movie data, we confirm improvement of test mode score by systematic training. However, in terms of difficulty level normal, questions not include in training mode is still difficult. For this difficulty, because people with autism have difficulties in generalizing learned social skills [23, 24, 25], autistic traits which individuals have should be considered.

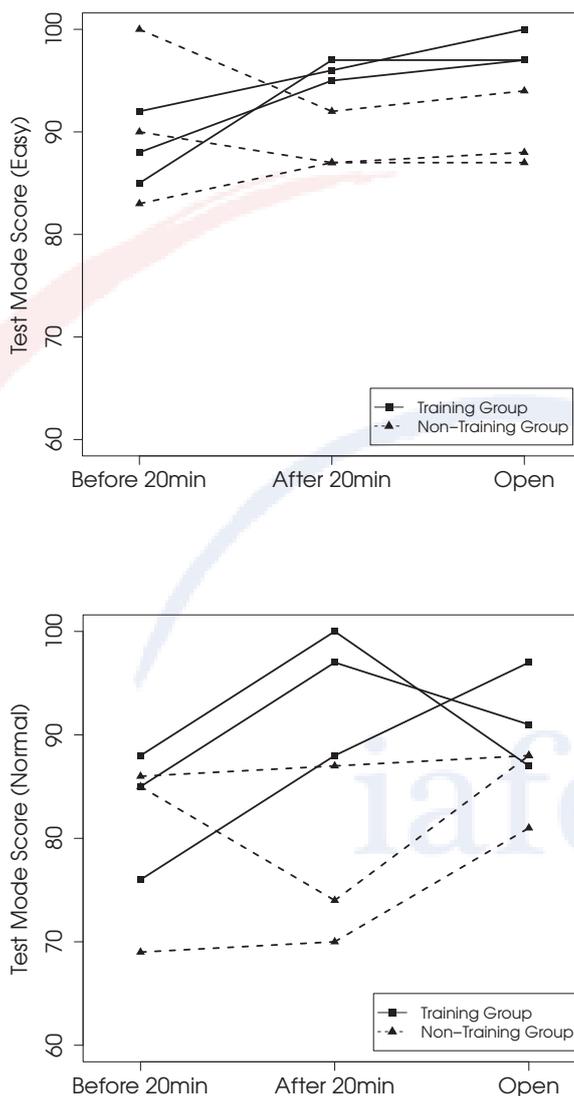


Figure 4: Left figure indicates difficulty level easy, and right figure indicates difficulty level normal. Dot-line is score of non-training group, and solid-line is score of training group. Pre and Post 20 minutes (Closed data) is shown as well as Post 20 minutes (Open data).

## 7. Conclusion

Previous research has found that social and communication difficulties have been found across different sensory modalities, both visual and auditory. We expand upon the NOCOA framework with not only audio data, but also movie data. We refer to this updated application as NOCOA+. In this paper we confirm the relationship between non-verbal communication skills and AQ subareas by using NOCOA+, and examine prospective intervention through teaching non-verbal communication skills, intention and partner information.

One potential direction for the future is considering individual differences (e.g. relationship between tendency of mistakes and autistic traits). Collecting more data

for training is also important, and as a substitute plan, contextual data can be used for training. In addition, people with ASD need long term treatment for emotion recognition [17]. Thus we will design the next experiment with long-term follow-up in people with ASD.

### **8. Acknowledgement**

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## 9. References

- [1] GOLEMAN D., 2007. Social intelligence. Arrow Books.
- [2] BARON-COHEN S., RICHLER J., BISARYA D., GURUNATHAN N., WHEELWRIGHT S., BARON-COHEN S., RICHLER J., BISARYA D., GURUNATHAN N. & WHEELWRIGHT S. 2003. The systemizing quotient: an investigation of adults with Asperger syndrome or high—functioning autism, and normal sex differences. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences* 358: 361-374.
- [3] KANNER L., 1943. Autistic disturbances of affective contact. *Nervous Child* 2: 217-250.
- [4] BARON-COHEN S., 2008. Autism and Asperger syndrome. Oxford University Press, USA.
- [5] BAUMINGER N., 2002. The facilitation of social-emotional understanding and social interaction in high-functioning children with autism: Intervention outcomes. *Journal of autism and developmental dis- orders* 32: 283-298.
- [6] GOLAN O., & BARON-COHEN S., 2006. Systemizing empathy: Teaching adults with Asperger syndrome or high-functioning autism to recognize complex emotions using interactive multimedia. *Develop. Psychopatholgy*.
- [7] TANAKA H., SAKTI S., NEUBIG G., TODA T., & NAKAMURA S., 2012. Non-verbal cognitive skills and autistic conditions: An analysis and training tool, In *Proc IEEE CogInfoCom*.
- [8] AMERICAN PSYCHIATRIC ASSOCIATION, 1994. The diagnostic and statistical manual of mental disorders, IV . Washington, D.C.: American Psychiatric Association.
- [9] FUJISAKI H., 1997. Prosody, models, and spontaneous speech. *Computing Prosody*.
- [10] WING L., 1996. Autistic spectrum disorders. *Bmj* 312: 327.
- [11] BARON-COHEN S., WHEELWRIGHT S., SKIN- NER R., MARTIN J., & CLUBLEY E., 2001. The Autism-Spectrum Quotient (AQ): evidence from Asperger syndrome/high-functioning autism, males and females, scientists and mathematicians. *Journal of Autism and Developmental Disorders* 31: 5-17.
- [12] BISHOP J., 2003. The Internet for educating individuals with social impairments. *Journal of Computer Assisted Learning* 19: 546-556.
- [13] MOORE D., MCGRATH P., & THORPE J., 2000. Computer-aided learning for people with autism - a framework for research and development. *Innovations in Education and Teaching International* 37: 218-228.
- [14] GOLAN O., BARON-COHEN S., HILL J. J., & RUTHERFORD M. D., 2007. The ‘ reading the mind in the voice ’test-revised: A study of complex emotion recognition in adults with and without autism spectrum conditions. *Journal of autism and develop- mental disorders* 37: 1096-1106.
- [15] GOLAN O., BARON-COHEN S., & GOLAN Y., 2008. The ‘ Reading the Mind in Films ’task [child version]: Complex emotion and mental state recognition in children with and without autism spectrum conditions. *Journal of Autism and Developmental Disorders* 38: 1534-1541.
- [18] TANAKA Y., & WAKIMOTO K., 1983. Methods of multivariate statistical analysis. Gendai-Sugoku, Tokyo.
- [19] The Snack Sound Toolkit. <http://www.speech.kth.se/snack/>
- [20] WAKABAYASHI A., BARON-COHEN S., WHEELWRIGHT S., & TOJO Y., 2006. The Autism-Spectrum Quotient (AQ) in Japan: a cross-cultural comparison.

Journal of Autism and Developmental Disorders 36: 263-270.

[21] EKMAN P., 1993. Facial expression and emotion. *American Psychologist* 48: 384.

[22] OERTEL C., SCHERER S., & CAMPBELL N., 2011. On the use of multimodal cues for the prediction of degrees of involvement in spontaneous conversation. Twelfth Annual Conference of the International Speech Communication Association.

[23] BLTE S., FEINEIS-MATTHEWS S., LEBER S., DIERKS T., HUBL D., & POUSTKA F., 2002. The development and evaluation of a computer-based program to test and to teach the recognition of facial affect. *International Journal of Circumpolar Health* 61:

[24] SILVER M., & OAKES P., 2001. Evaluation of a new computer intervention to teach people with autism or Asperger syndrome to recognize and predict emotions in others. *Autism* 5: 299-316.

[25] BERNARD-OPITZ V., SRIRAM N., & NAKHODA-SAPUAN S., 2001. Enhancing social problem solving in children with autism and normal children through computer-assisted instruction. *Journal of Autism and Developmental Disorders* 31: 377-384.

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*Higher Education and the Malaysian Public Employment*

Kuan Heong Woo

Universiti Sains Malaysia, Malaysia

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Abstract

Higher Education expanded rapidly in Malaysia. Shouldering the country's aspiration to achieve the goal of becoming a developed nation by 2020, higher education systems and institutions are under pressure to produce skilled and quality graduates to meet the nation's workforce and employers' needs. The Malaysian government is the major employer of the country. Although graduate manpower, which joins the Management and Professional Group, forms just over a fifth of the public employment, its importance is much larger than its proportion suggests. "This is the Group that is responsible for the administration and development of the country" (Abdullah Sanusi et al., 2003: 79). Through analyzing current situation and using a clustered-stratified random sample of 1,200 final year students of four public universities, this paper aims to examine the ability of the Malaysian public universities to produce sufficient graduates in terms of quantity, quality and representativeness to meet the government's graduate manpower need, and to identify factors affecting graduates' choice of public employment. Results show that the public universities are able to produce sufficient graduate manpower for public employment in terms of capacity but not representativeness. The pool of respondents who prefer public employment does not have enough high-CGPA Chinese for merit-based representative recruitment. Further analyses point to the declining quality of education including in teaching English, and the poorer academic performance of males compared to females. Factors which affecting graduates' choice of public employment including job security, pay, promotion prospects, working hours, job stress, challenging job, image and autonomy.

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## INTRODUCTION

Higher education expanded rapidly in Malaysia. Shouldering the country's aspiration to achieve the status of developed nation by 2020, higher education institutions (HEIs) are under pressure to produce skilled and quality graduates to meet the nation's workforce's needs.

Over the years, enrollment and output of graduates in the Malaysian HEIs are increasing. While data show that the output of graduates is increasing annually, a large proportion of them remain unemployed. Issues concerning graduate employability have been raised in the context of continuing supply of quality graduate manpower against a changing economic structure of the country.

In its effort to address the skills mismatches that exist in the labor market and to create innovative and sustainable economies, the government has introduced entrepreneurship into conventional subject courses by revising the higher education curriculum to include small business management, analytical skills, team work and proficiency in English (Shafiq 2011). Despite the efforts, scarcity of skilled, competent employees continue to be one of the biggest policy concerns in Malaysia.

The Malaysian government is the major employer of the country. A number of researches on employability and meeting employers' needs has been conducted, however, the focus has been for the private sector (Mohamad Sattar and Puvanasvaran 2009; Latisha 2010; Mohd Noor and Ishak 2011; Nik Hairi et al. 2012). There is few, if any, research concerning meeting the government's graduate manpower needs. This paper aims to examine the ability of public universities to produce sufficient graduates to meet the government's manpower needs. Factors affecting graduates' choice of public employment would also be examined.

### 1.0 HIGHER EDUCATION AND THE MALAYSIAN CIVIL SERVICE

Central to the performance of the civil service is its ability to secure needed manpower. Success in securing needed manpower for the civil service depends directly on personnel recruitment practices. However, it also depends, and no less importantly, the ability of the HEIs to produce quality graduates to meet the nation's workforce's needs.

This part examines the Malaysian HEIs and civil service, and identifies the specific questions that would be examined in the paper.

#### 1.1 The Malaysian Higher Education: Expansion and Manpower Supply

The Malaysian government created the Ministry of Higher Education (MoHE)<sup>1</sup> in 2004 to take charge of its higher education. The mission of MoHE is to create a higher education environment that will foster the development of academic and institutional excellence. This mission is in line with the vision of MoHE to establish Malaysia as a centre of excellence for higher education by the year 2020.

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<sup>1</sup> MoHE merged with the Ministry of Education in 2013.

In line with the requirements of economic growth, the government has linked the development of higher education to the country's workforce's needs. HEIs expanded rapidly in Malaysia. Enrollments at all levels of study in HEIs increased from 674,499 in 2005 to 1,134,134 in 2010, an increase of 68.15%. Every year, enormous number of graduates is entering the local employment market. The output of graduates with bachelor degrees has increased from 72,065 to 93,007 in 2005 – 2010, an increase of 29.10% (MoHE 2008 and 2011), and this trend shows no sign of slowing down.

While the above statistics show that the supply of graduate manpower is increasing, lack of employability skills is one of the problems which employers are facing with graduates or their future employees, however. The unemployment rates among graduates with bachelor degrees range from 24.7% to 36.4% in 2006 – 2009 (UNESCO 2012, p. 26). Nik Hairi et al. (2012) warn that graduate unemployment will continue to increase unless the HEIs and graduates are prepared to sharpen the soft skills.

## 1.2 The Malaysian Civil Service: Size and Performance

The introduction of the New Economic Policy (NEP) after the racial violence on May 13, 1969 marked a sharp increase in the re-structuring role of the Malaysian government. The NEP was “public sector-driven” and many “new instruments of government were created” with “generous allocation of resources to carry out their tasks”. The intake of civil servants as well as training programmes for them were vastly expanded to “increase the capability of the civil service and to increase the number of qualified or trained *bumiputra* (i.e., native) in the government service” (Abdullah Sanusi, Norma and Abdul Kuddus 2003, p. 226). The number of civil servants increased rapidly during the 1970s, at an annual rate of 5% to 6%. When Mahathir Mohamad became Prime Minister in 1981, he was concerned with the size of the civil service and took steps to curb its growth. From 1982 until Mahathir Mohamad relinquished office in 2003, the number of civil servants increased at an average annual rate of only about 1% (Lim 2006, p. 14; Public Service Department 2008). However, civil servants still account for over 10% of the country's labor force and over 4% of the country's population, as indicated in Table 1.

Is public employment in Malaysia high by international standards? Determining the right size of the civil service is a complex matter and precise comparisons among countries are difficult due to different definitions adopted. However, Lucas and Verry, the chief technical advisers in manpower planning to the Economic Planning Unit of the federal government during the preparation of the Sixth Malaysia Plan (1991 - 1995), present revealing international comparisons. By comparing (a) the total government employment relative to total population; (b) the total Malaysian public employment relative to total non-agricultural employment; (c) the total public sector (including public enterprise) employment relative to non-agricultural employment, Lucas and Verry (1999, p. 229) concludes: “By whichever measure, it seems that Malaysia indeed had a fairly large public sector by Asian standards as of 1987.”

Two more recent reports lend support to Lucas and Verry's conclusion. In 2003, Malaysia ranked first among six Asian countries in total public employment relative to total population. In 2009, Malaysia's civil servants-to-population ratio was the highest in Asia Pacific (*Sin Chew Daily* 2006; *Rightways* 2011). These comparisons

suffice to show the large size and role of the civil service and to underline the importance of its performance.

**Table 1: Malaysian Population, Labor Force (Employed Persons) and Civil Servants, 2000 – 2010**

Year	Population <sup>a</sup>	Labor Force <sup>b</sup>	Civil Servants <sup>c</sup>	C. Servants as % of Population	Civil Servants as % of Labor Force
2000	23 494 900	9 269 200	979 464	4.2	10.6
2001	24 123 400	9 357 000	994 548	4.1	10.6
2002	24 727 100	9 542 600	1 026 143	4.2	10.8
2003	25 320 000	9 869 700	1 080 886	4.3	11.0
2004	25 905 100	9 979 500	1 098 638	4.2	11.0
2005	26 476 900	10 045 400	1 118 392	4.2	10.6
2006	26 831 500	10 275 400	1 152 467	4.3	11.2
2007	27 186 000	10 538 100	1 244 372	4.6	11.8
2008	27 540 500	10 659 600	-	-	-
2009	27 895 300	10 897 300	1 222 947 <sup>d</sup>	4.4	11.2
2010	28 334 100	11 899 500	1 290 000 <sup>d*</sup>	4.6	10.8

Sources: <sup>a</sup> Department of Statistics (2010)  
<sup>b</sup> Department of Statistics (2011b)  
<sup>c</sup> Public Service Department (2008)  
<sup>d</sup> *Sin Chew Daily* (2010a and 2010b)  
 \*The number of civil servants until 21 June 2010

Evaluating civil service performance also faces difficult problems of measurement and standards to be used. However, Lim (2009, p. 3) argues that it is both appropriate and feasible to evaluate civil service performance by looking at the satisfaction of stakeholders with the civil service because “meeting the expectations of stakeholders is the *raison d’être* of the public service.” The stakeholders here referred to the country’s citizens.

The public often regards corruption and unsatisfactory service delivery as significant performance deficits of the civil service. Government corruption has long been seen as worrisome in Malaysia. According to both rank and score in Transparency International’s Corruption Perception Index, little improvement has been made in political and bureaucratic corruption for the country since 1995 (Lim 2009, p. 12; *Sin Chew Daily* 2009).

Public dissatisfaction with the delivery of public services is indicated by the volume of complaints received by the Public Complaints Bureau. Public complaints shot up to 14,700 cases in 2010 compared to 2,707 cases in 2005, suggesting increasing public dissatisfaction (Prime Minister’s Department 2013).

The ability of the police in ensuring a safe living environment has also been widely questioned. High crime rates are plaguing the daily lives of the public. Even the Malaysian Home Minister admitted that Malaysians have every reason to be worried over the rising crime rate and the people had a basis for such fear “because cases of shooting and killing are occurring almost every week.” (Lavendran 2013; *The Star Online* 2013c)

The above discussion indicates that the civil service has failed to meet the expectations of its stakeholders.

### 1.3 The Malaysian Public Employment: Attractiveness and Supply

Dissatisfaction with the performance of the Malaysian civil service has called into question the ability of the civil service to attract needed graduates manpower. Although graduate manpower forms only 21.4% of the public employment, its importance is much larger than its proportion suggests. University graduates join the Management and Professional Group in the civil service and “this is the Group that is responsible for the administration and development of the country.” (Abdullah Sanusi, Norma and Abdul Kudus 2003, pp. 79-80)

In this paper, the ability of the civil service to secure graduate manpower is assessed by examining the adequacy of the pool of respondents who prefer public employment (the pool of likely applicants for public employment, hereafter referred to as the pool).

#### 1.3.1 The pool of likely applicants: quantity

In order to examine the attractiveness of the Malaysian public employment, Woo (2011) uses a clustered-stratified random sample of 1,200 final year students of four public universities to examine the ability of the civil service to attract graduate manpower for ensuring capacity and representativeness.<sup>2</sup> Respectively, there are 49.8% and 50.2% respondents of the sample who prefer public employment and non-public employment. In other words, the pool consists of 597 respondents of the 1,200 respondents. The question is whether the 49.8% of respondents who prefer public employment is enough to meet the needs of the public sector. To answer it, we need to estimate the percentage that the public sector must attract in order to fill its graduate manpower needs. This is done in two steps below.

Table 2 shows the total labor force and civil servants with tertiary qualifications only. From the table, it can be said that the civil service needs to attract no more than 13% of graduates in the labor force.

**Table 2: Civil Servants in Labor Force with Tertiary Qualification**

Year	Labor Force (Employed Persons)	Civil Servants	Civil Servants as % of Labor Force
2000 <sup>a</sup>	1 288 419	137 817	10.7
2001 <sup>a</sup>	1 513 491	139 497	9.2
2002 <sup>a</sup>	1 584 072	159 265	10.1
2003 <sup>a</sup>	1 727 198	190 297	10.9
2004 <sup>a</sup>	1 817 561	220 948	12.2
2005 <sup>a</sup>	2 004 025	226 475	11.3
2006	1 975 200 <sup>b</sup>	255 773 <sup>c</sup>	12.9
2007	2 121 900 <sup>b</sup>	-	-
2008	2 244 700 <sup>b</sup>	-	-
2009	2 541 000 <sup>b</sup>	289 225 <sup>c</sup>	11.4
2010	2 788 600 <sup>b</sup>	282 907 <sup>c</sup>	10.2

<sup>2</sup> The study was conducted in 2005.

Sources: <sup>a</sup> Woo (2011, p. 169)  
<sup>b</sup> Department of Statistics (2011a)  
<sup>c</sup> Public Service Department (2006; 2009; 2010)

The graduate labor force consists of graduates from all Malaysian universities and foreign universities. The next step is to use the above 13% of all graduates to estimate the percentage that the civil service needs to attract from public universities for meeting its graduate manpower needs. This latter estimate is the appropriate standard for judging whether the pool of 49.8% of respondents from public universities is adequate. To arrive at this standard also requires knowing the proportion of total graduates that are accounted for by public universities as well as the proportion of graduate applicants to the civil service that are accounted for by public universities.

Table 3 shows that public universities account for an estimated 62.1% and 61.0% of total graduates in 2005 and 2010 respectively.

**Table 3: Number of Graduates by Type of University in 2005 and 2010**

Type of University	Year	N	%
Public	2005 <sup>a</sup>	51 771	62.1
Private		20 294	24.3
Foreign		11 322	13.6
	Total	83 387	100
Public	2010 <sup>b</sup>	66 445	61.0
Private		26 562	24.4
Foreign		15 851	14.6
	Total	108 858	100

Sources: <sup>a</sup> Woo (2011, p. 171)

<sup>b</sup> MoHE (2011)

However, the civil service does not depend solely on public universities for its graduate manpower. Statistics show that 88.7% of applicants graduated from public universities (Abdullah Sanusi, Norma and Abdul Kuddus 2003, p. 93). It is therefore estimated that 90% of graduate applicants to the civil service come from public university graduates. With this 90% estimate, the proportion of the sample that the civil service must attract to meet its needs is calculated to be 18.8%.<sup>3</sup> This is rounded up and slightly increased to 20% in order to provide a strong test of the ability of the civil service to meet its graduate manpower needs. If the pool reaches 20% of the sample, then it would be safe to say that the civil service is able to attract the graduate manpower it needs, as far as quantity is concerned.

<sup>3</sup>The 18.8% of graduates from public universities needed by the civil service (X), is obtained by entering the estimated figures into the right hand side of the following equation:

$$\begin{aligned}
 X &= \frac{\% \text{ of total graduates needed by the civil service}}{\% \text{ of total graduates from public universities}} \times \% \text{ of applicants from public} \\
 &\text{universities} \\
 &= \frac{13\%}{62.1\%} \times 90\% \\
 &= 18.8\%
 \end{aligned}$$

Comparing the size of the pool against this 20% standard, it is clear that, in 2005, the civil service is able to attract enough numbers of graduate employees. The pool comprising of 49.8% of the study's sample of graduating students greatly exceeds the estimated 20% needed by the civil service.

In short, public universities are able to supply sufficient graduate manpower for public employment and the civil service is capable of attracting its share of fresh local graduates in terms of quantity.

From Tables 2 and 3, in terms of percentages, the supply of graduate manpower by various universities and graduate manpower which the civil service needs to attract in 2005 and 2010 are quite similar. Therefore, it is argued that the 20% standard which developed by Woo is probably applicable in the Malaysian current situation. This is supported by the announcement recently made by the Malaysian Chief Secretary to the Government that "the 1.42 million civil servants are sufficient for the country at present" (*The Star* 2013a).

The above overall standard of 20% is also useful for constructing the standards for assessing the ability of the civil service to attract adequate graduate manpower in terms of the qualitative aspects of capacity and representativeness in the rest of the paper.

### **1.3.2 The pool of likely applicants: capacity**

This part examines the pool in terms of the following aspects that affect the capacity of the civil service: academic performance (CGPA) and English language proficiency. The importance of attracting good academic performers is obvious: The civil service needs brains in order to perform well. As English is the main international language, proficiency in the language is important for conducting international transactions and also for facilitating relations with the private sector that mainly uses English.

From Table 4, the 42.8% and 39.4% of Good and Very Good CGPA in the pool are greatly exceeding the 20% fair share of the civil service in these two stronger subgroups. It may become clearer by looking at actual numbers. Those with Good and Very Good CGPA in the pool add up to 263, while the fair share of the civil service amounts to only 125 (i.e. 20% of 627, the total number of Good and Very Good CGPA in the sample). More strikingly, the 263 of high CGPA in the pool even exceeds 20% of the sample (here 1,012) or the total of 202 graduates from the sample that are needed by the civil service.

**Table 4: Comparison of the Pool of Likely Applicants and the Sample by CGPA**

CGPA*	Pool	Sample	Pool as % of Sample
	N	N	
Very Weak	33	58	56.9
Weak	189	327	57.8
Good	200	467	42.8
Very Good	63	160	39.4
Total	485	1 012	47.9

Source: Woo (2011, p. 173)

\*CGPA: Very Weak = below 2.50      Good = 3.00 – 3.49  
 Weak = 2.50 – 2.99      Very Good = 3.50 – 4.00

Table 5 compares the pool with the sample in terms of proficiency in English. The pool contains 47.7% of respondents who are Good in English, more than double the fair share of 20%. The civil service is thus doing much better than the private sector as a whole in terms of attracting respondents who are Good in English.

**Table 5: Comparison of the Pool of Likely Applicants and the Sample by English Language Proficiency**

English Proficiency	Pool	Sample	Pool as % of Sample
	N	N	
Not Good	28	55	50.9
Moderate	385	765	50.3
Good	176	369	47.7
Total	589	1 189	49.5

Source: Woo (2011, p. 175)

In terms of numbers, the estimated 20% of the sample (here 1,189) needed by the civil service amounts to 238 graduates. However, the number of respondents who are Good in English in the pool is only 176. Even though the civil service fares much better than the private sector and attracts 47.7% of respondents who are Good in English, it is still unable to meet its estimated share of graduates entirely from those who are Good in English.

The preceding analysis has shown that the civil service is able to meet its estimated 20% of graduates from those who have high CGPA. Why is the situation different when it comes to proficiency in English? From Tables 4 and 5, it's obvious that this difference is not due to any difference in the attractiveness of the civil service. Rather, the reason lies in the relative scarcity of graduates who are Good in English. The sample has only 31.0% (369 of 1,189) respondents who are Good in English, compared to 62.0% (627 of 1,012) of respondents with high CGPA. The result suggests that public universities fail to produce sufficient graduates who are proficient in English.

The declining standard of English among graduates has become a serious issue in Malaysia. The deplorable state of affairs with regard to the proficiency of the English language in Malaysia is exemplified by the shocking admission by a top Education Ministry official recently that two-thirds of the 70,000 English language teachers in the country failed to reach a proficient English level, and, it is said that uplifting the English standard among students poses "the most acute challenge" of the Malaysia

Education Blueprint 2013-2025 which launched in September 2013 (Hariati and Lee 2011; Doss 2012; Azman 2013; *Declining English Standard* 2013).

### 1.3.3 The pool of likely applicants: representativeness

This part examines the adequacy of the pool for achieving representativeness in terms of race and gender. The question of interest is whether the pool is adequate for recruitment into the civil service to be representative of the country's population. To examine this question, it is not enough to compare the pool with the sample or even to see whether the pool has 20% of each racial or gender group in the sample. This is because the sample is not representative of the country's population. What is needed is to compare the pool with what is required for recruitment, i.e. of only 20% of the sample, to be representative of the country's population.

**Table 6: The Adequacy of the Pool for Racially Representative Recruitment**

Race	Pool	Sample	Pool as % of sample	C. Pop., 2005 (%)	N required for rep.
	N	N			
Malays	471	761	61.9	54.1	130
Chinese	79	354	22.3	25.3	61
Indians	37	68	54.4	7.5	18
Others <sup>4</sup>	10	17	58.8	13.1	31
Total	597	1 200	49.8	100	240

Source: Woo (2011, p. 179)

The numbers required for racially representative recruitment are computed as follows. The civil service needs to recruit 20% of the sample of 1,200 respondents or 240 graduates. In 2005, the year in which data was collected, the estimated population of the country consisted of 54.1% Malays, 25.3% Chinese, 7.5% Indians and 13.1% Others. Thus, to be racially representative of society in 2005, the 240 needed graduates should have 130 Malays, 61 Chinese, 18 Indians and 31 Others. The numbers required for racially representative recruitment in 2010 is similar to 2005.<sup>5</sup> From Table 6, generally, the pool has enough numbers of all races for representative recruitment. However, this examination of racial representativeness raises another question: Whether ensuring representative recruitment would compromise capacity. To check this, Table 7 provides breakdowns by CGPA for the various racial groups.

<sup>4</sup>The number of Others (mainly non-Malay *bumiptrras*) in the pool falls far short of what is required for representative recruitment. This is probably because most other *bumiptrras* in Sabah and Sarawak go to the universities in those two states that the study does not cover. Due to the number of Others in the sample is too few for meaningful analysis, analysis will only be done for the other racial groups.

<sup>5</sup> In 2010, the population of the country contained 54.6% Malays, 24.6% Chinese, 7.3% Indians and 13.5% Others, hence, the numbers required for racially representative recruitment are 131 Malays, 59 Chinese, 18 Indians and 32 Others.

**Table 7: Comparison of the Pool of Likely Applicants and the Sample by Race and High CGPA\***

Race	Pool			Sample			Pool as % of Sample		
	Good CGP A	V. Gd CGP A	Total	Good CGP A	V. Gd CGP A	Total	Good CGP A	V. Gd CGP A	Total
	Malays	151	40	191	267	59	326	56.6	67.8
Chinese	28	18	46	162	91	253	17.3	19.8	18.2
Indians	18	4	22	34	9	43	52.9	44.4	51.2
Others	3	1	4	4	1	5	75.0	100.0	80.0
Total	200	63	263	467	160	627	42.8	39.4	41.9

Source: Woo (2011, p. 182)

\*CGPA: Good = 3.00 – 3.50; Very Good = 3.50 – 4.00

To examine the racial groups in the pool according to CGPA, the sample is reduced to 1,012 respondents because of missing values for CGPA. To enable recruitment of 20% of the sample or 202 graduates to be representative of the country's population, the pool should have at least 109 Malays, 51 Chinese and 15 Indians.<sup>6</sup> The main purpose of Table 7 is to examine whether representative intake could be achieved without compromising merit as measured by CGPA. A simple way to do this is by examining whether the racial totals of high CGPA applicants are adequate for representative recruitment. The pool contains 191 Malays, 46 Chinese and 22 Indians with high CGPA. Thus the 109 Malays and 15 Indians needed for representative recruitment can all be taken from those with high CGPA. For Chinese, however, the situation is not so favorable. The pool only has 46 high-CGPA Chinese, which is less than the 51 needed for representative recruitment.

The under-representative of Chinese in the Malaysian civil service is not something new. In 2010, there was only 6% Chinese out of the 1.22 million-strong civil service. In 2011, out of the total 1,121,692 applicants for government jobs, only 2% to 3% are Chinese and Indian applicants. Even the Chairman of the Public Service Department expressed his concerned over the increasingly mono-ethnic civil service in Malaysia (*Sin Chew Daily* 2010a; 2012a).

**Table 8: The Adequacy of the Pool for Gender Representative Recruitment**

Gender	Pool	Sample	Pool as % of Sample	C. Pop., 2005 (%)	N required for rep.
	N	N			
Male	178	396	45.0	50.9	122
Female	419	804	52.1	49.1	118
Total	597	1 200	49.8	100	240

Source: Woo (2011, p. 184)

The more than 2 to 1 gender imbalance in favor of females in the pool might suggest that males are not enough for gender-representative recruitment (Table 8). However, as in examining racial representativeness, this issue can be better examined by comparing the pool numbers with the numbers required for representative recruitment of 20% of the sample.

<sup>6</sup> In 2010, when the sample is reduced to 1,012, the numbers required for racially representative recruitment are 110 Malays, 50 Chinese, 15 Indians and 27 Others.

For recruitment to be representative of society in terms of gender, the pool should have at least 122 males and 118 females. This requirement is more than satisfied by the 178 males and 419 females in the pool. The numbers required for gender representative recruitment in 2010 is similar to 2005.<sup>7</sup>

The question, however, is whether gender representative recruitment would compromise capacity as measured by CGPA. To examine the two gender groups in the pool according to CGPA, the sample is reduced to 1,012 respondents because of missing values for CGPA. A total numbers of 103 males and 99 females are needed for recruitment of 20% of the sample.<sup>8</sup>

The 191 females with high CGPA in the pool greatly exceed the 99 females required for female-representative recruitment (Table 9). Ensuring representativeness for males, however, would require considerable compromise of merit as the pool only contains 72 males with high CGPA, which is significantly short of the 103 required. This analysis suffices to show that the pool does not have enough high-CGPA males for achieving gender representativeness under competitive recruitment.

**Table 9: Comparison of the Pool of Likely Applicants and the Sample by Gender and CGPA**

Gender	Pool			Sample			Pool as % of Sample		
	High CGP A	Low CGP A	Total	High CGP A	Low CGP A	Total	High CGP A	Low CGP A	Total
	Male	72	75	147	188	143	331	38.3	52.4
Female	191	147	338	439	242	681	43.5	60.7	49.6
Total	263	222	485	627	385	1 012	41.9	57.7	47.9

Source: Woo (2011, p. 186)

The reasons for the inadequate number of males with high CGPA in the pool can be explained using Table 9. The last column that compares the pool and sample shows that the pool contains 44.4% of males and 49.6% of females in the sample. Public employment is therefore not much less attractive to males than to females. The reasons are to be found in the sample column, which shows that females not only outnumber males by 681 to 331, but also do better academically, i.e. with a higher proportion earning high CGPA compared to males. The inadequate number of high-CGPA males in the pool is therefore due to their lower university enrolment and academic performance.

The relative importance of these two reasons can also be assessed from Table 9. The single change of raising high-CGPA males to the same proportion as for females in the sample would produce 82 high-CGPA males in the pool,<sup>9</sup> which is not enough to

<sup>7</sup>In 2010, the country's population contained 51.2% males and 48.8% females, hence, the numbers required for gender representative recruitment are 123 males and 117 females.

<sup>8</sup>In 2010, when the sample is reduced to 1,012, the numbers required for gender representative recruitment are 103 males and 99 females.

<sup>9</sup>From Table 9, the ratio of females with high-CGPA in the sample is 0.6446 (439/681). If males perform equally well and have the same ratio as females, the sample would consist of 213 (0.6446 x 331) males with high CGPA. Then, with the ratio of high-CGPA males entering the pool remaining at 0.3830 (72/188), the pool would consist of 82 (0.3830 x 213) high-CGPA males.

satisfy the required number of 103. However, the single change of increasing males in the sample to their population percentage would produce 112 high-CGPA males in the pool,<sup>10</sup> which is more than enough to satisfy the required number of 103. This clearly suggests that the lower enrolment of males in universities is the more serious reason for the shortage of high-CGPA males for representative recruitment.

Male students used to outnumber females in 1970s and 1980s. However, data show that a milestone was reached when females made up 50% in 1990, since then, females gradually exceed males in HEIs. The ratio of female to male students was 63: 37 by 2005. In 2011, the national average of enrolment of students into the public HEIs was 65: 35 in favour of females. According to the Education Ministry's Higher Education Department Director-General that 68.1% of those accepted into public universities in 2013 were females (Kapoor and Au 2011; *New Straits Times* 2013). From the trend, the shortage of high-CGPA males for representative recruitment is very likely to persist due to the lower enrolment of males in universities.

#### 1.4 Factor Affecting Graduates' Choice of Public Employment

*Job security* (49.6%), *fringe benefits* (40.0%), *fixed working hours* (26.6%), *low job stress* (24.6%) and *sufficient pay* (18.4%) are the five main pull factors cited by choosers of public employment. These factors together account for 74.3% or close to three quarters of total cites. Other pull factors include *good promotion prospects*, *many holidays*, *serving the public*, *bonded*, and *good image*.

The main pull factors could be grouped into two broad categories. The first category is *material rewards*, which the factors of *job security*, *fringe benefits*, *sufficient pay* and *good promotion prospects* primarily relate to. These factors together account for 55.3% of total cites. The second category is *lower job demands*. This category consists of the three factors of *fixed working hours*, *low job stress* and *many holidays*, which together account for 28.4% of total cites. To date, *job security*, *fringe benefits*, *sufficient pay* and *fixed working hours* are still the main attractions to applicants to public employment (Tee 2009; *Sin Chew Daily* 2010b and 2012b; *Harian Metro* 2013; *Sinar Harian* 2013)

As for push factors, *unattractive pay* (68.7%), *poor promotion prospects* (47.6%), *not interesting and challenging job* (35.7%), *poor image* (15.4%) and *low autonomy* (14.3%) are the five most important factors that made respondents avoid government jobs. Together, these top five push factors make up 84.4% of total cites.

## 2.0 CONCLUSION

As the labor market rapidly changes, HEIs need to play a stronger role in preparing sufficient and quality graduate manpower for the workforce. It is obvious that the Malaysian HEIs are under pressure not only making the country as a centre for the development of intellectual, but also to supply trained and skilled graduates

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<sup>10</sup>If the enrolment of males is increased to their population share of 0.509, there would be 515 (0.509 x 1,012) males in the sample. With the ratio of high-CGPA males remaining at 0.5680 (188/331), this would result in 293 (0.5680 x 515) high-CGPA males. Then, with the ratio of high-CGPA males entering the pool remaining at 0.3830 (72/188), the pool would have 112 (0.3830 x 293) high-CGPA males.

manpower for the labor market in order to keep pace with global competition and to meet the modern economy needs. Examinations of the paper show that the Malaysian public universities are able to produce sufficient graduates in terms of quantity and quality to meet the government's graduate manpower needs. However, ensuring representative recruitment for Chinese requires some compromise of merit as measured by CGPA and due to the much poorer academic performance of males compared to females, ensuring the representative recruitment of males requires some compromise of merit as measured by CGPA.

Material rewards are found to be most important to respondents and also the most important push factors to non-choosers of public employment. The general factor of work-life balance, which respondents see as next in importance to material rewards, is not a push factor to non-choosers and is already an important pull factor to choosers of public employment. It is also questionable whether the civil service should rely on lower job demands to attract job seekers or should try to attract job seekers looking for lower job demands.

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## References

- Abdullah Sanusi Ahmad, Norma Mansor and Abdul Kuddus Ahmad 2003. *The Malaysian bureaucracy: four decades of development*. Kuala Lumpur: Pearson: Prentice Hall.
- Azman Ujang 2013. English is blueprint's biggest challenge. *The Sun Daily*, September 9. Available from: <http://www.thesundaily.my/node/222091> [Accessed on 10 September 2013].
- Declining English standard a shame to Malaysia 2013. *Educationfactory*, January 12. Available from: <http://educationfactory.com.my/declining-english-standard-a-shame-to-malaysia/> [Accessed on 10 September 2013].
- Department of Statistics 2005. *Year book of statistics, Malaysia, 2005*. Putrajaya: Department of Statistics, Malaysia.
- Department of Statistics 2010. *Population statistics (2010)*. Available from: Department of Statistics Malaysia, Official Portal [http://www.statistics.gov.my/portal/download\\_Economics/files/DATA\\_SERIES/2011/pdf/21Perangkaan\\_Penduduk.pdf](http://www.statistics.gov.my/portal/download_Economics/files/DATA_SERIES/2011/pdf/21Perangkaan_Penduduk.pdf) [Accessed on on 15 July 2013].
- Department of Statistics 2011a. *Number of employed persons by educational attainment, Malaysia, 1982–2011*. Available from: Department of Statistics Malaysia, Official Portal [http://www.statistics.gov.my/portal/download\\_Economics/files/DATA\\_SERIES/SURVEY10/PDF/TABLE14.pdf](http://www.statistics.gov.my/portal/download_Economics/files/DATA_SERIES/SURVEY10/PDF/TABLE14.pdf) [Accessed on 17 July 2013].
- Department of Statistics 2011b. *Principal statistics of the labor force, Malaysia, 1982–2011* (last update 28 June 2013). Available from: Department of Statistics Malaysia, Official Portal [http://www.statistics.gov.my/portal/download\\_Economics/files/DATA\\_SERIES/SURVEY10/PDF/TABLE1.pdf](http://www.statistics.gov.my/portal/download_Economics/files/DATA_SERIES/SURVEY10/PDF/TABLE1.pdf) [Accessed on 30 June 2013].
- Doss, Stephen 2012. Whither the standard of English? *Free Malaysia Today*, June 13. Available from: <http://www.freemalaysiatoday.com/category/opinion/2012/06/13/whither-the-standard-of-english/> [Accessed on 10 September 2013].
- Harian Metro* 2013. Public Sector attracts Chinese, Indians. January, 14, p. 24.
- Hariati and Lee 2011. Top jobs only for those who know the language well. *The Star Online*, April 10. Available from: <http://www.thestar.com.my/story.aspx?file=%2f2011%2f4%2f10%2fnation%2f8454838&sec=nation> [Accessed on 10 September 2013].
- Kapoor, Carisma and Au, Eunice 2011. Female undergrads outnumber males: Malaysia. *AsiaOne*. Available from:

- <http://news.asiaone.com/News/AsiaOne+News/Malaysia/Story/A1Story20110908-298320.html> [Accessed on 10 September 2013].
- Latisha Asmaak Shafie 2010. Employability awareness among Malaysian undergraduates. *International Journal of Business and Management*, 5(8), pp. 119 – 123.
- Lavendran, G. 2013. Suaram worried about high crime rate. *Free Malaysia Today*. Available from:  
<http://www.freemalaysiatoday.com/category/nation/2013/08/22/suaram-worried-about-high-crime-rates/> [Accessed on 19 September 2013].
- Lim, Hong Hai 2006. Malaysia: distilling the lessons of forty years. In Ho Khai Leong (Ed.), *Rethinking administrative reforms in Southeast Asia*. Singapore: Marshall Cavendish International (Singapore) Private Limited.
- Lim, Hong Hai 2009. *Improving the public service for national development*. Unpublished paper.
- Lucas, R. E. B. and Verry, D. 1999. *Restructuring the Malaysian economy: development and human resources*. New York: St. Martiu's Press.
- Ministry of Higher Education 2008. Official Portal of Higher Education. Available from:  
[http://www.mohe.gov.my/web\\_statistik/statistik\\_pdf\\_2008\\_05/data\\_makro\\_1-2.pdf](http://www.mohe.gov.my/web_statistik/statistik_pdf_2008_05/data_makro_1-2.pdf);  
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[Accessed on 30 June 2013].
- Ministry of Higher Education 2011. Official Portal of Higher Education. Available from: [http://www.mohe.gov.my/web\\_statistik/indikator\\_pengajian\\_tinggi\\_2009-2010.pdf](http://www.mohe.gov.my/web_statistik/indikator_pengajian_tinggi_2009-2010.pdf); and [http://www.mohe.gov.my/web\\_statistik/perangkaan\\_2010.pdf](http://www.mohe.gov.my/web_statistik/perangkaan_2010.pdf) [Accessed on 30 June 2013].
- Ministry of Higher Education 2013. Official Portal of Higher Education. Available from: <http://www.mohe.gov.my/portal/en/> (last update: 28 June 2013) [Accessed on 30 June 2013].
- Mohd Noor Azam Nafi and Ishak Ab. Ghani 2011. Modelling employability of graduates using logistic regression. *Journal of Statistic Modelling and Analytics*, 2(1), pp. 45-51. Available from: <http://www.instatmy.org.my/downloads/e-jurnal%202/5.pdf> [Accessed on 30 June 2013].
- Mohamad Sattar Rasul and Puvanasvaran, A.P. 2009. Importance of employability skills as perceived by employers of Malaysian manufacturing industry. *Journal of Human Capital Development*, 2(2), pp. 23 – 35. Available from [http://eprints2.utm.edu.my/6869/1/Employability\\_2010.pdf](http://eprints2.utm.edu.my/6869/1/Employability_2010.pdf) [Accessed on 30 June 2013].

- Mukherjee, Hena, Jasbir, S. Singh, Chung, R. M. Fernandez and Marimuthu, T. (2011). Affirmative action policies in Malaysian higher education. *The World Bank: Equity of Access and Success in Tertiary Education – Documents*. Available from: [http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079956815/547670-1276537814548/Ultima-Revision\\_Malaysia\\_Equity-Study-March-23v2.pdf](http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079956815/547670-1276537814548/Ultima-Revision_Malaysia_Equity-Study-March-23v2.pdf) [Accessed on 4 October 2013].
- New Straits Times* 2013. Najib lauds women undergrads' achievement. July 13. Available from: <http://www.nst.com.my/nation/general/najib=lauds-women-undergrads-achievement-1.318524> [Accessed on 21 September 2013].
- Nik Hairi Omar, Azmi Abdul Manaf, Rusyda Helma Mohd, Arena Che Kassim and Khairani Abd. Aziz. 2012. Graduates' employability skills based on current job demand through electronic advertisement. *Asian Social Science*, 8(9), pp. 103 – 110.
- Prime Minister's Department 2013. Official Portal of Public Complaints Bureau. Available from: <http://www.pcb.gov.my/bm/aduan/statistik> [Accessed on 7 September 2013].
- Public Service Department 2006. *Annual Report*. Putrajaya: Corporate Communications Unit. Available from: <http://docs.jpa.gov.my/docs/pnerbitan/ltahunan/flipbook/lp2006/> [Accessed on 23 February 2013].
- Public Service Department 2008. *Maklumat perjawatan dan pengisian sektor awam*. Available from: <http://www.interactive.jpa.gov.my/imspa/MaklumatPerjawatan.pdf>. [Accessed on 5 April 2009].
- Public Service Department 2009. *Annual Report*. Putrajaya: Corporate Communications Unit, Public Service Department. Available from: <http://docs.jpa.gov.my/docs/pnerbitan/ltahunan/flipbook/lp2009/> [Accessed on 23 February 2013].
- Public Service Department 2010. *Annual Report*. Putrajaya: Corporate Communications Unit, Public Service Department. Available from <http://docs.jpa.gov.my/docs/pnerbitan/ltahunan/flipbook/lp2010/> [Accessed on 23 February 2013].
- Rightways* 2011. Malaysia world's No. 1 highest civil-servants-to-population ratio. October 19. Available from: <http://rightways.wordpress.com/2011/10/19/public-servants-legally-vulnerable-but-notoriously-difficult-against-the-delinquents/> [Accessed on 20 August 2013].
- Sin Chew Daily* 2006. Malaysian civil servants' salary schemes different of 19.5 times. December 23, p. 26.

*Sin Chew Daily* 2009. Lower than last year: corruption index Malaysia ranked 56. November 18.

*Sin Chew Daily* 2010a. 1.22 million civil servants, only 6% is Chinese. May 22, p. 1.

*Sin Chew Daily* 2010b. Until June 21: civil servants increase to 1.29 million. August 27, p. 4

*Sin Chew Daily* 2012a. Mahmood Adam: Lesser Chinese and Indians civil servants, worry over the increasingly mono-ethnic of the civil service. June 27, p. 1.

*Sin Chew Daily* 2012b. Public Service Commission agreed to recruit annually. August 6, p. 3.

*Sinar Harian* 2013. PSC appointed 14,257 candidates to fill various positions. April 4, p. 16

Shafiq Mohamud Fouzi 2011. The case of graduate employability in Malaysia. *Education UNESCO Bangkok*. Available from: <http://www.unescobkk.org/education/news/article/the-case-of-graduate-employability-in-malaysia/> [Accessed on 30 June 2013].

Tee, Lin Say 2009. Stability in public sector jobs. *The Star Online*, June 27. Available from: <http://biz.thestar.com.my/news/story.asp?file=/2009/6/27/business/4196812&sec=business> [Accessed on 6 June 2013].

*The Star* 2010. Graduates unemployable due to poor English. April 1.

*The Star Online* 2013a. Ali Hamsa: We have enough civil servants for now. May 2. Available from <http://thestar.com.my/news/story.asp?file=/2013/5/2/nation/13054138&sec=nation> [Accessed on 17 May 2013]

*The Star Online* 2013b. Education system not producing thinking graduates, say experts. May 25. Available from <http://www.thestar.com.my/News/Nation/2012/03/04/Education-system-not-producing-thinking-graduates-say-experts.aspx> [Accessed 30 June 2013].

*The Star Online* 2013c. Ahmad Zahid: Malaysians should be worried about rising crime rate. August 20. Available from: <http://www.thestar.com.my/News/Nation/2013/08/20/ahmad-zahid-crime-on-the-rise.aspx> [Accessed on 19 September 2013].

UNESCO 2012. *Graduate employability in Asia*. Bangkok: Asia and Pacific Regional Bureau for education. ISBN: 978-92-9223-295-2 (Electronic Version). Available from <http://unesdoc.unesco.org/images/0021/002157/215706E.pdf>. [Accessed on 15 June 2013].

Woo, Kuan Heong 2011. *The attractiveness of public employment: a study of perception among final year university students in Peninsular Malaysia*. PhD Thesis. Penang: Universiti Sains Malaysia.

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*English Language Teachers' Digital Literacy Development: A Case Study of English as a Foreign Language Teachers at a Vietnamese University*

Nguyen, Xuan T. T.

Vietnam National University, Vietnam

0206

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Abstract

Digital technology has significantly contributed to the shaping of an increasingly digitalised landscape of English language teaching (ELT) over past decades. Recent years have seen initial changes in the technology-supported English as a Foreign Language (EFL) education in Vietnam including a number of emerging initiatives aiming to developing teachers' technological competencies. With this purpose, a case study into the digital literacy professional development of a group of EFL teachers at a Vietnamese tertiary organisation was proposed. The intent of this article is to provide an overview of this current research project. The paper starts with a critical review of literature on English language teachers' digital literacy and technology-focused professional development. In the second part, the rationale for and significance of this research are justified, giving rise to its aims and questions. Following this is a brief specification of planned methodology and methods of data collection as well as data analysis. The subsequent section is dedicated to a brief discussion of research rigour and relevant ethical issues. Finally, a concise summary completes the paper.

## I. THEMES FROM LITERATURE REVIEW

Many recent studies focus on how teachers actually use digital technologies in their teaching and the factors influencing their technology adoption. Teachers' use of technology varies across contexts and is markedly different in aspects of preferred tools, focused activities and instructional goals (Fitzpatrick & Davies, 2003; Suwannasom, 2010). Evidently, most teachers only use a limited range of types of technology and their technology use still stays at a personal level (Park & Son, 2009; Son, Robb, & Charismiadji, 2011; Suwannasom, 2010). A closer look into how foreign language teachers are using digital technologies in their classroom reveals seven common ways of using them (Fitzpatrick & Davies, 2003). The most popular technology-assisted activities were found to be presenting lectures, designing language practice tasks using authoring tools, employing computer-assisted and web-based tools for assessment, and referring to teachers' e-resources for activities and materials. More recently, some English language teachers have started using currently emerging technologies such as virtual learning environments and Web 2.0 tools for self-publishing and social networking (Fitzpatrick & Davies, 2003; Dudeney & Hockly, 2009).

In addition, some investigations into factors affecting technology-based teaching show that the most critical determinants are teacher-related (Ertmer, 2005; Lee & Son, 2006; Shin & Son, 2007). Common findings from these studies indicate that teachers' own teaching context and personal pedagogical beliefs about English language acquisition and technology-enhanced language learning (TELL) strongly influence their views and practices of technology-mediated instruction (Ertmer, 2005; Park & Son, 2009; Suwannasom, 2010). It is also evident that apart from external factors involving financial and technical resources, administrative and technical support (Park & Son, 2009), teachers with diverse educational and professional experiences in the use of digital technologies as well as pedagogical stances are the key element contributing to the success or failure of TELL practice (Kim, 2002; Ertmer, 2005).

For these reasons, the professional development of teaching staff in relation to digital literacy is another focal concern among ELT researchers and educators in the literature. Attempts have been made to evaluate teachers' technology competencies and examine the main challenges to, and opportunities for, developing their digital literacy. Many teachers are still novice users of digital technology and their positive attitudes cannot always be translated into high competencies (Razak, Lubis, Embi, & Mustapha, 2010). There is also a distance between teachers' self-rated abilities and their actual levels of technology knowledge and skills (Son et al., 2011). In explaining teachers' inadequate digital literacy, researchers point to major reasons including insufficient digital literacy education and professional development, limited infrastructure and support, exponential technology diffusion, and teachers' workload (Anderson-Inman & Ketterer, 2003; Razak et al., 2010; Son et al., 2011).

To address such challenges, recent studies have started exploring ways in which teachers' digital literacy can be enhanced in classroom instruction integrating technology (Chapelle, 2007). There are a growing number of comprehensive

guidelines for EFL teachers' technology integration (Davies & Hewer, 2012; Dudeney & Hockley, 2007; Erben & Castañeda, 2009) and various digital literacy development projects and programmes developed especially for these teachers (Classroom Aid, 2012; Peachey, 2010; Pegrum, 2012). These useful openly accessible resources could also be integrated into a staff development plan or used by teachers as part of a self-study plan for professional development (Hockly, 2012).

Also apparent in many studies on teachers' digital literacy development is the provision of technology-focused professional development for in-service teachers (Tai & Chuang, 2012). Apart from formal education and training, which is not always feasible and effective, alternatives such as expert-novice teacher mentoring, communities of practice, and self-training, have been put forward (Hubbard & Levy, 2006). Some practical examples of these effective approaches, confirmed by empirical research, are Lee's (2007) peer-support enhanced model, Ingham's (2008) student-teacher mentoring, Stevens' (2009) Webheads in Action - an online teacher community of practice. Notably, further efforts have been recorded in post-training and on-going development of teachers' digital literacy. Investigations into these issues found positive changes in teacher practice and unraveled common difficulties that teachers encountered in their application of acquired technological knowledge, skills, and integration strategies (Okey, 2006; Wong & Benson, 2006).

## II. RATIONALE AND SIGNIFICANCE

Arguably, in today's participatory culture of media-saturated and automated society, digital literacy, which allows one to acquire various capabilities required across a range of future scenarios (Beetham, McGill, & Littlejohn, 2009), is no longer a luxury, but a necessity (NCREL & Metiri Group, 2003; Robertson, 2008) and even an entitlement (Payton & Hague, 2010; Becta, 2010). Moreover, the modern ELT world, full of complexity, opportunities, and challenges (Levy, 2012) has been suggesting the imperative for English language teachers' professional development, especially in the aspect of digital literacy (Krumsvik, 2006; Hockly, 2013).

Responding to this professional development demand, significant attempts have been made to provide digital literacy education for English language teachers. A growing number of studies with a focus on in-service teachers have been conducted in various ELT contexts such as in Hong Kong (Lee, 2007), Korea (Lee & Son, 2006; Park & Son, 2009), and Malaysia (Hassan, 2010). However, the majority of previous studies have tended to focus on preparing prospective teachers for digitally inclusive future work (Choate & Arome, 2006; Kerin, 2009; Farooq, Asmari, & Javid, 2012; DelliCarpini, 2012). In Vietnam, there is a paucity of research work in this field. From a review of literature, it appears that no systematic investigation has so far been elaborated in the field of enhancing Vietnamese teachers' digital literacy, leaving an apparent research gap. Thus, the study can hopefully make a useful contribution to the EFL teachers' development of digital literacy in Vietnam.

The research is also in line with the organisational approach of maximising TELL

through more effective digital inclusion as well as developing teaching staff expertise. Thus, it might also be regarded as a response to the call for integrating technology in EFL instruction and upgrading technological skills for teachers, as part of the national project, *Teaching and learning foreign languages in the national education system, period 2008-2020*, also known as Project NFL2020 (Vietnam Ministry of Education and Training, 2008). Ideally, the target group of teachers should be functioning as 21<sup>st</sup> century teachers, but many are novice users of ELT technologies and in-experienced TELL practitioners. Hence, findings from this research could contribute to better informing effective professional development required of these teachers, especially when there is an obvious lack of digital literacy development opportunities for them. This research proposal has received very positive support from the teachers in this case study, from an initial informal survey (T. Nguyen, H. Nguyen, & Y. Nguyen, personal communication, February 27, 2013).

In addition, this research work could potentially benefit the leaders, teachers, students, and the institution as the whole. For the leaders, the study can help better inform the organisational plan for staff professional development as well as improve implementation in the area. As for the teachers, the research might offer a good opportunity for their voices to be heard and their needs related to digital literacy professional development to be identified and attended to. It can also be beneficial to students in the sense that they may promisingly experience more effective acquisition and development in both English language learning and digital literacy.

It may, moreover, offer a significant contribution to understanding teachers' perceptions and expectations of ongoing professional development concerning digital literacy in the educational context where the teaching of English is undertaken by mostly non-native-English-speaking teachers. Finally, despite its scope as small-scale case study with no intended valid generalisations, the research and its transferable findings could still serve as a useful source of reference for other departments in the institution, for other Vietnamese educational organizations, and for those in similar contexts.

### **III. RESEARCH AIMS AND QUESTIONS**

The overall aim of this research is to explore the professional needs of the International Standard Programme teachers in relation to digital literacy development and to critically review current digital literacy development provision for the teachers, with a view to developing their digital literacy in their educational practice. Specifically, the objective of this study is to address the following research questions:

- How do International Standard Programme teachers at a Vietnamese university currently use digital technologies in their teaching?
- What are the teachers' professional development needs in the use of digital technologies, as perceived by the university leaders and themselves?
- How effective is the teachers' current digital literacy professional development and how should it be further developed?

## **IV. METHODOLOGY AND METHODS**

### **1. Methodology**

The nature of this research problem and aims entail an in-depth investigation into a specific group of teachers' perception of practices, and hence, requires an exploratory and descriptive approach based on a qualitative, interpretive paradigm – a case study (Yin, 2003). The approach is a “best fit” since it allows meaningful description of such “social activities” as teachers' technology practices and professional development activities to be achieved through “a substantial appreciation of the perspectives, culture and world views” of the involved actors (Verma & Mallick, 1999, p. 28).

Another rationale for embracing this research tradition is the opportunity to collect detailed information about the focused subjects (teachers) and their on-going and changing performances (teaching and professional development) (Lankshear & Knobel, 2004). Furthermore, focusing on a “particular one” (Dörnyei, 2007, p. 152), which, in this case, is the International Standard Programme group, I will employ the method of a single-case study. This method offers the potential of achieving thorough explanation (Yin, 2003) with “a thick description of a complex social issue embedded within a cultural context”, providing “rich and in-depth insights that no other method can yield” (Dörnyei, 2007, p. 155).

Adopting this framework, I wish to yield qualitative information that “reflects the experiences, feelings or judgment” (Verma & Mallick, 1999, p. 27) of the institution and programme leaders as observers and informants, and of the teachers as the subjects as well as key participants, in this investigation of teachers' digital technology usage and digital literacy development. Targeting a unique context of EFL teachers in Vietnam, therefore, this choice of method could potentially obtain an insightful understanding of teachers' perceptions and actual proficiency in terms of technology integration as well as an in-depth look into how their digital literacy has or has not been developed. In other words, the employment of interpretive qualitative approach stems from the aim to uncover teachers' use of digital technologies in their teaching and teachers' technology-related professional development needs as perceived by the leaders and teachers themselves. It is also driven by the need to unravel the current levels of teachers' technology competencies and the present situation of technology-focused professional development for the teaching staff and their beliefs about effective digital literacy professional development.

### **2. Sampling**

This study will be carried out at a Vietnamese university of languages and international studies, using a sample of eight teachers drawn from a total of 29 English language teachers in the International Standard Programme, including the Head of the group, and four other senior staff of the university. This purposive sampling, based on a prior understanding of the context, helps to ensure the chosen participants are potentially rich sources of data; and hence, provide sufficient data for

well-informed interpretation.

### **3. Data Collection Methods**

To address the research questions, observations and interviews will be employed as the two main methods of data collection. Notably, despite not being a major data source, documents regarding professional development for teachers at the target institution, especially for the International Standard Programme teachers, will also be examined to add a reference for data analysis in general and in particular, address the third research question. One-to-one interviews (of about 40-60 minutes) will be carried out with these selected 12 informants while observations will be conducted with four out of eight International Standard Programme teachers (3 observation sessions of 90 minutes each). (*See appendix 1-3 for further details.*)

### **4. Data Analysis**

The data analysis procedure will include coding, categorising, presenting, and interpreting the collected information. In coding the data sources, the participants will be numbered according to the order of their interview instead of using their real names or their pseudonyms. Data classification requires going through the data multiple times, reading between the lines of the observation notes and interview transcripts to identify recurring themes. An adequate set of categories will be developed to organise data in a logical system with reference to both the research questions and a relevant *priori* framework (Yin, 2003). The analysis of data will be guided by a framework derived from a sound theoretical foundation, responding to the actual data gathered, and relevant to the research inquiry (Mutch, 2005). More specifically, common issues will be grouped under themes and subthemes in the developed framework (Borg, 2006). Such quantitative data as participants' personal information will be illustrated in appropriate kinds of graphs. Other key qualitative data will be presented in summary forms or as direct quotations. In terms of analysing, data from various sources including documents, meetings, interviews, and observations, will be constantly compared and contrasted with reference to the research questions and relevant literature.

## **V. RESEARCH RIGOUR AND ETHICAL ISSUES**

The research rigour of this case study could be justified by two critical qualities of empirical research: validity and reliability, which are established by its strong rationales, appropriate design and ensured by multiple data collection methods as well as the systematic procedures of data collection and analysis. Both validity and reliability in this case study are represented by the criteria of truthfulness, which includes credibility, transferability, dependability, and confirmability (Denzin & Lincoln, 2000).

Apart from this, this research complies with ethical conduct embracing the ethical principles established in the Unitec Research Ethics Committee (UREC, 2010)

guidelines. Since this case study involved interpersonal interaction in a complex EFL context, the ethical issues of informed consent, confidentiality, security, and socio-cultural awareness and other more general principles were carefully considered. (*See appendix 4-7 for further details.*)

### **SUMMARY**

This paper provides a justification of the rationale for the proposed research and an explanation of the main objectives and research questions to be investigated. The methodology and methods used in the study and issues related to research rigour and ethics have been concisely discussed. To conclude, as the first known research into digital literacy professional development to tertiary in-service teachers of English in Vietnam, this in-depth case study can hopefully serve as a springboard for further research to advance our understanding of teachers' digital literacy professional development needs and expectations in order to yield better improvement in English language teacher education and development.

## REFERENCES

- Anderson-Inman, L., & Ketterer, K. (2003). Technology in language arts and foreign language instruction. In M. D. Roblyer (Ed.), *Integrating educational technology into teaching* (3rd ed., pp. 235-252). New Jersey: Merrill Prentice Hall.
- Becta. (2010, March). *Digital literacy: Teaching critical thinking for our world*. Retrieved from [http://schools.becta.org.uk/upload-dir/downloads/digital\\_literacy\\_publication.pdf](http://schools.becta.org.uk/upload-dir/downloads/digital_literacy_publication.pdf)
- Beetham, H., McGill, L., & Littlejohn, A. (2009). *Thriving in the 21st century: Learning literacies for the digital age*: JISC.
- Borg, S. (2006). *Teacher cognition and language education. Research and practice*. London, UK: Continuum.
- Chapelle, C. A. (2007). Technology and second language acquisition. *Annual Review of Applied Linguistics*, 27, 98-114.
- Choate, A., & Arome, G. (2006). *Teacher preparation for effective practices in integrating technology in the ESOL classroom*. Paper presented at the Society for Information Technology & Teacher Education International Conference 2006, Orlando, Florida, USA. <http://www.editlib.org/p/22346>
- Classroom Aid (2012). Resources for teaching digital literacy. Retrieved Feb 02, 2013, from <http://classroom-aid.com/educational-resources/digital-literacy/>
- Davies, G., & Hewer, S. (2012). Introduction to new technologies and how they can contribute to language learning and teaching. Module 1.1. In G. Davies (Ed.), *Information and communications technology for language teachers (ICT4LT)*. Slough: Thames Valley University. Retrieved from [http://www.ict4lt.org/en/en\\_mod1-1.htm](http://www.ict4lt.org/en/en_mod1-1.htm).
- DelliCarpini, M. (2012). Action research: Building computer technology skills in TESOL teacher education. *Language Learning & Technology*, 16(2), 14–23.
- Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford: Oxford University Press.
- Dudeny, G., & Hockly, N. (2007). *How to teach English with technology*. England: Pearson.
- Dudeny, G., & Hockly, N. (2009). A whole new world: Language education in virtual worlds is a rapidly growing field of education, *NATECLA News*, pp. 8-9. Retrieved from [http://www.natecla.org.uk/uploads/documents/doc\\_3114.pdf](http://www.natecla.org.uk/uploads/documents/doc_3114.pdf)
- Erben, T., Ban, R., & Castañeda, M. (2009). *Teaching English language learners through technology*. New York: Routledge.
- Ertmer, P. A. (2005). Teacher pedagogical beliefs: The final frontier in our quest for technology integration? *Educational Technology Research and Development*, 53(4), 25-39.

- Farooq, M. U., Asmari, A. R. A., & Javid, C. Z. (2012). A study of online English language teacher education programmes in distance education context in Pakistan. *English Language Teaching*, 5(11). doi: 10.5539/elt.v5n11p91
- Fitzpatrick, A., & Davies, G. (2003). The impact of information and communications technologies on the teaching of foreign languages and on the role of teachers of foreign languages. Germany: International Certificate Conference.
- Hassan, W. S. (2010). *Teachers' adoption of information and communication technology for learning in Malaysia: An ecological-complexity analysis of a professional development innovation*. (Doctor of Philosophy in Education), Victoria University of Wellington. Retrieved from <http://hdl.handle.net/10063/1580>
- Hockly, N. (2012). Digital literacies. *ELT Journal*, 66(1), 108-112. doi: 10.1093/elt/ccr077
- Hockly, N. (2013, February 21). Digital literacies: What are they and why should we care? *Digital literacies*. Retrieved from Teaching English website: <http://www.teachingenglish.org.uk/articles/digital-literacies-what-are-they-why-should-we-care#sthash.DrLFUORi.dpuf>
- Hubbard, P., & Levy, M. (2006). Teacher education in CALL. Retrieved from <http://site.ebrary.com.libproxy.unitec.ac.nz/lib/unitech/docDetail.action?docID=1013786>
- Ingham, S. (2008). *Turning the tables: Students mentoring teachers in ICT professional development*. (Master of Educational Leadership and Management Unpublished thesis), Unitec New Zealand. Retrieved from <http://unitec.researchbank.ac.nz/handle/10652/1303>
- JISC. (2012). Developing digital literacies. Retrieved from <http://www.jisc.ac.uk/developingdigitalliteracies/#>
- Kerin, R. (2009). Digital portraits: Teacher education and multiliteracies pedagogy. In V. Carrington & M. Robinson (Eds.), *Digital literacies: Social learning and classroom practices* (pp. 131-145). Los Angeles: Sage.
- Kim, H. (2002). Teachers as a barrier to technology-integrated language teaching. *English Teaching*, 57(2), 35-64.
- Lankshear, C., & Knobel, M. (2004). A handbook for teacher research: From design to implementation. New York: Open University Press.
- Lee, S., & Son, J.-M. (2006). The use of ICT in Korean middle school English classrooms: Practices and challenges. *English Language Teaching*, 18(1), 49-73.
- Lee, T. T. H. (2007). *Professional development of ICT integration for secondary school teachers in Hong Kong: Towards a peer support enhanced model*. (Doctor of Philosophy), The University of Waikato. Retrieved from <http://hdl.handle.net/10289/2595>.
- Levy, M. (2012). Technology in the classroom. In J. C. Richards & A. Burns (Eds.),

*The Cambridge guide to pedagogy and practice in second language teaching* (pp. 279-286). New York: Cambridge University Press.

- Martin, A., & Grudziecki, J. (2006). DigEuLit: Concepts and tools for digital literacy development. *Innovation in Teaching And Learning in Information and Computer Sciences*, 5 (4), 249-267. Retrieved from [www.ics.heacademy.ac.uk/italics/vol5iss4/martin-grudziecki.pdf](http://www.ics.heacademy.ac.uk/italics/vol5iss4/martin-grudziecki.pdf)
- Mutch, C. (2005). *Doing educational research: A practitioner's guide to getting started*. Wellington, New Zealand: NZCER Press.
- NCREL, & Group, M. (2003). 21st century skills for 21st century learners: Literacy in the digital age. *enGauge*. Retrieved from <http://pict.sdsu.edu/engauge21st.pdf>
- Okey, D. (2006). *Where to after the cluster: Using lead teachers to sustain ICT PD after the cluster funding finishes*. (Master of Education), Unitec, New Zealand. Retrieved from <http://hdl.handle.net/10652/1312>
- Park, C. N., & Son, J.-B. (2009). Implementing computer-assisted language learning in the EFL classroom: Teachers' perceptions and perspectives. *International Journal of Pedagogies & Learning*, 5(2), 80-101.
- Payton, S., & Hague, C. (2010). Digital literacy in practice: Case studies of primary and secondary classrooms. Retrieved from [http://www.futurelab.org.uk/sites/default/files/Digital\\_Literacy\\_case\\_studies.pdf](http://www.futurelab.org.uk/sites/default/files/Digital_Literacy_case_studies.pdf)
- Peachey, N. (2010). Nik's daily English activities for English language and digital literacy skills. Retrieved from <http://daily-english-activities.blogspot.co.nz/>
- Pegrum, M. (2012). E-language wiki. Retrieved from <http://e-language.wikispaces.com/about>
- Razak, N. A., Lubis, M. A., Embi, M. A., & Mustapha, R. B. (2010). IT literacy of language teachers in Malaysian technical schools. *International Journal of Education and Information Technologies*, 4(3), 149-156.
- Robertson, K. (2008). Preparing ELLs to be 21st-century learners. Retrieved from <http://www.colorincolorado.org/article/21431/>
- Shin, H.-J., & Son, J.-B. (2007). EFL teachers' perceptions and perspectives on Internet-assisted language teaching. *CALL-EJ Online*, 8(2). Retrieved from [http://callej.org/journal/8-2/h-js\\_j-bs.html](http://callej.org/journal/8-2/h-js_j-bs.html)
- Son, J.-B., Robb, T., & Charismiadji, I. (2011). Computer literacy and competency: A survey of Indonesian teachers of English as a foreign language. *CALL-EJ*, 12(1), 26-42.
- Stevens, V. (2009). Issue: Tools for online teacher communities of practice. In E. Hanson-Smith & S. Rilling (Eds.), *Learning languages through technology* (pp. 257-269). Alexandria, Va., USA: TESOL.
- Suwannasom, T. (2010). *Teacher cognition about technology-mediated EFL instruction in the Thai tertiary context*. (Doctor of Philosophy in Second

- Language Teaching), Massey University, New Zealand. Retrieved from <http://hdl.handle.net/10179/1853>
- Tai, S.-J. D., & Chuang, H.-H. (2012). TPACK-in-Action: An innovative model to help English teachers integrate CALL. Retrieved from <http://www.lsl.nie.edu.sg/icce2012/wpcontent/uploads/2012/12/C6-t-68.pdf>
- Unitec Research Ethics Committee (UREC). (2010). Research ethics guidelines (version 2). Retrieved from <http://moodle.unitec.ac.nz/mod/folder/view.php?id=67710>
- Verma, G. K., & Mallick, K. (1999). Researching education: Perspectives and techniques. Retrieved from <http://site.ebrary.com.libproxy.unitec.ac.nz/lib/unitech/docDetail.action?docID=10095035>
- Vietnam Ministry of Education and Training. (2008). *Teaching and learning foreign languages in the national education system, period 2008-2020 (NFL2020) project*. Hanoi: MoET.
- Wong, L., & Benson, P. (2006). In-service CALL education: What happens after the course is over? In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 251-266). Amsterdam, NLD: John Benjamins Publishing Company. Retrieved from <http://site.ebrary.com.libproxy.unitec.ac.nz/lib/unitech/docDetail.action?docID=10137866>.
- Yin, R. K. (2003). *Case study research: Design and methods* (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage.



## **APPENDIX 2:**

### **TEACHER INTERVIEW SCHEDULE (following completion of signing Consent Form)**

#### **Introduction**

Thank you for your interest in participating in my research into English language teachers' digital literacy professional development. My name is Xuan Nguyen and I am currently enrolled in the Master of Education degree in the Department of Education at Unitec Institute of Technology and currently conducting this study as part of my study programme.

#### **Settings**

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Place: \_\_\_\_\_

#### **Personal information (confidential)**

Teacher's name: \_\_\_\_\_

Gender: M/F

Age: (years old)

Qualification: \_\_\_\_\_

Years of experience: \_\_\_\_\_

#### **Questions**

##### ***Current situation of technology use in teaching practice***

1. How have you used technologies in your teaching practice?
  - What technologies do you often use?
  - How often do you use them?
  - What do you use them for? (Planning, instruction, administration, professional development, etc)
  - In which language skills and/or areas do you use technologies the most?
  - What techniques and strategies do you use for integrating technologies into your classroom practice?
2. How do you evaluate the effectiveness of your technology use in teaching practice?
3. What difficulties have you experienced in your professional use of technologies?
4. Have you been able to address these issues and challenges? If so, how? / If not, why not?

##### ***Current digital literacy and digital literacy professional development***

5. How do you evaluate your current level of confidence and competences in using:
  - Basic computer operation and file management
  - Office programmes (e.g.: Word, Excel, Power Point)
  - Multi-media resources (e.g.: graphics, audio-video materials) and applications (e.g.: audio-video production)
  - The internet/World Wide Web (including communication applications (e.g.: emails, video conferences) and web 2.0 tools (e.g.: blogs, wikis, podcasts))
6. How important is digital literacy professional development to you as an EFL

- teacher (in the digital age)?
7. What do you see as the most important thing(s) you need to develop in your use of technologies? Why?
  8. What technology-focused professional development have you undertaken over the past two years? How useful was it and why?
  9. What type of digital literacy professional development would be most useful to you? (Self-study, group study/community practice, mentoring, training, etc.) Why?
  10. In your opinion, what are the potential opportunities and challenges of developing digital literacy for you?
  11. Are there any other comments or remarks you wish to make?

### **APPENDIX 3:**

## **LEADER INTERVIEW SCHEDULE (following completion of signing Consent Form)**

### **Introduction**

Thank you for your interest in participating in my research into English language teachers' digital literacy professional development. My name is Xuan Nguyen and I am currently enrolled in the Master of Education degree in the Department of Education at Unitec Institute of Technology and currently conducting this study as part of my study programme.

### **Settings**

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Place: \_\_\_\_\_

### **Personal information (confidential)**

Leader's name: \_\_\_\_\_ Position: \_\_\_\_\_ Qualification: \_\_\_\_\_  
Gender: M/F \_\_\_\_\_ Age: (years old) \_\_\_\_\_ Years of experience: \_\_\_\_\_

### **Questions**

#### ***Current situation of technology use in the International Standard Programme (ISP)***

1. How have technologies been used in the ISP?
  - What technologies are used most?
  - How often are they used?
  - What are they used for? (Planning, instruction, administration, professional development, etc.)
2. How do you evaluate the effectiveness of technology use in the ISP?
3. What constraints has your institution experienced in the use of technologies in the ISP?
4. How well has your institution been able to address these issues and challenges?
5. What do you think about the potential development in technology use in the ISP?

#### ***ISP teachers' digital literacy and digital literacy professional development***

6. How do you evaluate the ISP teachers' current level of confidence and competences in the use of technology in teaching practice?
7. How important is it to develop digital literacy for the ISP teachers?
8. How do you view the ISP teachers' professional development needs in the use of technologies? How could you identify their needs?
9. What technology-focused professional development has been provided for the ISP teachers in the past two years and how effective do you think it was?
10. What types of strategies would be employed to further develop the ISP teachers' digital literacy? (Self-study, group study/community practice, mentoring, training, etc.) Why?

11. What do you see as potential opportunities and challenges of developing digital literacy for the ISP teachers?
12. Are there any other comments or remarks you wish to make?

**N.B.:**

**Digital literacy** is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesise digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process (Martin & Grudziecki, 2006, p. 255). In other words, digital literacy goes beyond the mastery of technological skills and knowledge to engage complex non-linear cognitive and social processes that empower an individual to live, learn, and work in a digital era (JISC, 2012).

## APPENDIX 4:



### INFORMATION SHEET (for interviews)

#### Title of Thesis:

**English language teachers' digital literacy professional development: A case study of English as a Foreign Language teachers at a Vietnamese university**

My name is Xuan Thi Thanh Nguyen and I am currently enrolled in the Master of Education degree in the Department of Education at Unitec Institute of Technology. I am seeking your help in meeting the requirements of research for a thesis, which forms a substantial part of this degree.

The aim of my project is to explore the professional needs of the International Standard Programme teachers in relation to digital literacy development and critically review current digital literacy development provision for the teachers, with a view to develop their digital literacy in their educational practice.

I will be collecting data using an interview schedule with some questions and would appreciate being able to interview you at a time that is mutually suitable. This one-to-one interview will take approximately 40-60 minutes and will take place in a place on campus that is suitable for the interview and accessible for both of us. I will also be asking you to sign a consent form regarding this event.

Neither you nor your organisation will be identified in the Thesis and all the collected data will be stored securely and kept confidentially. I will be recording your contribution and will provide a transcript for you to check before data analysis is undertaken. You may withdraw yourself from the research up to two weeks after the interview. You will also have the right to edit or withdraw any information that you have contributed before the completion of data collection in October 2013. This can be done by seeing me or contacting me personally via email [xuan\\_nguyen\\_tt@yahoo.com](mailto:xuan_nguyen_tt@yahoo.com).

If you have any queries about the project, you may contact my supervisor at Unitec Institute of Technology. My supervisor is Dr John Benseman and may be contacted by email or phone. Phone: (09) 815 4321 ext 8736 Email: [jbenseman@unitec.ac.nz](mailto:jbenseman@unitec.ac.nz)

Yours sincerely

**UREC REGISTRATION NUMBER: 2013-1041**

**This study has been approved by the Unitec Research Ethics Committee from 25 June 2013 to 25 June 2014. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.**

## APPENDIX 5:



### INFORMATION SHEET (for observation)

#### Title of Thesis:

**English language teachers' digital literacy professional development: A case study of English as a Foreign Language teachers at a Vietnamese university**

My name is Xuan Thi Thanh Nguyen and I am currently enrolled in the Master of Education degree in the Department of Education at Unitec Institute of Technology. I am seeking your help in meeting the requirements of research for a thesis, which forms a substantial part of this degree.

The aim of my project is to explore the professional needs of the International Standard Programme teachers in relation to digital literacy development and critically review current digital literacy development provision for the teachers, with a view to develop their digital literacy in their educational practice.

I will be collecting data using observation schemes and would appreciate being able to observe your classes for three sessions of 90 minutes each, at times that are mutually suitable. I will also be asking you and your students to sign a consent form regarding this event.

Neither you nor your organisation will be identified in the Thesis and all the collected data will be stored securely and kept confidentially. I will be taking notes during my observation of your lessons and will provide the observational notes for you to check before data analysis is undertaken. You may withdraw yourself from the research up to two weeks after the observation. You will also have the right to edit or withdraw any information that you have contributed before the completion of data collection in October 2013. This can be done by seeing me or contacting me personally via email [xuan\\_nguyen\\_tt@yahoo.com](mailto:xuan_nguyen_tt@yahoo.com).

If you have any queries about the project, you may contact my supervisor at Unitec Institute of Technology. My supervisor is Dr John Benseman and may be contacted by email or phone. Phone: (09) 815 4321 ext 8736 Email: [jbenseman@unitec.ac.nz](mailto:jbenseman@unitec.ac.nz)

Yours sincerely

#### UREC REGISTRATION NUMBER: 2013-1041

**This study has been approved by the Unitec Research Ethics Committee from 25 June 2013 to 25 June 2014. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.**

## APPENDIX 6:



### CONSENT FORM

**(for use with teachers and leaders)**

**Research event: Individual interview**

**Researcher: Xuan Thi Thanh Nguyen**

**Programme: Master of Education**

**THESIS TITLE:** English language teachers' digital literacy professional development: A case study of English as a Foreign Language teachers at a Vietnamese university

I have been given and have understood an explanation of this research and I have had an opportunity to ask questions and have had them answered. I understand that neither my name nor the name of my organisation will be used in any public reports.

I also understand that I will be provided with a transcript for checking before data analysis is started. I am aware that all the collected data will be stored securely and kept confidentially and that I may withdraw myself from the research up to two weeks after the interview. I acknowledge that I will have the right to edit or withdraw any information that I have contributed before the completion of data collection in October 2013. This can be done by seeing me or contacting me personally via email [xuan\\_nguyen\\_tt@yahoo.com](mailto:xuan_nguyen_tt@yahoo.com).

**I agree to take part in this project.**

**Signed:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**UREC REGISTRATION NUMBER: 2013-1041**

**This study has been approved by the Unitec Research Ethics Committee from 25 June 2013 to 25 June 2014. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.**

## APPENDIX 7:



### CONSENT FORM

(for use with teachers and students)

**Research event: Classroom observation**

**Researcher: Xuan Thi Thanh Nguyen**

**Programme: Master of Education**

**THESIS TITLE:** English language teachers' digital literacy professional development: A case study of English as a Foreign Language teachers at a Vietnamese university

I have been given and have understood an explanation of this research and I have had an opportunity to ask questions and have had them answered. I understand that neither my name nor the name of my organisation will be used in any public reports.

I understand that I will be included in the researcher's observations of teaching in my class. The researcher will take notes about these observations, but will not identify me or any other students in her writing about these observations. Also, I will be provided with the observational notes for checking before data analysis is started.

I am aware that all the collected data will be stored securely and kept confidentially and that I may withdraw myself from the research up to two weeks after the observation. I acknowledge that I will have the right to edit or withdraw any information that I have contributed before the completion of data collection in October 2013. This can be done by seeing me or contacting me personally via email [xuan\\_nguyen\\_tt@yahoo.com](mailto:xuan_nguyen_tt@yahoo.com).

**I agree to take part in this project.**

Name	Signature	Date
<i>Teacher</i>		
<i>Student 1</i>		
<i>Student 2</i>		
...		

**UREC REGISTRATION NUMBER: 2013-1041**

**This study has been approved by the Unitec Research Ethics Committee from 25 June 2013 to 25 June 2014. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.**

**Author's information:**

Xuan is an English Language Lecturer at University of Languages and International Studies, Vietnam National University, Hanoi, Vietnam. A part from her BA in English Language Teacher Education, PG Diploma in TESOL, Xuan trained in the Development of Audio-Visual Learning Materials programme at University of Leuven, funded by VLIR-OUS scholarship. She is currently a Master of Education programme student representative at Unitec, New Zealand, wherein her study is funded by New Zealand ASEAN Scholars Awards. Her current research interests include English language teacher education, training and professional development, e-learning, TELL, and lifelong learning.

Nguyen, Xuan T. T. (Vietnam National University, [xuan\\_nguyen\\_tt@yahoo.com](mailto:xuan_nguyen_tt@yahoo.com))

*Investigation into a Special Needs Student Coping with a Physical Handicap and the Issue of Low-Visual Acuity to Understand How it Affects the Student's Learning and Social Interaction; and Suggesting Possible Strategies to Overcome these Barriers to Learning*

Brian Gallagher

Nagoya University of Foreign Studies, Japan

0207

The Asian Conference on Education 2013

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**Keywords:** Special Needs, Disability, low-visual activity, handicap, barriers

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## ***Introduction***

In this unique case study I identify **the issue of low-visual acuity** and how it affects a student's learning in an international institution, compounded with physical mobility problems by analysis of the learning/teaching environment. This is of extreme importance as “data from international studies show that approximately 25% of school-age children carry some form of visual deficiency” (Gianini et al, 2004). In the United States of America Kemper et al, (2003) suggest that “correctable visual impairment is the most common treatable chronic condition of childhood” and it is clear that the number of school-age children being diagnosed with poor vision is on the increase. Visual impairment is considered “a large and growing socio-economic problem” (Binns et al, 2012) and eye imbalances in strength occurs in 1.2%<sup>1</sup> of children by seven years of age and occurs equally in males and females. This points to a progressive coherence of knowledge in this matter and a consensus in literature to the issue.

I explain why it is reasoned that the student has low V-A and I suggest some measures to improve her educational situation. While it is impossible for the teacher to improve her mobility issues it was possible to minimize the barriers to learning within the confines of the current school environment. Any techniques or coping skills that can benefit the learner here, may be transferable to further educational situations to advise facilitators in primary, secondary or tertiary educational institutions on how they might manage and support students with similar requirements.

Rosner and Gruber (1985) describe how it is possible to teach how to “provide appropriate services for school-aged children who present, because of reduced visual acuity, unstable binocularity and perceptual skill disorders” which are clear barriers to learning.

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<sup>1</sup> According to doctors at Wills Eye Hospital, Philadelphia, the most common divergent strabismus in childhood Divergent strabismus - <http://www.surgeryencyclopedia.com/Ce-Fi/Eye-Muscle-Surgery.html#b> (accessed November 22<sup>nd</sup>, 2011)

### *The Context*

The learner chosen for this case study has a mixture of physical barriers to her learning. The primary focus is on her low visual acuity and low vision apparent in both eyes. One being better than the other. In common terms this is known as “a squint” or “lazy eye”, but more correctly termed “strabismus” (Good & Hoyt, 1996) which is a feature in our eyes that we all have to some extent. In this specific student's situation one eye can see only blurry shapes but the other is much stronger. The student wears corrective lenses at all times, predominantly a spectacle wearer.

She has a severely handicapped twin brother who is not capable of attending school and is cared for at home by a specialist carer. Any schooling that can be done with him is done at home by his personal carer. Due to complications at birth both children experienced complications resulting in lower extremity difficulties, making it very difficult for her to walk and making it not possible for him. She herself was home schooled until the age of eight after which time she went to a regular school for the first time in Hawaii. During all of this time she was accompanied by a full-time helper who was also her tutor.

Now, at the age of 15 years old, she finds herself in her freshman year of high school where she must compete with able-bodied students on a level par because the school cannot provide any additional support for her, at this time. She spends most of her day in her wheelchair because of mobility issues with her legs which needs no further explanation in terms of her medical record at this time. She can function with the use of a stroller if required, but not for prolonged periods of time. This makes safety an issue for her in some classes where mobility is required (sciences and P.E.)

Due to both emotional and physical difficulties that she overcame as a child, and the lack of traditional schooling she has difficulty with simple arithmetic and some English comprehension. She is Japanese, born of 2 Japanese parents but has been always educated in English, from even the earliest age. She is 2 years older than other children in her class because of her late start and she is below grade average in most subjects. In this international school context there are multiple issues that all students encounter, including but not limited to: second and third culture peers, who are living in a foreign country (for what can be short periods of time, typically 2-3 years); mixed race or multicultural families; multilingual peers; and a high turnover of teaching staff at the school, annual changes in form tutors. Individual spatial awareness, along with both physical and psychological stresses are factors that could also be considered in this case as they have an effect on students performance but are very difficult to measure and compare. It should be pointed out that this student is not the only low-vision student at the school but she is the only wheelchair user.

### ***Low Vision and Low Visual Acuity in Students***

Vision is described as “**a dynamic process that integrates sensory and motor information to derive meaning. A student's ability to use vision for learning is dependent upon many factors, such as the severity and age of vision loss, the timeliness and type of intervention, and the presence of additional disabilities**” Now, as this student has other disabilities it serves to compound her problems in learning because of her inability to see well and to respond to stimulus as quickly as other able-bodied and of clear unaided visual acuity students. The government of Alberta, Canada suggests “***student programs and services must be based on the assessed needs of each student***” which makes perfect sense in any school district or otherwise that can afford the time and personnel to support such a program. As much as the school in question tries to support SEN students to the extent that they are more closely monitored and scrutinized than other students, where deemed necessary by the school principal, they are required to complete progress reports by themselves and meet with teachers to work on agreed “success plans” or “intervention plans” dependent on their current grades if they are at risk of failing subjects. This additional strain on students often becomes another barrier to learning and cause for concern for their ownership of learning as they are asked to adhere to the plans. It may be prudent to schedule additional time and personnel to aid in understanding and collecting of information, of which I shall discuss later.

Smith, (1980) suggested that “because most partially sighted students do not use white canes for travel and because most are able to get around much like everyone else, people have difficulty believing that the student needs to use adaptive methods when utilizing printed materials” (Ibid). also suggesting that “having large print on the chalk board, or the use of enlarged print on an overhead projector may assist a partially sighted student. However, the capacity to read printed materials depends so greatly on conditions such as degree of contrast, brightness, and colour that it is preferable that the student and instructor discuss what methods, techniques, or devices may be used to maximum advantage.” These “conditions” vary from classroom to classroom and now, the use of interactive whiteboards (Smart-boards) combined with the need to turn off/down classroom lights to allow this contrast to be clear enough for regular learners makes it difficult for SEN students to be accommodated in many situations. These and similar suggested strategies can be seen in Appendix 1.

### ***Methodology***

Yin (1994) defines case study as “an empirical inquiry that; investigates a contemporary phenomenon within its real-life context”. In this very unique, qualitative case study, the student was informally interviewed several times. A selection of teachers (3), the mother, counsellor, school nurse and high school principal were interviewed separately, and I, the researcher, as home-room teacher

(form tutor<sup>2</sup>), gave the most crucial evidence and created the experimental plan. By way of counselling and interview, evidence was collected (over a six week period) from all parties. The nurse and high school principal are self imposed “support planners” based on the principals own system of student support. Maternal permission was asked for in a private meeting, for consideration in the study, after I noticed body language mannerisms, repetitious instruction requests from the student and having been in discussion with both parents before, at an open evening at the school. It was clearly obvious that there were concerns from the parents about the challenge of high school after a somewhat easier time in the middle school environment. The student was also asked if she would allow me to discuss her learning with her and to develop some possibilities that may help her with her learning, to which she very cooperatively agreed to. It must be noted that this student is a very happy child from a very loving, caring and supportive family.

Unfortunately, the high school under study does not have any program in place that can properly or officially supports students with any learning difficulties, with second language learning issues or physical disabilities. This paper hopes to shed some light on the school situation and propose solutions that would be of benefit to this student, and any future student.

After the mothers prompt consent was given, I discussed with the student how we might go about collecting information. The provisional plan was for us to spend some time together one day and experience “a day in the life” of this student but the teaching workload and impossible school schedule meant this idea was to be replaced with the interview/counselling path made possible by the fact that I teach both sciences and mathematics to this student allowing me unrestricted access to information for 2 classes in which she is a pupil as well as being able to enact immediate changes without any delays. Teachers' legal rights and responsibilities “Protecting children from abuse” (Berry 2007)

One benefit of the school having no official program set up at this time meant it was simple to execute a reasonable plan with minimal administrative discussion. Under consultation with the support planners (Nurse and Principal) and the counsellor I was able to relay problems and concerns to them that they were unaware of, as well as being able to liaise with individual teachers on her behalf so as to allow awareness of her difficulties to be known, while still held in professional confidence within the faculty of the high school.

The idea of a questionnaire was dismissed as the evidence that may have been collected would have been too rigid and inflexible to serve the purpose of this enquiry (Cohen et al, 2007). Concentrating on only one student and focusing on interview and

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<sup>2</sup> Home-room teacher is the international school term used for “Form Tutor” as it is known in England.

counselling, we went about these private discussions with the assistance of two other teachers, one of whom was present in the room during each discussion/interview. When dealing with any individual student, it is appropriate to have another member of staff present at all times in accordance to “the Children Act 1989, and is further supported by the Education Act 2002, which obliges schools and colleges of all sorts to have regard to the promotion of the welfare and safety of all children” *Berry (2007)*. Thorne (1998), Mauthner (2002), Punch (1986).

By monitoring the student in mathematics and science lessons, liaising with participants, interviewing and adapting to responses an appropriate plan was set in place. By providing copies of lesson materials at the start of the lesson, selective seating near to Interactive-White-Board (IWB), screens and workstations, access to information was made simpler. Additional time for working where possible was also granted, including semester examination. Two teachers were already managing the situation well, but some were unaware of the vision issue or had suspicions so explanation was simple and direct.

#### ***Data Analysis in terms of related theory and social interaction.***

The student manages very well to engage with others but ***“since vision plays a role in the early development of social behaviours and of social cognition, lack of visual cues could lead to difficulties in initiating and maintaining social interactions”*** Zebehazy, K.T. & Smith, Thomas. J. (Feb 2011). This was apparent in a science group-work project in which the student was involved. There were reports from other pupils in the group of four that the student involved failed to fulfil her share of work in the project causing delays in the other students progression and eventual completion of the work set. In interview with the student she reported that “things were fine” and that “there were no problems” that she was aware of. This unfortunately is a clear indication that social cognition of the problems being encountered by the group were not being seen by the student as she was missing visual clues from the group. She explained that the “group is confused about who is doing what” although instructions were very clear. She was alone in this confusion.

The other pupils are fully aware of her mobility problems and they are now beginning to pick up on the cues that this student has been sending out to them, in that she cannot always clearly see instructions as they are given. And that she gives the impression that she can cope well with other subjects when she may be in fact, concealing issues from herself and others without even being aware of it going on. Some element of shame/embarrassment is involved as students try not to make possibly hurtful comments either directly or publicly. The students all like each but were concerned about their individual grades and the possibility of looking foolish at the point of presentation. In order to maintain good social interaction the students were advised that although they were working together in group work that their own individual scores were not dependent on the team necessarily working together,

rather, that they play their own part strongly within the group. The project required all 4 members to work collaboratively in producing a proposal to a company based on the physics involved in a renewable energy type of the groups own choosing. Classwork involved the use of computers, classroom materials and internet resources provided. Work set for outside the classroom over the course of the week-long project was to collaboratively report all information and graphics collected while building for their final short presentation on the Friday. The project was created to allow the groups freedom to decide as a group which one of four roles that each would play and optimize their final scores. Together they had ample opportunity to check on the progress of each other and there was a requirement that they do so each day of the project and log the progress regardless of the amount.

The other three members of the group (a Japanese-Canadian, A Taiwanese-Japanese and a American-Japanese) came to complain that they felt that it be unfair for someone to score well when they felt that a majority of the work had been done by them and that minimal effort had been put in by the other student. The oblivious nature of the response was a clear indicator that the student herself could not pick up the signals which were coming from the group and that there is clearly need for some type of intervention. Individual workloads, computers to work on and time outside of class were all given to every student to make the exercise as accessible as possible. As a qualitative researcher my role required social management skills and in this small conflict a way to “steer a way through the ethical issues that may be raised” (Hammersley, 1993). Specifically, concerns over the students private information and the idea of any preferential treatment.

The solution given by the teacher to overcome these difficulties brought the group together, and taught them the need for a “willingness to communicate”.

Cultural differences and previous learning styles add to the confusion within such an international group but as they are all around 14 years old we must also consider their inability to cope with stress and emotion due to their youth. McConnell (1994) explains this well, as “students have to be rewarded for collaborating”; they “have to see a real educational purpose for collaborating”. This was achieved by them being organised in a way “*that help them collaborate*” and the reconfirmed explanation of individual grades. Kaye and Hawkrige (2003) describe this type of project as “innovative methods of delivery” which are “fit for the purpose”.

Motivations for the learner to achieve are her own ambition to become a television announcer, parental pressure and peer pressure. As noted before, she is a very happy child. However, barriers to her learning also include that same parental pressure as well as her low vision. Conley (1996).

In trying to establish the amount of the learning and teaching that has taken place over such a short period of time as was allowed for this project to be completed. In such a

short window of opportunity for change it could be inferred that the changes that were “seen” were conditioned by what this study was looking to show, and require further investigation. Bulmer (1979). The experiment carried out was effective in that the student reported needing less help than previously. She felt more confident in attempting lessons and felt that she needed to ask fewer questions when trying to establish what was the each lesson's requirement. These are evidence of success of presentation of information and improved access. This being said, the amount of actual improvement in learning would require testing and comparison to previous results. Nicholls (1978) wrote that the “concepts of effort and ability are logically interdependent” as one might imagine them to be. However, it can be suggested that causal attributions for success and failure can be linked to behavioural implications to social and moral development

As mentioned earlier, student relationships at international school can be short term, although friendships can be close between students there are very few life-long friendships. In this situation, the student has at least one friend who she spends her day with but this friend is often in different level classes. Different levels of ability mean that friends and supporters are often apart during the school day. The nature of high school teaching is such that students move from classroom to classroom as the daily schedule demands. This is a strain on students and involves trips to lockers and carrying often large amounts of materials. Tardiness between lessons is tolerated in this situation because of the mobility issues with this student, but no designated assistance is given to her in any transition.

Student conditions do not reflect the normal low-vision student because she is also limited by her physical handicap which restricts her movement and the ability to adjust position relative to anything outwith<sup>3</sup> close proximity, without extraneous effort. This means that movement around the classroom, if the situation demanded/conditions changed within the lesson, were more obvious and occasionally disruptive to other students. The student can see well enough to manage this unaided but it is another inconvenience, or barrier, which cannot be helped.

In the first week of the project the student was provided with hand-out copies of each lesson as they were planned that showed exactly what was going to appear on the Interactive White Board (IWB) for both mathematics and sciences classes. This was only possible by the teachers forward planning to print out the document in black ink, on A4 size paper, with font size (22) that was exactly the same as that which would appear in each lesson. This furnishing of the student with the materials at the beginning of each class allowed the student to see the materials while the other students were in the first section of the lesson either at the introduction (normally a non-linguistic representation) section or while the others were writing down the

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<sup>3</sup> Outwith – preposition, Scottish, outside; beyond <http://oxforddictionaries.com/definition/outwith> (accessed Nov 20<sup>th</sup>, 2011)

lesson title, objectives and learning outcomes, as is now standard in both the Science and Mathematics classes. This is a consideration that was under my direct control and was not supported by the other teachers as it was reported to them by the principal that this was not necessary (in fact, in consultation with the support group the student said that she did not want it highlighted that she had low visual acuity) and that she rather be treated as an equal to the other students. This was in stark contrast to the experiment that was going on in the 2 lessons mentioned previously.

The student felt that she was coping with her disability well enough in some classes but she admitted that in both sciences and mathematics that these were two of her weakest subjects and that she did want to have the additional support. This very reasonable request was accepted and is considered as a signal that it may not be necessary in all situations to provide the same level of support. It intimates that in subjects that the student feels weaker academically and inexperienced that the additional support can be seen as more acceptable as it is perhaps a challenge for all students and could be considered that it would be less embarrassing to accept. This is a factor which was not originally anticipated and now poses the question or questions. Which subjects are the most difficult for a low VA student? Which subjects are traditionally the most difficult in high school? Midgley et al (1989) suggest that “Students who moved from high- to low-efficacy math teachers during the transition ended the junior high year with the lowest expectancies and perceived performance (even lower than students who had low efficacy teachers both years) and the highest perceptions of task difficulty”.

During the observation period of the student and in discussions with other teachers they suggested that the student had no apparent issues in their class as the student could produce some good quality work. The English teacher noted “she is fine in my class, but of course, I tweak her grade. Otherwise, she would fail every piece of work set.” This confirms the need for an intervention and official adjustment of the assessment policy in the school and is obviously a contradiction in terms. How could she be fine, but still need an amendment of her grade? This matches the description by Smith, (1980) but also means that the teacher is forced to change his way of scoring in contradiction to the school assessment policy.

Effective teaching and learning needs to occur and Bishop and Denley (1997) state that “Learning is an active process involving at least one human being-and human beings, particularly young ones, are at times unpredictable, influenced by feelings and above all, different from one another.” Onus is on the student to make every effort to learn, which in this case, she does. It must also be noted that ensuring that these practices are adopted by teaching staff will not guarantee effective learning will occur, but should be adopted as good practice. By providing the support suitable for each student we can hope to create the opportunity of accelerated learning. Smith (2000) suggests that the “accelerated learning classroom is one where success and the possibility of success is affirmed at all levels”

The importance of freshman (grade 9) and sophomore (Grade 10) years is highlighted in the importance of grade-point average system in the international academic world as a majority of students go on to study in the United States of America as most schools use this system when considering applications for tertiary education (colleges and universities) Imber (2002), Gilman & Swan (1989) explain that there is no standardized system of grading in the United States itself, and as such, entrance issues are up to the individual institutions and the regulatory authority of each individual state. The GPA is commonly stripped down to core academic performance across five areas; Math, English or Language Arts, Social Studies, Science and finally Foreign Language. This allows students to attempt more subjects than the five core areas and can of course be a consideration for admission to college. Alternatively students can concentrate on only core subjects to improve their chances of a better average.

Students studying in an “International Baccalaureate” school such as this, are standardized worldwide in that they conform to the same standards and are required to study subjects from 6 areas<sup>4</sup>, including an Extended Essay in one topic (EE), a Theory of Knowledge essay (TOK) and a portfolio of Creativity, Action and Service (CAS). The latter sections are compulsory for all students and are at the core of the diploma programme in that they teach students how to think about their role in the world, “requiring critical thinking skills and a sense of international-mindedness”<sup>5</sup>. This could be working with the disabled, homeless or other external group.

Lightbown and Spada (2001) “Critical Period Hypothesis” suggests that “there is a time in human development when the brain is predisposed for success in language learning”. In considering the subject as a late starter to school and not being a native English speaker it is reasonable to suggest that age of acquisition for her differ from her classroom peers, although their ages are not too dissimilar.

### **Conclusion**

It is clear to see from the study of this student that there is a real need for additional support from individual teachers in their classes and from the school administration to increase the accessibility of information to individual students and to raise awareness of the prevalence of visual impairments and simple steps that can be taken to reduce the barriers to learning.

There ways forward for this student are many and varied and should be supported by the school and the staff. There is a requirement of the school administration to fully explore all of these possibilities so as to support their students and to educate

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<sup>4</sup> Group 1 – Language Art. Group 2 – Second Language. Group 3 - Individuals and Societies. Group 4 - Experimental Sciences. Group 5 – Mathematics or Computer Science

<sup>5</sup> <http://www.ibo.org/diploma/> accessed January 2<sup>nd</sup> 2012

themselves in the signals and mannerisms that students with these kinds of problems in order to provide an even platform on which students can compete and be quality assured of the courses in which they are enrolled and the parents pay for. This will increase the authenticity of the school and their students' efforts and eventual grades.

Lightbown and Spada (2001) explain the importance of "In a classroom, a sensitive teacher, who takes learners' individual personalities and learning styles into account, can create a learning environment in which virtually all learners can be successful in learning a second language". Whether in their first or second language, students can study knowing that all efforts are being made to provide the best learning environment possible. Each course should be quality assured as being fully accessible and level appropriate as described by Chambers (1995), Azuma (1991).

It is very possible to provide support to students with low vision and other disabilities without too much need for specialise equipment or training. Simple changes to classroom management, forward planning of lesson (and classroom) materials, and open discussion between students and teachers can provide a better learning condition and boost confidence for success. The main focus in any school must be the welfare and education of the students. Teachers should continually be willing to adjust their practice to accommodate students' needs, and administrators, should promote professional development opportunities for teachers and manage scheduled time to facilitate this need.

## ***REFERENCES***

- Azuma, H. (1991) Issues related to the Whole Child: Implications for Curriculum Development, from Maclure, Stuart and Davies, Peter, LEARNING TO think: thinking TO LEARN, Chapter 14, pp197, Pergammon Press. **EDE314Mac191-1-3a**
- Berry, J (2007) Teachers' legal rights and responsibilities - Protecting children from abuse p20, 2<sup>nd</sup> edition, University of Hertfordshire Press, Great Britain.
- Binns, A.M. et al, (2012) How Effective is Low Vision Service Provision? A Systematic Review.  
Surv Ophthalmol. 2012 Jan 2;57(1):34-65. Epub 2011 Oct 21. Source Cardiff University, Cardiff, Wales.
- Bishop, K., & Denley, P. (1997) Effective Learning in Science Redwood Books, Trowbridge, Wiltshire, England.
- Bulmer, M. (1979) Concepts in the analysis of Qualitative Data, Sociological Review, Vol. 27, no. 4, pp.651-677.
- Chambers, E. Course Evaluation and Academic Quality Chapter 32, p352 in “Open and Distance Learning Today” edited by Fred Lockwood, Routledge Studies in Distance Education.
- Cohen, L et al (2007) Research methods in Education, London: Routledge Falmer.
- Conley, D. (1996). Daddy, I'm Scared: A Prophetic Parable. Phi Delta Kappan, 78 (4), pp.290-296
- Good, W.V., & Hoyt. C.S., (1996) Strabismus Management. Boston: Butterworth-Hienemann, ISBN-10: 0750690755
- Gianini, R. J. et al (2004) Prevalence of low visual acuity in public school's students from Brazil  
[http://www.scielo.br/pdf/rsp/v38n2/en\\_19779.pdf](http://www.scielo.br/pdf/rsp/v38n2/en_19779.pdf) accessed October 27<sup>th</sup> 2011.
- Gillman, D., & Swan, E. (1989). Solving GPA and Class Rank Problems. NASSP Bulletin 73, pp 91-97.
- Hammersley, M. (1993) On the Teacher as a Researcher in Hammersley, M. (ed) Educational Research: Current issues, London, Paul Chapman.
- Imber, M. (2002). The Problem with Grading. American School Board Journal 189 (6), 40-41, 47.
- Kaye, R., & Hawkrigde, D. (2003) Learning & Teaching for Business, Case Studies of Successful Innovation, Kogan Page, London.
- KEMPER et al (2003) Prevalence and Distribution of Corrective Lenses among School-Age Children Optometry and Vision Science: The Journal of the American

Academy of Optometry, January 2004, Volume 81, Issue 1, pp7-10 available at [http://journals.lww.com/optvissci/Fulltext/2004/01000/Prevalence\\_and\\_Distribution\\_of\\_Corrective\\_Lenses.3.aspx](http://journals.lww.com/optvissci/Fulltext/2004/01000/Prevalence_and_Distribution_of_Corrective_Lenses.3.aspx) (accessed December 18<sup>th</sup>, 2011)

*Lightbown P.M., & Spada N., (2001) Factors affecting Second Language Learning, Chapter 2, p42 in Candlin C.N., & Mercer N., "English Language Teaching in its Social Context – A Reader" Routledge, Oxon, England.*

Mauthner, M. L. (2002). Ethics in qualitative research. Thousand Oaks, CA: Sage.

McConnell, D. (1994) Trends and Development Chapter 7, p228. Implementing Computer Supported Cooperative Learning 2nd Edition, Kogan Page, London.

Midgley, C., et al. (1989) Change in teacher efficacy and student self-and task-related beliefs in mathematics during the transition to junior high school. Journal of Educational Psychology, Vol 81(2), Jun 1989, 247-258  
Accessed January 2nd 2012,  
(<http://psycnet.apa.org/index.cfm?fa=buy.optionToBuy&id=1989-34691-001>)

Nicholls, J.G. (1978) Development of the concepts of effort and ability, perception of academic attainment, and the understanding that difficult tasks require more ability Child Development, 49, 800-814. The Society for Research in Child Development. Available at <http://www.jstor.org/pss/1128250> (accessed December 12<sup>th</sup>, 2011)

*Punch, M. (1986). The politics and ethics of fieldwork. Beverly Hills; London, Sage Publications.*

Rao, E. Considerations for Low vision students in a classroom  
<http://www.tsbvi.edu/program-and-administrative-resources/3277-considerations-for-low-vision-students-in-a-classroom> (accessed Dec 27<sup>th</sup>, 2011)

Rosner, J., & Gruber, J., (1985) The Pediatric Optometry Program at the University of Houston College of Optometry 1985 Journal of Optometric Education, v10 n4 p15-17 Spr 1985, ERIC #: EJ318545

Smith, L.M. (1980) The College student with a Disability: A Faculty Handbook. ED198766. President's Committee on the Employment of the Handicapped, Washington, D.C. USA.  
(accessed Jan 2<sup>nd</sup> 2012) [http://www.eric.ed.gov/http://www.eric.ed.gov/ERICWebPortal/search/recordDetails.jsp?searchtype=basic&pageSize=10&ERICExtSearch\\_SearchValue\\_0=wheelchair+low-vision&eric\\_displayStartCount=1&ERICExtSearch\\_SearchType\\_0=kw&pageLabel=RecordDetails&objectId=0900019b800408bd&accno=ED198766&nfls=false](http://www.eric.ed.gov/http://www.eric.ed.gov/ERICWebPortal/search/recordDetails.jsp?searchtype=basic&pageSize=10&ERICExtSearch_SearchValue_0=wheelchair+low-vision&eric_displayStartCount=1&ERICExtSearch_SearchType_0=kw&pageLabel=RecordDetails&objectId=0900019b800408bd&accno=ED198766&nfls=false)

Smith, A. (2000) Accelerated learning in Practice – brain-based methods for accelerating motivation and achievement” EDE314 Course Materials

Thorne, S. (1998). Ethical and representational issues in qualitative secondary analysis *Qualitative Health Research* 8(4): 547-555

Yin, 1994: 13) Designing Case Studies EDE314GRA123-2-1 (accessed November 17<sup>th</sup>, 2011)

Zebehazy, K.T. & Smith, T. J. (Feb 2011) An Examination of Characteristics Related to the Social Skills of Youths with Visual Impairments AFB Journal Of Visual Impairment & Blindness, v105 n2 p84-95 Feb 2011

[http://www.eric.ed.gov/ERICWebPortal/search/recordDetails.jsp?ERICExtSearch\\_Descriptor=%22Visually+Impaired+Mobility%22&ERICExtSearch\\_Facet\\_0=facet\\_de&ERICExtSearch\\_FacetValue\\_0=%22Visual+Impairments%22&ERICExtSearch\\_FacetValue\\_1=36&ERICExtSearch\\_Facet\\_1=facet\\_pds&ERICExtSearch\\_FacetValue\\_2=%22Secondary+Education%22&ERICExtSearch\\_Facet\\_2=facet\\_edlevel&pageLabel=RecordDetails&objectId=0900019b80458c5b&accno=EJ914290&\\_nfls=false](http://www.eric.ed.gov/ERICWebPortal/search/recordDetails.jsp?ERICExtSearch_Descriptor=%22Visually+Impaired+Mobility%22&ERICExtSearch_Facet_0=facet_de&ERICExtSearch_FacetValue_0=%22Visual+Impairments%22&ERICExtSearch_FacetValue_1=36&ERICExtSearch_Facet_1=facet_pds&ERICExtSearch_FacetValue_2=%22Secondary+Education%22&ERICExtSearch_Facet_2=facet_edlevel&pageLabel=RecordDetails&objectId=0900019b80458c5b&accno=EJ914290&_nfls=false)  
(accessed Jan 2<sup>nd</sup> 2012)

Medical/Disability Information for Classroom Teachers “Visual Impairment – Strategies that make a difference” Government of Alberta, Canada. [http://www.learnalberta.ca/content/inmdict/html/visual\\_impairment.html](http://www.learnalberta.ca/content/inmdict/html/visual_impairment.html) (accessed December 21<sup>st</sup>, 2011)

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*Engendering Education: Ensuring Equity*

Ishrat Khan

University of Dhaka, Bangladesh

0210

The Asian Conference on Education 2013

Official Conference Proceedings 2013

### ***Introduction:***

Securing free, compulsory, quality public education for all is a need of time. Though 50% among 75 million children over the world are girl, unfortunately majority of them are deprived of their right to education. The gender equality goal of EFA (Education for All) 2005 was missed by a long shot and still there is long way to achieve the Millennium Development Goal by 2015.

Giving substance to gender equality also means tackling violence against girls and women as unremarked often, perpetuating non-participation in school. This ultimately hinders the continuation of girl's education.

Research on Gender based violence indicates a complex relationship associated with gender identities and access to power and esteem. In addition, these issues are often cloaked in shame and a process of silencing. It is usually quite difficult for children to raise their voices concerning sensitive issues like violence and sexual harassment. It often challenges the protection of girl child, impeding their access to education and school system. Therefore it is a matter of concern to explore strong policy framework, legislation to engender education system emphasizing on equality, development and social justice.

As education becomes an increasingly important process in social stratification, it is crucial to ensure not only equality to education but also equality in and through education. Expanding opportunities to girls and other marginalized children reveals how far South Asian governments have come in understanding and acting on all persons being equal and having a right to expect fair and equal chances. Still, there is a long way to go. The Charter on Rights Respecting School for students is much talked worldwide to ensure non-discrimination, safe and non-violent environment. It is thus education that can act as an agent of social change, minimizing violence against girls.

The focus up until now has been on improving access for girls by, for example, providing incentives to families, by employing more female teachers and by improving schools' infrastructure. Quality and equality of learning, however, go beyond equality of resources. Too many children now in school have not mastered basic competencies. Present investments in education will only pay off if a minimum quality is achieved. This will require employing sufficient teachers for lower student-teacher ratios, improving teacher education, revising curricula and text books.

### ***How education can act as an agent of social change:***

Education can act as an agent of social change through questioning the constructed, unequal power relation reinforced by establishing men's control over women. Therefore importance should be given in eliminating violence against girls for which millions of girls are deprived of their education rights. It is also quite difficult for children to raise their voices concerning sensitive issues like violence and sexual harassment.

#### **➤ *Bringing social changes through modernization:***

Bringing social changes through modernization is one of the key factors of education. Though education generally means a formal training for knowledge management, it also denotes shaping of values and social production of personalities and cultures (Marshall in Barik, 2009). Thus it is commonly expected that education will help expanding the mental horizon of a child from the confined family relationship to diverse relationship of a larger society, rationality and equality (Jeffrey & Basu (1996) in Barik, 2009).

Though modernization has been considered as a process of differentiation through schooling, literacy and media exposure, but experiences of developing countries require rethinking of this unidirectional relationship between education and modernization (Ahmad, 1980: 108). Beside all these facts, in developing country's context, social, economic, political and cultural factors are also powerful intervening variables in changing individual attitude towards life.

Education is also a major determinant of the syndrome of attitudes, argued Inkeles (1974) in 'Education and individual modernity in developing countries.' Bourdieu (1977) emphasized on the contribution of education reproducing the dominant cultural capital through legitimizing certain forms of knowledge. This ultimately results reconstructing the social relationship of power, class, race and gender inequality.

Now the question arises, can education as an instrument of modernization really bring gender equality within society? Feminists have answered this question from diverse perspective considering children's access to schooling depending on the family structure, financial settings led by son preferences and resource constraints.

In analyzing the modernizing aspects of education, feminists have identified two major problems naming **male monopolization of culture, knowledge** and also **sexual politics of everyday life in school** (Acker, 1994).

***What are the Feminist concerns for identifying inequalities in girls' education:***

Feminists have long been advocating promoting better socialization of children removing sexual stereotypes, sex discrimination. Emphasizing on the principle of liberty and equality for both sexes, liberal feminists aimed at locating the barriers for girls' less access to education. Concerning socialization, sex roles and stereotyping, they also pointed out lack of rights, social justice and fairness that produce unequal treatment for girls.

Spender (1982) uncovered the role of schools in silencing women through the gate keeping process and also the role of language confining women into a segregated world. Spender alike other radical feminists figured the sexual politics in educational institutions. Among the major issues, one is teacher's biased attention towards boys and also the potential benefits of single sex schooling. As Bryne (1978) argues, 'separate educational provisions for girls meant inferior facilities and restricted features' (Bryne in Barik, 2009). And mostly girls' presence outside their classroom is experienced with the verbal and non-verbal abuse or sexual harassment which is of a serious concern.

On the other hand, post modern feminists have focused on the cultural elements of education reconstructing the ideas on masculinity and femininity. Davies in his 'Discursive production of the Male/Female Dualism in School Settings' discussed, in learning discursive practices in school, children learn to position themselves as a male or female through the subject positioning which are available within those linguistic practices' (Davies, B. 1989a: p.229-241).

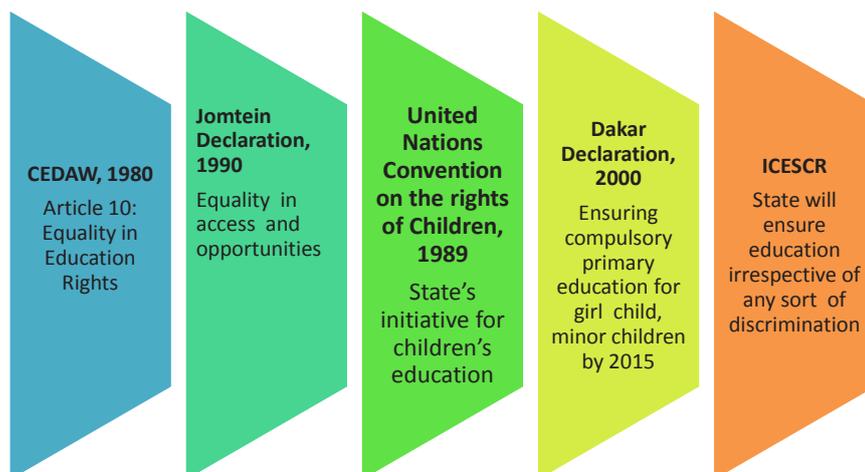
Post modern feminists therefore envisioned examining the equity implications for the Education policy. They also emphasized on multiple identity positions rather viewing gender as a core element of selfhood (Dillabough, 2001).

Mirza (1992) in her 'Young, Female and Black' outlined a different colonial narrative for women and girls' education. She showed how the marginal identity of women as 'other' is reproduced through education system and also how educational research fails to recognize the experiences of minority, ethnic girls.

### ***Equality in Education: still gendered? Bangladesh context...***

Like many other countries in Asia, equality in girls' education is still an under achieved issue in Bangladesh. The country with its intent to achieve equality in education have consented to ratify the international Conventions (CEDAW, CRC) and Declarations (Jomtein, Dakar),

#### ***Conferences highlighting issues on education and equality***



but it has failed to consider education as a fundamental right in our constitution. Article 27-44 of the third section of the Constitution of Bangladesh has talked about 18 fundamental rights, of which education is not an element. This in return questions the accountability of state in ensuring education for all.

If we give an eye at our national statistics we will find a remarkable change in girls' enrolment in primary and secondary education. A published World Bank report (2010) identified that in Bangladesh, the ratio of girls to boys was 107.16 in 2009. Beside this quantitative change, still there are many girl child who fail to continue their education at certain point of time due to several socio-economic factors. Time has come to look at those issues, to bring equality in quality.

### ***Friendly Education for Girls: Ensuring Equality in Quality***

To ensure equality in quality of education, a massive change is required not only in the school setting but also in the perception, attitude and values of its every single beneficiary. Considering poverty, unequal social stratification and gender segregation, government should design an education system accelerating opportunities for girls and other socially excluded children. Beside gender sensitive teaching- learning

process, equality should be ensured in teacher's attitude and understanding of how children should learn.

Girls and boys have the same right to a quality education. But the 'gender gap' becomes painfully evident when looking at who is in the classroom. Quality is essential for closing the gender gap in basic education. Girls in particular face discrimination and challenging circumstances keeping them out of school or affecting their learning. To increase girls' enrolment rate and continuation of their study also requires institutionalization of non-discrimination and zero tolerance against violence against girls and such discriminatory attitude towards them (Rabindra, 2009).

Alike many countries in South Asia, Bangladesh is also not an exception of powerful patriarchal social structure. Disparities and gender gaps in access and retention are in many cases crowned with poverty. Despite national and international commitment, wider gender gaps within family and community widens the discrepancy between expectation and commitments. Lack of reliable data on such exclusion is also noteworthy. Besides, less value is attached to the inclusion of street children, working children, children of migrant workers, children with disabilities and other disadvantaged children's education (Heijnen, 2003).

Among multiple reasons, *gender sensitive curriculum* is the first thing to be mentioned. In most of the cases text books content, pictures reflect our socialization process where gendered roles are reconstructed through language. Even though Bangladesh National Curriculum and Text Book Board, NCTB has been working since few years to bring massive changes in it, it still requires inclusion of our excluded groups, minorities as well.

*Teacher's education* is also an important fact. Before joining this profession, each person should be given gender training to help them create a gender neutral teaching-learning environment. This bias free environment and literacy skill will bring more girls to school rather being scared of class room.

*Safe environment and protection for girls* is a necessity to ensure maximum number of girls' participation. Increasing number of female teachers can help girl children feel comfortable in the class room. It may also help parents of rigid social customs to feel safe that their daughters are under the guidance of female teacher. The Charter on Rights Respecting School for students is much talked worldwide to ensure non-discrimination, safe and non-violent environment.

And also there should be *a language of instruction* for the teachers how to teach and behave with the students avoiding gender sensitive words and activities like corporal punishment and so on.

A proper *monitoring of education* should be conducted as often. As education paves the way of social transformation, it needs to be monitored whether it succeeds to promote social changes. Also importance should be given to find whether it facilitates to mainstream the less participatory segment of society and bring them in the holistic development process.

### **Conclusion:**

Quality education is a fundamental right for ensuring empowerment, development of every human being. It often challenges the protection of girl child, impeding their access to education and school system. Therefore it is a matter of concern to explore strong policy framework, legislation to engender education system emphasizing on equality, development and social justice. It is also a crucial target of Millennium Development Goal and Education for All. Intensive approaches should be taken for strengthening partnerships to facilitate the demands from the excluded groups. Beside service delivery mechanism, advocacy in the local and international level should be geared up to attain the international commitments. Most importantly, male bias in the institutions, curriculum designing and institutionalization of education should be minimized. More women and girls should be encouraged to access and achieve their educational rights for being an active citizen rather only being good mother and contributing for the socio-economic development of the nation.

### Reference:

Acker, S. (1994). *Gendered Education: Sociological Reflection on Women, Teaching and Feminism*. Buckingham: Open University Press

Barik, Vandana. (2009). *Women's Education, Gender Equality and Fertility*. New Delhi: Rajat Publications

Davies, B. (1989a). Discursive production of the Male/Female Dualism in School Settings. *Oxford Review of Education* 15(3): 229-241

Dillabough, J. (2001). Gender Theory and Research in Education: Modernist Traditions and Emerging contemporary themes. In *Investigating Gender: Contemporary Perspectives in Education*, ed. B. Francis and C. Skelton. 11-26. Buckingham: Open University Press

Els Heijnen, M. (2008). *From Parity to Equality in Girls' Education: How are we doing in South Asia*. United Nations Children's Fund (UNICEF)

Mirza, H.S. (1992). *Young, Female and Black*. London: Routledge

Sen, Rabindra. (2009) *Women and Higher Education System*. India: Crescent Publishing Corporation

Spender, D. (1982). *Invisible Women: The Schooling Scandal*. London: Writers and Readers Pub. Cooperative Society

World Bank, 2010 report, <http://www.tradingeconomics.com/bangladesh/ratio-of-girls-to-boys-in-primary-and-secondary-education-percent-wb-data.html>, retrieved on 15 October, 2013

*Perspectives on World Englishes in Government-Authorized High School Textbooks  
in Japan*

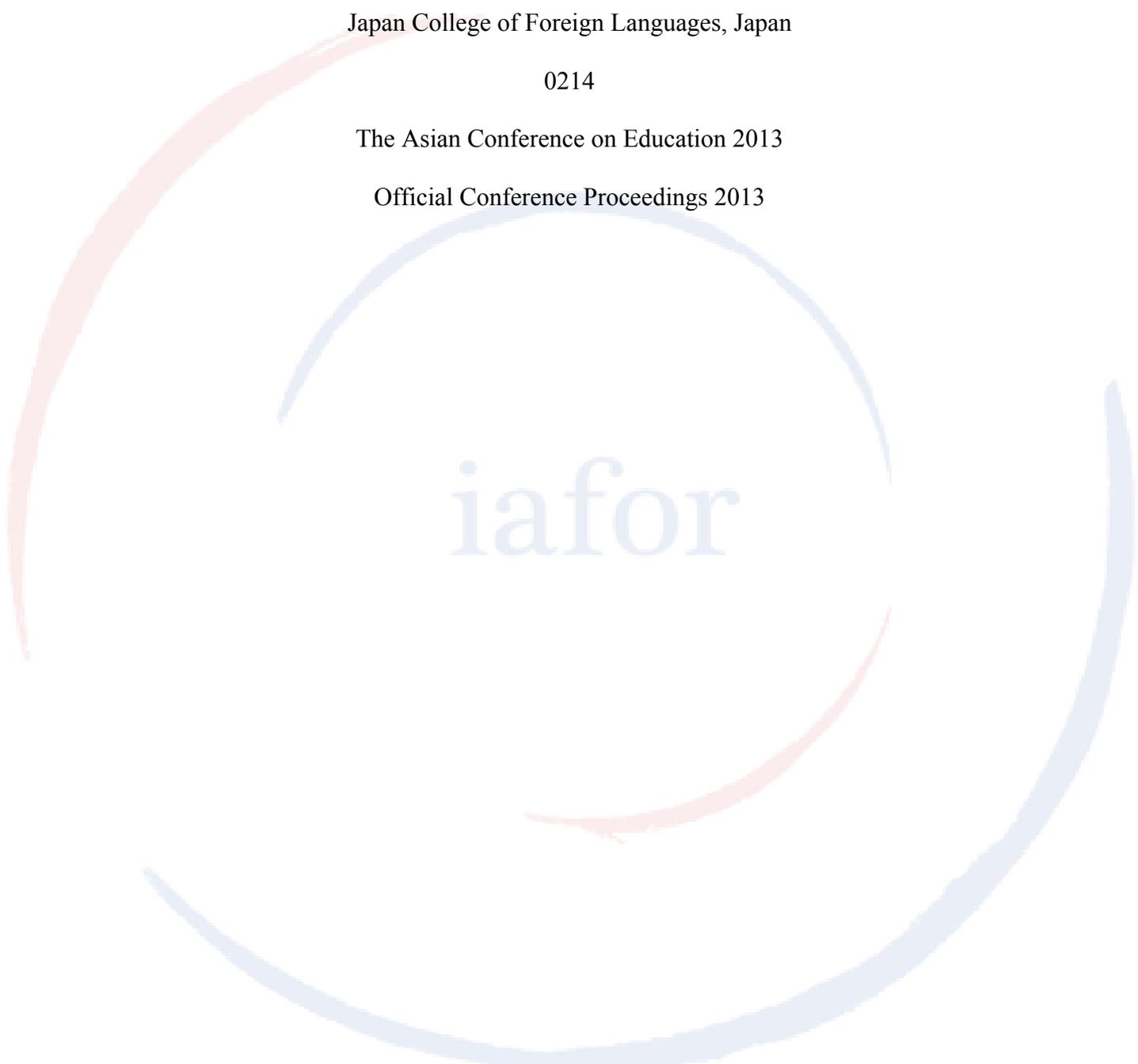
Tomoko Uryu

Japan College of Foreign Languages, Japan

0214

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The notion that English has been functioning as one of the most influential and powerful international contact languages has become the globally common assumption. In ELT environment, it is clear that students have been under pressure to become successful speakers of English due to this global demand of a common language. As it is pointed out that English will be one of the strongest candidates for an international language in ASEAN, it is important especially for Asian ESL/EFL learners and teachers to cultivate the understanding of the linguistic and cultural diversity of World Englishes (henceforth WE) and the function of English as a lingua franca (henceforth ELF) (Crystal 1997; Kachru 1998; McArthur 2003; Graddol 2006; Kirkpatrick 2007). ELF in this paper refers to English which function as a contact language mainly among traditionally called non-native speakers while WEs refers to local varieties of English, including ones from Inner, Outer and Expanding Circles<sup>1</sup> (Jenkins 2006). As Graddol (2006) predicted, one of the key trends of English in 21<sup>st</sup> century is the future decrease of influence toward English given by native-speaker norm(s) of English (p.14). In ELF speaking environment, English language is *de jure* treated as a truly means of communication and independent from any legitimacy control from the traditional native speakerism. Yet, awareness about the global as well as Asian roles of ELF has not been connected to the need of reconsideration of norm-dependent educational standard model (Seidlhofer 2001). Moreover, as Halliday (2013) noted, the fallacy or “cultural disbelief” that non-native teachers and students have ‘problems’ in autonomy and communicative ability of English has been pervasive in their own attitudes and conceptions about English language especially in South East Asia (p.21). In Japan, for instance, Honna and Takeshita (2000) reported the students’ negative attitudes toward their own English due to the lack of the ‘perfectness’ of being like a traditional native speaker and Kudota (1998) found there is a strong preference for a traditional native speaker model and prejudice against Outer and Expanding Circles varieties of English among Japanese students. I consider them obstacles to develop ELF because these negative attitudes toward WE might prevent ELF speakers from valuing and enhancing the linguistic and cultural diversity with WE and the intercultural communicative ability of ELF. In this study, a qualitative analysis was conducted to unveil the treatments of ELF and the linguistic and cultural diversity of WE in Japanese high school teaching settings. The study investigated government authorized textbooks of English adopted from 2013 in ways the current situations of ELF and linguistic varieties of WE are introduced in them because textbooks are one of the major resources which students gain linguistic as

well as cultural information about English language. Additionally, I believe it is partly possible to perceive Japanese government's attitude toward the perception of the legitimate language model in ELT settings in Japan because textbooks used in classroom are under control of government textbook authorization process. In the authorization process, the private publishers create textbooks and submit them to the national textbook examination conducted by the ministry of education. Contents of textbooks must meet the requirements given by the curriculum guideline in order to pass the examination of authorization process. The decision of which textbooks to be used is done by local boards of education for the case of public schools and by schools in the case of private schools (MOFA<sup>2</sup> 2013).

### Research Questions

In Japan, the ministry of education provides the national curriculum guidelines for all subjects. Overall objective of all foreign languages education focuses on three goals: 1) to “develop students’ communication abilities”, 2) to “deepen their understanding of language and culture” and 3) to “foster a positive attitude toward communication through foreign language” (MEXT<sup>3</sup> 2009, p.1). Also, the national curriculum guideline presents a suggestion about the language model in high school ELT settings:

Contemporary standard English should be used. At the same time, consideration should also be given to the reality that different varieties of English are used to communicate around the world (MEXT 2009, p.6).

From the overall objective and suggestion, it is not clear about which standard variety should be taught in Japanese high school ELT settings. Yet, there is any concrete set of linguistic rules for “contemporary standard English” provided by the national guideline. In terms of students’ understanding of culture, there is no suggestion about what culture(s) should be introduced in ELT settings. In order to investigate how the government covertly represents English language and culture to be taught from high school textbooks, two research questions are given:

- 1) How do government authorized English textbooks in Japan treat “the reality that different varieties of English are used to communicate around the world” (NEXT 2009, p.8) in their contents?

- 2) How is the perception toward “contemporary standard English” (MEXT 2009, p.6) made by the national curriculum guideline represented covertly in the textbooks?

### Materials Analyzed

The materials analyzed in this study are 49 English textbooks which were authorized by the ministry of education in 2012 and adopted to the educational environment in 2013(MEXT 2012). The 49 textbooks are categorized into four subjects: Basic English Communication, English Communication I, English Expression I and English Conversation. Out of four subjects, English Communication I is the mandatory subject while the three other subjects are elective. The number of the textbooks analyzed in this study was 1 textbook for Basic English Conversation, 27 textbooks for English Communication I, 17 textbooks for English Expression and 4 textbooks for English Conversation shown as below:

*Table 1.1* Number of Textbooks Analyzed

Subject	Category	Number
Basic English Communication	elective	1
English Communication I	mandatory	27
English Expression	elective	17
English Conversation	elective	4
Total		49

(MEXT 2009)

See Appendix 1 for the detail of subdivided objectives of subjects

### Points to Examine

In this study, I conducted the qualitative analysis of textbooks under two points to examine. Firstly I focused on themes of chapters given by textbooks in the ways whether cultural diversity of English and/or the concept of ELF are introduced and secondly on exercise and representation of language *per se* in ways of what linguistic varieties of English were introduced. The first point was set to investigate the representation of culture(s) which the curriculum guideline was to provide to the educational settings. The second point was given to find the covert assumption of

“contemporary standard English” which the curriculum guideline provided as a model language for high school ELT settings.

### Analysis

Out of 49 English textbooks analyzed in this study, 6 textbooks (12.2%) have a chapter explaining the linguistic and/or cultural heterogeneity of English in the globalized world and/or the intra/international functions of ELF. Among these six textbooks, however, none of them provided any concrete linguistics examples of WE, and the lexical (i.e. spellings)/phonetic (i.e. IPAs of words) information introduced in them were American English. Also, none of the textbooks which provided the linguistic and/or cultural diversity of WE noted a problem or “conflict” (Jenkins 2009, p.42) between mutual intelligibility and language as identity.

Table 1.2 Number of Textbooks which have a Chapter on WE and/or ELF

Subject	Number	Total
English Communication I	2	27
English Expression I	4	17
Basic English Communication	0	1
English Conversation	0	4
Total	6(12.2%)	49

(MEXT 2012)

See Appendix 2 for the details of the material information

In a textbook *New One World: Communication I*, for example, the theme of lesson 1 is based on the concept of English as a global language. It provided the information about the function of EFL. The first part of this chapter introduced three high school students from Korea (i.e. Expanding Circle), Italy (i.e. Expanding Circle) and Nigeria (i.e. Outer Circle) talking about the reasons why they study English. The reason given by a Nigerian student is related to the intranational function which English plays in Nigeria while the reason given by an Italian student indicates the possible function of English as a lingua franca in European countries. The reason given by a Korean student is also an expectation of the international communicative function which English language holds. The lesson also pointed out the legitimate issue of English as a global language with a sentence noted that “English no longer belongs only to

native speakers” (Ito et al. 2013, p.12). Yet, although the lesson noted the intranational use of English as a common language within Nigeria, neither is there linguistic introduction about local varieties of Nigerian English nor mentioning about the possible mutual intelligibility problem in the intra/international environments in which some varieties of Nigerian English have faced (Kirkpatrick 2007, pp.102-103). The linguistic representation in this lesson was standardized to American English in spite of the fact the diversity of WE is indispensable in the discussion of English as a global language. Another example *On Air: English Communication I*, the lesson 10 provided the critical insight about the spread of powerful language in the discussion of ELF. In the lesson, it clearly stated that “The language of international business as well as international diplomacy is largely English” (Yashiro et al. 2013, p.106). However, the lesson also provided the comment that the spread of EFL might negatively influence the linguistic diversity in general:

Language is not just a tool for communication. It is the history and culture of the people. People identify with their language. The language represents their value, belief and their way of life (Yashiro et al. 2013, p.108).

Nonetheless, the representation of English given by this textbook was also standardized in American English and the chapter did not mention the diversity of WE although it focused on the value of linguistic diversity. Third example *Monument: English Expression I* and fourth example *Mainstream English Expression I* covered the topic about the global function of ELF in chapter 16 and 13 respectively while fifth example *Perspective English Expression I* noted the intranational function of English in Singapore and India along with the global function of ELF. Although there are no linguistic examples of Outer and Expanding Englishes introduced in the chapter, the last example *Departure: English Expression I* attempted to start the topic of the global function of ELF with the sentences to point out and provide insights and positive attitude toward students’ concern or inferiority about ‘imperfectness’ of their English against the traditional native speakers’ norm(s):

Do you ever say to yourself, “I wish I could speak English like a native speaker?” You don't have to think so. There are many people all over the world who speak English as if it were their own language and don't care if they make mistakes (Yamaoka et al. 2013, p.88).

Although these six textbooks attempted to introduce the linguistic and/or cultural diversity of WE and the intra/international functions of ELF, the covert assumption about an educational model was standardized in American English. One out of six textbooks tried to challenge the negative attitude toward students' disbelief about the conception of "perfectness". Yet, the majority of the textbooks did not attempt to introduce the issues of the facts English language has faced in the globalized world. Contrary to this, in *Atlantic English Communication I*, for instance, I found an overt expression in a favor with the traditional norm(s) dependence from dialog between an Inner Circle native speaker and a Japanese student in chapter 14 such as "No, it's not wrong, but it's not so natural. Normally, native speakers use this pattern..." (Michell et al. 2013, p.117). These findings indicate the concept of "contemporary standard English" given by the national curriculum guideline restricts the possibility of an educational model of English language within one of the most influential Inner Circle norms (i.e. American English). This might be a reason why the chapters with the topics of the linguistic and/or cultural diversity of WE did not provide any concrete linguistic samples even from standardized varieties from Outer Circle(e.g. standard Singapore English) even though these varieties meet the criteria of "contemporary standard English" noted in the guideline.

## Conclusion

The analysis found there are few textbooks (6 out of 49) which provide with information about cultural and/or linguistic diversity of Englishes in high school environment in Japan. Among these textbooks, none of them introduced any concrete linguistic examples of WE, including standardized varieties in Outer Circle. Also, the perception about "contemporary standard English" is likely to be one of the most powerful Inner Circle models, i.e. American English although the national curriculum guideline did not clearly mention it. The study concluded firstly the linguistic and/or cultural diversity of WE and intra/international roles of ELF may not be considered as one of the key notions which English language has faced in the globalized world in high school ELT settings in Japan. Secondly, covert assumption or tacit understanding about the possibility of an educational model in ELT settings presented by the national curriculum guideline is likely to be limited to the extent of Inner Circle model(s). I believe it is necessary to investigate how ELT materials describe 'English language' along with its history and linguistic and cultural heterogeneity because the

information provided by them may influence how learners and teachers perceive and develop the linguistic and cultural ideology of English and evaluate varieties including their own. The further analysis is needed to investigate possible causalities and mechanisms which may produce pessimistic attitudes and intolerance toward non-Inner Circle varieties and fallacy or ‘cultural disbelief’ regarding native-speakerism intrinsically in Outer and Expanding Circles.

Appendix 1: Objectives for Subdivided Subjects: (MEXT 2009)

Subject	Objectives
English Communication I	To develop students' basic abilities such as accurately understanding and appropriately conveying information, ideas, etc., while fostering a positive attitude toward communication through the English language (p.1).
English Expression I	To develop students' abilities to evaluate facts, opinions, etc. from multiple perspectives and communicate through reasoning and a range of expression, while fostering a positive attitude toward communication through the English language (p.3).
Basic English Communication	To develop students' basic abilities such as listening, speaking, reading and writing, while fostering a positive attitude toward communication through the English language ( p.1).
English Conversation	To develop students' abilities to hold conversations on everyday topics, while fostering a positive attitude toward communication through the English language (p.4).

Appendix 2: High School Textbooks Introduced in the Study (See MEXT 2012 for the entire list of the high school textbooks analyzed)

Ito, H et al. 2013, *New World Communication I*, Tokyo:Kyoikushuppan

Mitchell, S et al. 2013, *Atlantis: English Communication I*, Cheers, Tokyo.

Mori, A et al. 2013, *Perspective: English Expression I*, Daiichigakushusha, Tokyo.

Suzuki, E et al. 2013, *Monument: English Expression I*, Kyorinkan, Tokyo.

Yamamoto, R et al 2013, *Mainstream: English Expression I*, Zoshindo, Tokyo.

Yamaoka, K et al. 2013, *Departure: English Expression I*, Taishukan, Tokyo.

Yashiro, K et al. 2013, *On Air: English Communication I*, Kaitakushuppan, Tokyo.

## References

- Crystal, D 1997, *English as a Global Language*, Cambridge University Press, Cambridge.
- Graddol, D 2006, *English Next*, British Council, viewed 1 October 2013, <<http://www.britishcouncil.org/learning-research-english-next.pdf>>
- Halliday, A 2013, 'Native Speaker' Teachers and Cultural Belief', in SA Houghton and D Rivers (eds) *Native-speakerism in Japan: intergroup dynamics in foreign language education*, Multilingual Matters, Bristol, Buffalo, Toronto.
- Honna, N & Takeshita, Y 2000, 'English language teaching for international understanding in Japan', *English Australia Journal*, vol. 18, no.1, pp.60-78.
- Jenkins, J 2006, 'Current perspectives on teaching world Englishes and English as a lingua franca', *TESOL Quarterly*, vol. 40, no. 1, pp.157-181.
- Jenkins, J 2009, *World Englishes: A Resource Book for Students*, 2nd edn, Routledge, London.
- Kachuru, BB 1992, *The other tongue: English across cultures*, University of Illinois Press, Urbana and Chicago.
- Kachru, BB 1998, *English as Asian language*, viewed 20 October, <<http://ddd.uab.cat/pub/lal/11337397n5p89.pdf>>
- Krikpatrick, A 2007, *World Englishes: implications for international communication and English language teaching*, Cambridge University Press, Cambridge.
- Kubota, R 1998, 'Ideologies of English in Japan', *World Englishes*, vol.17, no.3, pp.295-306.
- Seidlhofer, B 2004, 'Research perspectives on teaching English as a lingua franca', *Annual Review of Applied Linguistics*, no. 24, pp.209-239.
- McArthur, T 2003, 'English as an Asian language', *English Today*, vol.19, no.2, pp.19-22.

Ministry of Foreign affairs of Japan, 2013, *How a textbook becomes part of a school curriculum*, viewed 1 October 2013,  
<<http://www.mofa.go.jp/policy/education/textbooks/overview-1.html>>.

Monbukagakusho, 2009, *Koutougakko gakushu sidou ryouryo kaisetu gaikokugo: section 8 foreign languages* (Interpretation for national curriculum guideline for high school: section 8 Foreign Language), viewed 20 October 2013,  
<[http://www.mext.go.jp/a\\_menu/shotou/new-cs/youryou/eiyaku/\\_icsFiles/afieldfile/2011/04/11/1298353\\_9.pdf](http://www.mext.go.jp/a_menu/shotou/new-cs/youryou/eiyaku/_icsFiles/afieldfile/2011/04/11/1298353_9.pdf)>.

Monbukagakusho, 2012, *Koutougakkou shiyou kyokashomokuroku: heisei25nendo siyou* (High school textbooks list: used from 2013), viewed 1 October 2013,  
<[http://www.mext.go.jp/a\\_menu/shotoukyokasho/mokuroku/24/\\_icsFiles/afieldfile/2013/02/18/1320021\\_03.pdf](http://www.mext.go.jp/a_menu/shotoukyokasho/mokuroku/24/_icsFiles/afieldfile/2013/02/18/1320021_03.pdf)>.

Notes:

1. See Kachru (1992) for the details of the definitions of Inner, Outer and Expanding Circles.
2. MOFA= Ministry of Foreign Affairs of Japan.
3. MEXT= Ministry of Education, Culture, Sports, Science and Technology of Japan

*Development and evidence of Student Participatory Class model in  
Mathematics Education: Through the cases of Junior High Schools and High Schools  
in Guizhou, China*

Koichi Kitamura

Kure National College of Technology, Japan

0217

The Asian Conference on Education 2013

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Abstract

The student participatory class model in mathematics education was developed to nurture the necessary literacy in mathematics education. To nurture mathematical literacy, Compulsory Linkage, Project Cycle Management for Education, and Micro Presentation are used. Of the basic mathematical academic abilities, the author focused on Logical Thinking, Critical Thinking and Mathematics Expression, and made efforts to solve the issues of mathematical education today through the development of a student participatory class model aimed at the comprehensive nurturing of each skill. So as to verify the efficiency of this class model, a practice class was conducted at the junior high schools and high schools in Guiyang, Guizhou, China. From the results, the mathematical literacy of the junior high school and high school students increased because of the student participatory class model. The efficiency of the student participatory class model was proved and is reported.

**Keywords:** Mathematics education; Mathematical literacy; Junior high schools

## I. INTRODUCTION

In 21st century China, the economy rapidly developed in the coastal areas, but the economies in the inland areas were left behind. As a result economic disparity expanded. For this reason, the modernization of science technology was conducted in 1975 as one means of addressing this economic disparity. In order to train superior personnel with this modernization process, mathematics education was regarded as a particularly important element in school education. In the school curriculum reform, development in science technology was attempted by focusing on mathematics education by increasing the number of annual class hours for math. Accordingly the author conducted a research on math teachers in both Japan and China and carried out mathematics teacher's training in Guizhou, China. As a result, it became clear that there is a lack of autonomy in students, an expanded disparity in the capacity and ability for mathematics education, shortage of education budgets, teachers and teaching materials, and insufficient education maintenance. In this report, the student participatory class model was developed with the aim of improving the lack of autonomy in the students and the capacity and skills of the math teachers.

## II. THE DEVELOPMENT OF THE STUDENT PARTICIPATORY CLASS MODEL

The skill that should be nurtured in the student participatory class model is logical thinking, critical thinking and mathematical expressions. Logic and imaginative power are regarded as important qualities in mathematical activities not only in the mathematics education of Japan but also in China. For this reason, through the content analysis of the mathematics textbooks of junior high schools and high schools, text books specifically pick up phenomena of everyday life, and the teacher conducts the class by having the students convert the image of the learned content into the context of everyday life phenomena.

As a structural factor to mathematical expressions in the class model, the method of "mathematical communication" cited by Tadao Nakahara (1994) can be considered.

- Realistic Expression (Expressions by actual condition and object)
- Operational Expression (Expressions through the actual operation of teaching tools)

- Pictorial Expression (Expression by pictures and figures)
- Linguistic Expression (Expression utilizing everyday speech)
- Symbolic Expression (Expressions utilizing mathematical symbols)

Realistic Expression is the ability to express mathematical phenomena in the specific everyday phenomena of the learning content. Operational Expression is like drawing a figure using teaching tools, such as a compass or ruler, and drawing specific figures and graphs. Pictorial Expression is to express mathematical phenomenon by utilizing pictures or photographs in the learning content. Linguistic Expression means to express mathematical phenomena by language. Symbolic Expression means to express mathematical phenomena with mathematical symbols.

The author cited Nakahara's definition and defines mathematical expression as "the ability to communicate to others their thoughts utilizing specific objects, figures, tables, graphs, languages, symbols, and numerical formulas considered when mathematically processing the phenomenon." In this research, the development of a class model which nurtures logical thinking, critical thinking and mathematical expression was the first step. As an effective method to nurture these abilities, the following three methods were adopted.

- Compulsory Linkage
- Project Cycle Management (PCM) for Education
- Micro Presentation

An explanation regarding each method will be described in a simple manner as follows. Compulsory Linkage and Micro Presentation are methods developed by Tokuji Hayashi (2002).

#### A. Compulsory Linkage

Compulsory Linkage is a method for nurturing logical thinking skills as well as class design skills that stress linearity. Between the pre-established starting point (target group/participants) and the end point (the goal), association are made while incorporating vocabulary connected with the aspect in question (schema), and thereby

refining the presentation composition. The incorporated vocabulary considers the target groups' readiness (preparedness/prior education), and provides participants with the ability to acquire new skills and knowledge until their goal is attained. Compulsory Linkage, unlike existing Image Mapping, features the fact that the establishment of a goal results in the participants converging the temporarily expanded thought. Applying this method during presentation planning takes note of the target group or index, considers the target groups' background and prior knowledge, as well as the matter in concern, and aims to nurture their planning ability to logically assemble the new schema for communicating the information.

#### B. PCM for Education

PCM for Education is a method of problem analysis that utilizes a visual logic tree structure. Furthermore, the process of creating a logic tree structure aims to nurture the ability to think critically while mutually enhancing discussion. Logic trees, representative of diagrammed thought tools, organize the causal relationships of items (cause-effect) and help to clarify the structure of complex problems. In these instances, the logic tree structure can establish an evaluation index for objective measurements of the goal or the valuation standard for denoting the accomplishment of the goal for this particular index. This approach makes it possible to critically consider the causal relationship between cause-effect while preventing omission or one-sidedness during discussion.

#### C. Micro-presentation

Micro-presentation is a method for nurturing expressional and communicative skills. In our class model, students conduct micro-presentations based on the contents created through the Compulsory Linkage method. In the micro-presentations, both listeners and presenters (students) mutually evaluate the presentation while considering "verbal, nonverbal, media use, comprehension, interest, and degree of staying." The aim of this activity is to nurture communicative and expressional skills.

The author of this paper has noted the abilities beyond basic mathematical skills such as logical thinking, critical thinking, and mathematical expression. In addition, I have devised a solution for the issues of modern mathematics education by developing a student participatory class model that aims to comprehensively nurture their individual abilities.

I have hypothesized that the students will acquire an aptitude for mathematics education challenges such as “problem solving, conceptualization/logic, explanation/expression, and logical judgment” by fostering the above-mentioned logical thinking, critical thinking, and mathematical expression skills. Therefore, the hypothesis posited by the author will be verified through the development of a student participatory class model whereby the Compulsory Linkage, PCM for Education, and Micro-presentation methods can be comprehensively administered. Fig. 1 below illustrates the image of the math-related student participatory class model envisioned by the author.

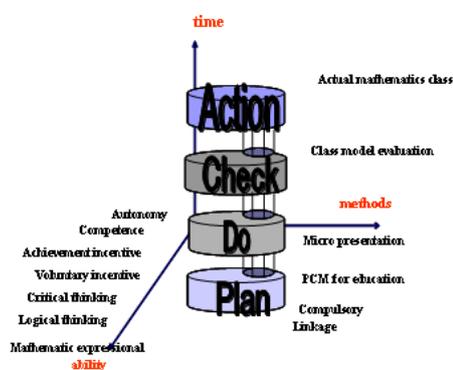


Figure 1. Math-related Student Participatory Class Model

Here, the author have not established an arrangement for listing behaviors/abilities with regard to the seven behaviors/abilities listed for literacy in Fig. 1, but I have simply ordered these from autonomy to mathematical expression subjectively. However, even with regard to my method of listing, I would like to study the arrangement or connectedness of each particular behavior/ability in the future.

## I. APPLYING THE STUDENT PARTICIPATORY CLASS MODEL IN GUIZHOU, CHINA (GUIYANG CITY)

### A. Application 1 of the Student Participatory Class Model at the Guiyang City Junior High and High School.

1) *Purpose:* Apply the student participatory class model in mathematics classes at the Qinghua School and verify the significance of the model.

*Method/Contents:* This application of the student participatory class model utilized the Compulsory Linkage method to nurture logical thinking. In addition, the Micro-presentation method was used to nurture critical thinking and mathematical expression.

- Period of Implementation 「March 2008.」
- Location and Time of Implementation
- 「Qinghua School, a single 45-minute class.」
- Persons Implementing the Study 「Author」
- Collaborator 「Yamaguchi University Professor Hayashi Tokuji, Guizhou University Professor Zhang Chongde, Yuan Guangwei (Translator)」
- Target Group 「49 first-year students at the Qinghua School.」
- Other 「Seven mathematics teachers at the Qinghua School. 」

a) Nurturing Logical Thinking: The author first presented an example of the Compulsory Linkage method and then explained the relationship and relatedness of the vocabulary from the compulsory linkage sheet posted on the blackboard. Approximately 10 minutes after presenting the compulsory linkage sheet, the participants were instructed to create their own compulsory linkage sheets that included as many vocabulary words that they could associate as possible. For this particular study, the initial keyword was provided as “rocket” and the final word as “potato.”

After another 10 minutes, participants were instructed to exchange notebooks with the students sitting next to them and then explain the contents of their writings. The students who had completed their compulsory linkage sheets were then instructed to write their responses on the simili paper posted on the blackboard.

Two students are then nominated. These two students investigate the number of terms present while the compulsory linkage sheets are being drawn up on the simili paper. These two are guided to check the relatedness and consistency of the associated words from the “initial word” to the “final word” based on their own compulsory linkage sheet, and to determine whether they are logically written. From this explanation, each student corrects and examines the compulsory individual linkage sheet they each drew.

b) Nurturing Critical Thinking and Mathematical Expression Skills: The listeners (the pairs of students) mutually discussed the method of presentation and the contents of their micro-presentations based on the compulsory linkage sheets created by each of them. After the discussion, they exchanged their compulsory linkage sheets and mutually evaluated the information. This study of the content of one another's compulsory linkage sheets and presentation method nurtures critical thinking and mathematical expression in the students.

3) Result: According to a term-number survey of the compulsory linkage sheets, five students provided 10–15 terms, 19 students provided 16–20 terms, 22 students provided 21–25 terms, 3 students provided 26–30 terms, but none of the students provided more than 31 terms. To show the students the results of the term-number survey, a bar graph was presented on the blackboard. At that time, those students with 30 or more terms were praised for having superior abilities. Next, the students who wished to present their compulsory linkage sheets were instructed to raise their hands. At that time, approximately half of the students wrote their compulsory linkage information on the simili paper posted on the blackboard.

Many of the students enthusiastically created their compulsory linkage sheets and after completing the task, two students were nominated to deliver micro-presentations in succession. Subsequently, each student received comments on their presentation methods and skills as well as their technique and method of explaining the contents in an accessible manner.

The contents presented by these students are noted below.

Students performed their micro-presentations for approximately three minutes. The presenting students efficiently transferred the information from their compulsory linkage sheets in their notebooks onto the simili paper posted on the blackboard. These students also showed great attentiveness/interest during the presentation and toward the creation of the compulsory linkage sheets.

These students created four routes in their compulsory linkage sheets. The terms found in the presenting students' compulsory linkage sheets totaled 18 words. A consistency in the associated words' connections was observed.

a) Logical Thinking Ability: After analyzing the students' compulsory linkage sheets, it was observed that the majority used terms associated with the initial keyword of

“rocket” and the final keyword of “potato” with relatedness and consistency. It appeared that students performed divergent thinking when listing associated words after the initial keyword. However, midway through the process, students began thinking in a convergent manner when connecting the terms to the final keyword. Many of the term included a clear causal relationship and the students acquired the ability for logical thinking during the course of this study. Furthermore, the terms of those students deemed to have unclear relatedness were reviewed and confirmed after their micro-presentations. In sum, it can be understood this particular effort nurtured logical thinking in a majority of the students.

b) Critical Thinking Ability: Students were asked to mutually evaluate the contents of the compulsory linkage sheets 10 minutes after creating them. As a result, I witnessed many instances in which the students could effectively express and exchange their opinions and thoughts, after listening to the partner’s opinions and thoughts. When the students (the listeners) were asked by the author for their opinions and whether they were for or against the presentation’s contents, many students were able to respond, listen to their partner’s opinions and thoughts, and state their own opinions and thoughts from the presenting student’s standpoint.

c) Mathematic Expressional Ability: The author offered advice for each micro-presentation especially with regard to language, e.g., speed of speech, gestures, eye contact, voice volume. Based on their reactions, the majority of the students involved in the student participatory class acquired points to note for expression/communication skills and methods to enhance their future presentations. Furthermore, the author established an evaluation level to assess the student participatory class model by following Kirkpatrick’s four-level course evaluation model. According to Hayashi, Kirkpatrick’s course evaluation model has been verified up to the third level through a student participation training model, which was designed to improve communication in the school administration, including the principle, vice principle, etc. in the Yamaguchi Prefecture. For our student participatory class model, I decided to apply the first two levels of Kirkpatrick’s four-level course evaluation. Table I displays the evaluations of the student participatory class model.

TABLE I. EVALUATION OF THE STUDENT PARTICIPATORY CLASS MODEL

Evaluation Level 1	Student's level of satisfaction (was the content satisfying to the students?)
Evaluation Level 2	Student's level of understanding (were the students able to acquire the particular skill?)
Evaluation Level 3	Change in student behavior (could the students apply the skills acquired in class?)
Evaluation Level 4	Level of contribution toward the creation of a school system

This application of this study occurred during a single 45-minute class period in May 2008 and it involved a target group of 52 first-year students from Qinghua School. The topic of the study was “vector planes” and the Qinghua School mathematics teaching staff administered the lessons. The author analyzed the verbal communication between the teachers and their students and the communication was analyzed in three-second intervals for the 45-minute class held during the first period. In addition, verbal communication analysis was carried out to analyze the dialog between the students and teachers during the mathematics classes to examine the students’ initiatives in proactive learning.

It is believed that the students were able to nurture proactivity, critical/logical thinking and mathematical expression through the student participatory class. Furthermore, during the research discussions between the author and teachers, one teacher commented that the Compulsory Linkage method was an effective teaching technique that nurtured critical and logical thinking abilities in the students. The teacher also stated that it enabled the students to become more attentive and interested in the material.

B. Application II of the Student Participatory Class Model at the Guiyang City Junior High and High School

Purpose: To apply the student participatory class model in mathematics classes at Qingyan School and verify the significance of the model.

Method/Contents: Qingyan School, located approximately 90 kilometers from

Guizhou University, is a public junior high and high school situated in the mountainous

region of the Huaxi District, a suburb of Guiyang City. The entire school encompasses approximately 1,000 students and 100 teachers. The account of the implementation of the student participatory class is mentioned below, with Table II denoting the content of the survey carried out at Qingyan School.

TABLE II. SURVEY METHOD AND APPLICATION PERIOD FOR SURVEYS, ETC.

Survey Method	Before the Model Class	After the Model Class
Observation of Mathematics Class	March 2008	May 2008
Mathematics Teacher Questionnaire Survey	March 2008	May 2008
Student Questionnaire Survey	January 2008	June 2008
Student Participatory Application Class	Mid-March 2008	
Student Questionnaire Survey regarding Target Attainment	Mid-March 2008	
Teacher Training Questionnaire Survey	Mid-May 2008	

- Period of Application 「March 2008」
- Location and Time of Application 「Qingyan High School, a single 45-minute class period」
- Persons Administering the Application 「Writer」
- Collaborator 「Yamaguchi University Professor Hayashi Tokuji, Guizhou University Professor Zhang Chongde, Yuan Guangwei (Translator)」
- Target Group 「50 first-year students from Qingyan School」

- Other 「10 Qingyan School mathematics teachers observed the class. 」

Result: While several students created their compulsory

linkage sheets on the simili paper, a term-number survey showed that 5 students provided 10–15 terms, 32 students provided 16–20 terms, 8 students provided 21–25 terms, 5 students provided 26–30 terms, but none of the students provided more than 31 terms. The students' term numbers were shown on the blackboard as a bar graph. Those students with 26 or more items were praised for having superior abilities. Furthermore, the students were enthusiastically engaged and all of them completed their compulsory linkage sheets with significant attentiveness and interest.

According to the questionnaire regarding target attainment evaluation noted in the educational instruction plan, many students answered “acceptable” for all of the target attainment contents.

The students who created compulsory linkage sheets created five routes and each student's presentation lasted approximately four minutes. The total number of terms found in the students' compulsory linkage sheets was 29, and a general consistency in term connections was found for the majority of students. A portion of the students' expressions were seen as redundant.

An analysis of the students' compulsory linkage sheets revealed that of the 50 sheets created by the students, the relationship of each term in 48 of the sheets showed relatedness, consistency, and a causal relationship. According to these results, the application and the creation of the compulsory linkage sheets nurtured logical thinking for almost all of the students.

We attempted to promote exchange between the students by having them exchange compulsory linkage sheets and explain the contents in their own words. As a result, the students were able to listen to what their partners were saying, take the position of their partners, and express their own thoughts and opinions. Through this activity, it is assumed that critical thinking skills were nurtured in the students. The author then commented on presentation skills, such as gestures, eye contact, voice volume, and had each of the students perform micro-presentations. During this time, students made an effort to increase their individual skills by observing the successive presentations of their fellow students. Furthermore, the students were able to nurture expression/communication skills through this effort.

According to the findings, the introduction of the student participatory class model helped improve the environment from a teacher-leading class to a student-participatory environment.

#### IV. SUMMARY OF THE CLASS APPLICATION AT THE GUIYANG CITY JUNIOR HIGH AND HIGH SCHOOL

A summary of the application using a student participatory class model is noted below:

Analysis results of the Qinghua School student compulsory linkage sheets revealed that a majority of students performed divergent thinking when listing the associated words related to the initial keyword. However, midway through the process, students began performing convergent thinking when connecting the terms to the final keyword. It can be understood that many of the terms included causal relationships and the Compulsory Linkage method nurtured the students' logical thinking abilities.

Furthermore, the micro-presentations also contributed to nurturing the students' logical thinking abilities. Many of the students were able to effectively exchange their opinions and thoughts with their partners while giving consideration to the partner's views, as well as answer any pertinent questions posed by the author.

Moreover, it can be understood that the students' presentations enhanced their presentation skills such as word usage, speed of speech, gestures, eye contact, and voice volume. According to our findings, the majority of students involved in the student participatory class acquired important points to note for expression/communication skills and methods to enhance their future presentations.

Furthermore, as a result of the Qingyan School Students' compulsory linkage sheet analysis, it can be understood that a majority of the students showed significant attention/interest in the creation of their individual compulsory linkage sheets. In addition, the process was able to contribute to the nurturing of logical thinking abilities.

Furthermore, students were able to listen and effectively state their own thoughts and opinions from the partner's standpoint throughout the micro-presentations. This effort by the students also nurtured their critical thinking abilities.

Furthermore, according to the analysis of the dialog between the teachers and their students, from the time before the author observed the class to after the application of the student participatory class, the change in the teacher–student relationship showed significant improvement, as classes became more oriented towards proactive studying by the students rather than teacher-led courses, in both high schools in Qinghua and Qingyan.

Based on the results, it can be concluded that the student participatory class model was able to effectively enhance the students' autonomy, which was the primary goal of the student participatory class model. In addition, it was observed that the teachers' explanations to their students had become courteous and forthcoming, and the students' utterances and problem-solving activities had become copious.

## V. CHALLENGES OF THE FUTURE

I would like to put our student participatory class model into practice in Japan to enhance the model according to the results of this activity. Furthermore, to improve the mathematics teachers' teaching methods, I would like to develop a curriculum model that utilizes the above class model.

## ACKNOWLEDGMENT

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## REFERENCES

- [1] H. Tokuji, 2005 Grants-in-Aid for Scientific Research Subsidiary (Basic Research C) Application Research regarding Student Participatory Class Model Development-Nurturing Discussion/Critical/Logical/ Expressional Ability. Yamaguchi University Faculty of Education, 2006. 3
- [2] M. Takeda, PCM in Education Guide Book–Aim for Applying Workshops to Student Participatory Class, 2006. 4, pp. 13–62.
- [3] Compulsory Linkage Method, H. Tokuji, Yamaguchi University Faculty of Education, <http://www.hayashitokuji.com/>

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is partially enclosed by a large, light blue circular arc that starts from the bottom left and curves towards the right. A red arc is also visible, starting from the top left and curving towards the bottom right, intersecting the blue arc.

*Whose Role is it to Develop Secondary Students as Self-Regulated Learners? A Study Exploring Student, Parent and Teacher Perceptions*

Prue Salter

University of Technology Sydney, Australia

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Abstract

This paper draws on data from a doctoral study exploring how schools approach the development of self-regulated learning (SRL) for secondary school students. Self-regulation is becoming increasingly important as we move towards technologically driven self-directed learning environments, where greater amounts of autonomous learning may be necessary. Equipping students with self-regulation skills that help them navigate the increasingly complex and demanding mire of school academic expectations and assessments in a way that makes their school experience more efficient, less stressful and ultimately more rewarding, has been demonstrated to be a worthwhile pursuit (Zimmerman 2002). The research presented in this paper explores students, parents and teachers' attitudes, beliefs, and perceptions around the development of SRL in contemporary secondary schools and in particular the perceived roles of students, parents and teachers. The findings emphasize the need for schools to clarify roles and determine explicitly how the goal of developing self-regulated learners is to be met by the school. This research outlines the importance for schools to communicate the expected roles for parents, teachers and students in developing self-regulated learners, in order to ensure the community has a shared understanding of the approach taken by the school. The necessity for parents, teachers and students to receive training and support in developing SRL, to ensure they have appropriate tools to fulfil the stated roles, is also highlighted. To date there has been little exploration of the attitudes, beliefs and actual perceptions of students, parents and teachers with respect to SRL, especially in contemporary, Australian secondary contexts. This study therefore leads to greater insights of the roles parents, teacher and students may play in developing SRL, challenging traditional assumptions as to where responsibility for developing SRL may lie in contemporary schools.

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## Introduction

Research into understanding the concept of self-regulated learning has fostered in-depth exploration of the constructs that contribute to a definition of this area. While Zimmerman (1986) originally introduced self-regulated learners as those who are metacognitively, motivationally and behaviourally active participants in their own learning process, the following quote describes the evolution of self-regulation:

The attainment of optimal academic performance requires more than high quality instructions and requisite mental ability on the part of students: it requires personal initiative, diligence, and self-directive skill. Research on self-regulated learning grew out of efforts to understand the nature and source of these forms of students' proactivity, and it has revealed evidence of substantial correlation between their use and academic achievement. Self-regulation refers to self-generated thoughts, feelings and actions that are planned and cyclically adapted to the attainment of personal goals (Zimmerman 2002a p.85).

The field has traditionally focused on defining and measuring self-regulated learning and subsequently, exploring experimental, targeted in-class interventions to foster self-regulated learning. There is little understanding, therefore, of how contemporary Australian secondary schools are approaching the development of students as self-regulated learners in the context of the 21st century learning environment, or whether they even see the need for this role. The focus of the research up to this point in time has been on interventions with individual teachers in specific learning contexts, not a whole-school approach.

In Australia there is no nationwide 'self-regulated learning curriculum' or a policy on how schools should approach the development of self-regulation skills. The Australian Government Department of Education, Employment and Workplace Relations website covering school education states 'Australia's future depends on a high quality and dynamic school education system to provide students with foundation skills, values, knowledge and understanding necessary for lifelong learning, employment and full participation in society' (Commonwealth of Australia 2010). However, foundation skills are not defined and, while there are policies for Numeracy and Literacy, 'learning-to-learn' or self-regulation skills are not addressed. The NSW Department of Education's Quality Teaching Model includes students' self-regulation as one of the 18 elements for good classroom and assessment practice (NSW Department of Education 2003). Yet the documentation provides little guidance on how to foster this self-regulation or an explanation of what schools are currently doing in this area. As there is not a consistent policy in Australian secondary schools towards the development of these skills, approaches taken by schools can vary widely with a notable lack of school-wide procedures (Salter 2012).

This means that there is no guarantee that the needs of students who enter secondary schools without the necessary 'learning-to-learn' skills will be met (Zimmerman 2000). Zimmerman discusses the increased demands facing students in high school and states 'many students respond to these increasing demands for self-regulation by adopting effective learning strategies, but a significant number of students do not adopt them' (2002c, p.3). Although many students display deficiencies in the area of self-regulation, Schunk and Ertmer (2000) point out that training in this area is often

not given in schools due to inadequate time, space, funding, parental support or the belief that students do not require self-regulation.

A study by Kember, Jamison, Pomfret and Wong (1995) investigating the relationship between learning approaches, time spent studying and grades, found that students with inefficient approaches to study worked long hours yet achieved poor grades. These students may lack effective strategies but also may not employ existing strategies appropriately (Nolen 1988). The importance of learning skills in academic performance is emphasized in a study by Tait and Entwistle (1996), who explored the idea of a computer program to identify students whose study skills and strategies were ineffective so that appropriate support could then be provided. Renzulli and Reis (1985) stressed the importance of teaching gifted and talented students 'learning-how-to-learn' skills that promote active learning of new information. However the research suggests that skills development is most effective when integrated into the curriculum rather than included as a 'bolt-on' extra-curricular activity, separated from subject content and the process of learning (Wingate 2006).

A dual role is essential for all teachers: teaching subject content and how students should learn in order to maximize students' chances of reaching their academic potential in that subject (Weinstein 1988). Weinstein, Ridley, Dahl and Weiner (1988) point out that many students do not develop effective learning strategies unless they receive explicit instruction in their use. Indeed, Schunk mentions: 'Self-regulation does not develop automatically with maturation nor is it acquired passively from the environment' (2001, p.142). Research over the last four decades points to the continued importance of teachers' assistance in developing students' strategies for learning (Miller et al 2009; Romeo 2004; Weinstein & Mayer 1986).

As there is no mandated policy in place, it is up to individual schools to determine if and how they will approach the development of self-regulated learning. Many schools leave it up to individual teachers. Zimmerman points out that despite research findings supporting the importance of students' use of self-regulatory strategies, 'few teachers effectively prepare students to learn on their own' (2002b, p.69). There are a number of reasons postulated. Firstly, it may not occur to some teachers that specific strategy development might be required. Brown et al (1983) argue that many educators falsely assume that effective learning and study skills will automatically come with maturity and experience. Secondly, some teachers may not believe it is part of their role as subject matter experts to do this and that with the crowded school curriculum, there is only time to focus on the prescribed content itself – not generic strategies for learning, which students should either know or acquire outside of the subject content classroom. Thirdly, many teachers themselves are under-skilled in this area and do not feel confident teaching learning strategies to students. In the higher education arena, Tait and Entwistle (1996) found that when poor student performance was attributed to ineffective study skills, few academic staff felt confident to provide advice on these matters and that the perceived time constraints meant they believed they only had time to focus on the syllabus. Lastly, focusing on explicit self-regulated learning skills development appears to some extent to have been an unfashionable approach as the focus of teaching in classrooms becomes more centred on discovery and experiential based learning. Schunk and Zimmerman outline the issues as follows:

Educators generally accept the important role in behaviour played by students' self-regulatory activities, but they often do not know how to teach students self-regulatory skills or how to otherwise enhance students' use of self-regulation principles in classrooms or other learning settings. This lack of knowledge stems from several sources. Teacher education programs typically emphasize content-area knowledge and mastery of pedagogical methods, and focus less on principles of learning, development, and motivation. Second, teachers typically feel overwhelmed with the sheer amount of material they are expected to cover, which leads them to forgo teaching self-regulation and other topics that are not required. Finally, few students and parents realize that self-regulation can be taught as a skill, and as a result these groups put little pressure on schools to offer self-regulation instruction as part of the curriculum (Schunk & Zimmerman 1998, p.vii).

As stated by Zimmerman (2002b), a number of students appear to have many learning skills in place when they arrive in secondary school, but students seldom receive instruction in methods of study or other self-regulatory skills and evidence suggests that without assistance, many students fail to acquire these skills. Paris, Byrnes and Paris (2001) postulate that students learn strategies for SRL through both invention and instruction. They may have developed these skills during the primary school years, from family members, particular teachers, external courses or some other unknown source; the source of development is unclear as there is little research examining the varying sources of this strategy development in secondary students. A study by Wood, Motz and Willoughby (1998) found that in a group of high school students, 42% cited their study strategies as being self-taught, 28% recalled learning from parents and siblings while 20% cited teachers and educational institutions as their strategy influence.

However, it is the students who have not and do not develop self-regulated learning skills who are of concern. If the school does not play an active role, many of these students will struggle with the demands of the school system and in particular, with assessment systems. Wigfield (1994) stresses that helping students become self-regulated learners is an important educational task, as 'students who are self-regulated are more likely to use effective learning strategies, be meaningfully engaged in their own learning, and attain their academic goals' (p.101). Zimmerman and Martinez-Pons (1989) demonstrated that self-regulatory processes are an important source of achievement differences among students, while more recently, Zimmerman and Cleary (2009) found that children who are able to regulate their behaviour in school tend to achieve better and have other positive personal development outcomes.

Weinstein (1996) raised the point that self-regulation is becoming increasingly important as we move towards technologically driven self-directed learning environments, where greater amounts of autonomous learning may be necessary. Self-regulated learning has been described as one of the key competencies contributing to maintaining life-long learning skills (EU Council 2002) and use of self-regulated learning strategies has been shown to be a strong contributor to academic achievement in school (Zimmerman & Martinez-Pons 1986).

This doctoral study explores the current state of play in the Australian context and how one secondary school has approached the development of students as learners. It explores their approach through the lens of self-regulated learning in the context of the

21st century learning environment and uncovers the stakeholders' attitudes and beliefs around this topic.

Self-regulated students focus on how they activate, alter, and sustain specific learning practices in social as well as solitary contexts. In an era when these essential qualities for life-long learning are distressingly absent in many students, teaching self-regulated learning processes is especially relevant (Zimmerman 2002b p.70).

## **The Study**

A mixed-methods approach was used in this interpretive study. Data was obtained across two phases. Phase 1 was an online survey of 54 Years 7-12 schools in the Sydney metropolitan region. The purpose of this first phase was to aid in preliminary data collection on approaches schools take to developing SRL, and to facilitate case selection. Findings relating to Phase 1 are reported in Salter (2012). Phase 2 of the study explored through a case study a whole-school approach to SRL development of an Australian secondary school. From the 54 schools participating in Phase 1, one school was selected as a purposeful sample (Patton 2002) as the case to be studied in Phase 2. This case school was selected from the Phase 1 participants as this school demonstrated a significant number of proactive whole-school approaches to fostering SRL.

A second school also demonstrating a number of proactive approaches to developing SRL was also selected from the Phase 1 participants to participate in a preliminary pilot study. The pilot school was located in south Sydney and was a Year 7-12 academically selective boys school with a multicultural population representing over 30 different cultural groups. According to teachers at the school, students had traditionally demonstrated high self-efficacy and strong motivation for their studies.

The case school selected for Phase 2 was an Australian co-educational, non-government secondary school in Western Sydney, with a student body from many different racial and socioeconomic backgrounds. Since establishment of the school in 1988, final examination results had been consistently below state average and unlike the pilot school, students had been perceived by teachers as having low self-efficacy and motivation for academic studies. Six years ago, with the appointment of a new principal, the school radically overhauled their approach to helping students become better learners.

To obtain multiple perceptions and verify interpretations (Stake 2005) during this case study, the following methods were used: questionnaires for students, parents and teachers, semi-structured interviews of teachers and school executives, observations and document gathering. Twelve 40 minute interviews were undertaken with executives and teachers; and observations of three lessons, three meetings and an assembly were undertaken. The data collection was spread across the 2012 school year in order to allow time to incrementally analyze the data and let each stage inform the next (Merriam 2009). Data was coded and analyzed thematically.

This paper focuses on findings emerging from analysis of the Phase 2 case study survey data, exploring students, parents and teachers' attitudes, beliefs, experiences and perceptions around the development of SRL in contemporary secondary schools

and in particular the perceived roles of students, parents and teachers. From a student body of 950, 256 (27%) students (age range 12-18) voluntarily completed the anonymous survey of five open-ended questions and 59 parents and 24 teachers also participated. Data from the pilot study school has also been included in these findings for illustrative purposes. From a student body of 930, 272 (29%) students (age range 12-18) from the pilot school voluntarily completed the online anonymous survey of five open-ended questions and 23 parents and 8 teachers also participated.

## Findings

Findings emerging from analysis of the case study survey data demonstrated that there were diverse views as to whose role it is to develop self-regulated learners. These viewpoints varied both within and between each of the parent, student and teacher groups. Perspectives of each of these groups and the implications of their views are discussed in the following sections.

The majority of parent participants (n=59) did not believe any responsibility for SRL development lay with the students, instead they viewed it as a shared responsibility between parents and teachers (see Figure 1). The remainder of the parent respondents had widespread opinions as to whose responsibility it was to develop self-regulated learners. In contrast, as shown in Figure 2 below, over a half of the student participants (n=256) believed the responsibility for being self-regulated was at least in part their own responsibility. A third of the student participants believed it was a joint responsibility between students, parents and teachers, a quarter believed both students and teachers were responsible, while a quarter believed this should be the sole province of the teachers. Figure 3 below illustrates that half of the teacher participants (n=24) believed students did have some responsibility with a third of teacher participants expressing the view it was a joint role between parents, teachers and students, while a quarter saw it as joint responsibility between teachers and parents. These findings are explained below and further discussed in the implications section of this paper.

### *Part 1: Parents' Perceptions of Whose Role it is to Develop Students as Self-Regulated Learners*

While there was a clear majority view amongst the parents as to whole role it is to develop SRL, there was also a wide diversity of views as shown in Figure 1.

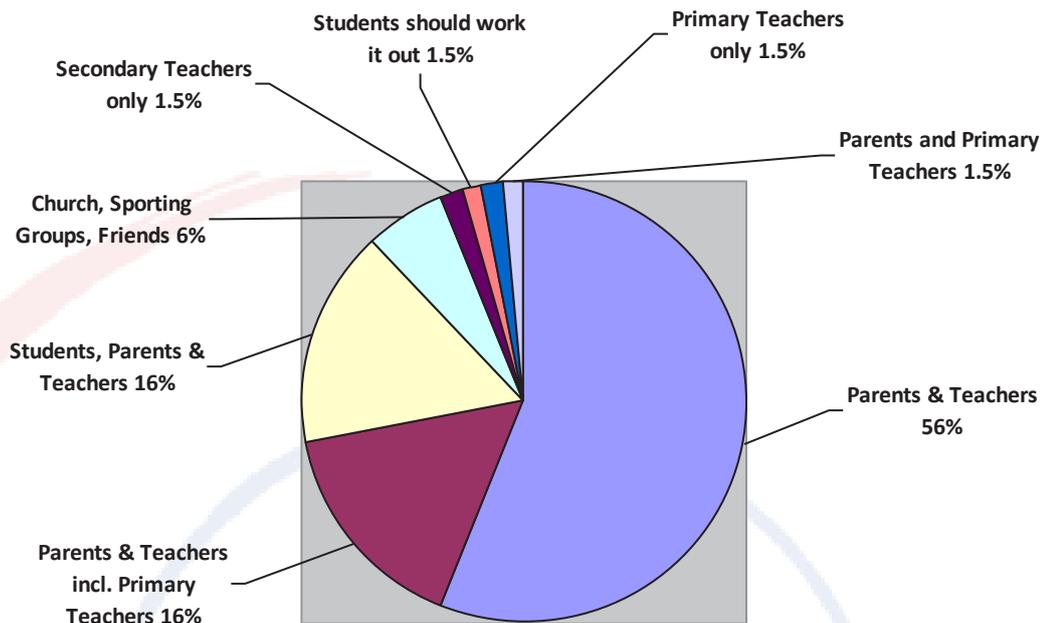


Figure 1: Parent perceptions: whose role it is to develop SRL skills (n = 59).

Of the 59 parents who responded, 16% believed developing students as self-regulated learners was a joint responsibility between parents, students and teachers with one parent explicitly outlining their view of the differing roles of each party:

The school's role would be to encourage these skills and create the learning environment that supports and facilitates such skills. Parents have a role to play in also ensuring that they create an enabling and supportive environment and show an interest at all times in their children's learning. I also believe the student needs to take on some responsibility (Respondent 22/59 of parent survey 2012).

However, 72% of parents emphasized a dual role between parents and teachers, with one parent explaining that 'both the home and school environment needs to be consistent for the message to get through and the behaviour to change' (Respondent 3/59 of parent survey 2012). It was interesting to note, given the 'self' in SRL, that such a large percentage of parents did not see this role as being shared by students, unlike the majority of student and teacher respondents. 16% of these parents respondents specifically mentioned both primary and high school teachers as both having a role to play in the development of SRL. These parents emphasised that it was important for students to lay the foundations and get into good habits before transitioning to secondary school.

Many of the parent participants who supported a dual role between themselves and the school also expressed doubt about how helpful parents could actually be. They explained that they often lack the time, expertise and confidence to teach these skills to their children and expressed the desire for greater communication from the school explaining how they could help with particular issues their child was facing. A

number of parents also believed the school was the appropriate place to develop these skills in situ, addressing the different needs and levels of the students. One parent explained: ‘Many parents are time poor and aren't conversant with the methodology of education’ (Respondent 4/59 of parent survey 2012).

A few parents had differing viewpoints. One parent believed that community involvement such as church and sporting groups also contributed to SRL development, another focused on the role of friendships, while another stated that students ‘should use whatever avenue presents itself’ (Respondent 9/59 of parent survey 2012). Other parents did not feel the secondary school had a role to play. One parent believed it was a role to be shared between parents and primary schools only, while another parent believed it was the sole province of primary schools ‘as when they hit high school, it is too late’ (Respondent 45/59 of parent survey 2012). Only one parent believed it was up to the students ‘to work it out themselves’ (Respondent 55/59 of parent survey 2012).

*Part 2: Students’ Perceptions of Whose Role it is to Develop Students as Self-Regulated Learners*

Figure 2 displays the range of students’ viewpoints on whose role it is to develop SRL.

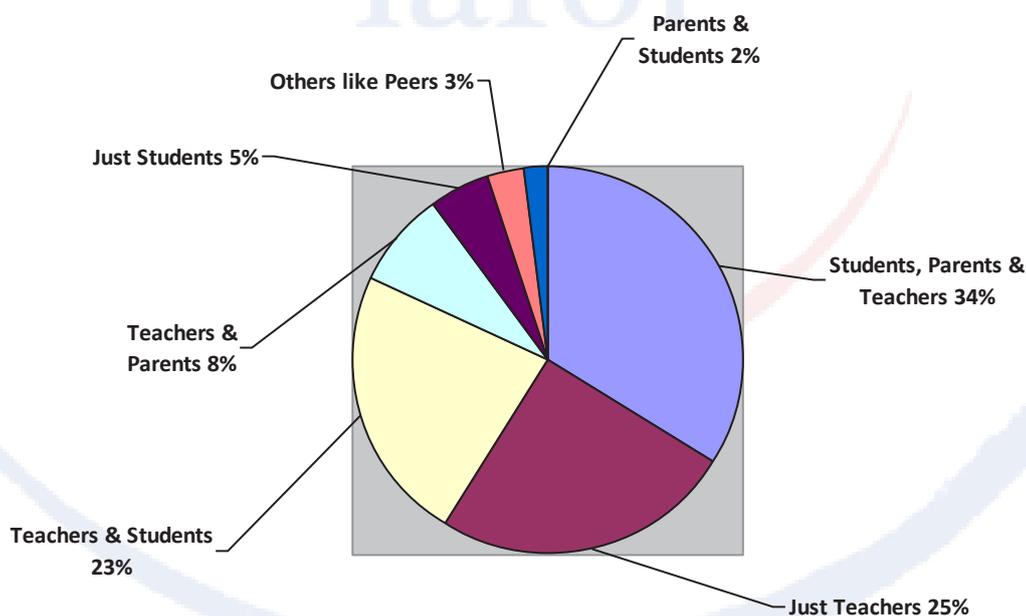


Figure 2: Student perceptions: whose role it is to develop SRL skills (n = 256).

A third of the 256 student respondents believed developing SRL was a shared role between students, parents and teachers. One student explained:

It is a student's role to manage their own work and learning; organisation, time management and commitment are the basic necessities for pushing one's self to achieve. However it is pertinent for parents to support and help sustain the students focus and a suitable studying environment. A school has the role to give the student the information and techniques to derive knowledge from and learn, so that when the time comes they are prepared to perform at their best (Respondent 227/256 of student survey 2012).

However a quarter of the student respondents believed developing SRL was the province of the teachers, with one student expressing this view: 'I think it's the teacher's role to keep us motivated, organised and help us manage our time effectively' (Respondent 54/256 of student survey 2012). This demonstrated that a significant portion of these students were not prepared to take any responsibility for the development of their own SRL skills, nor did they place expectations on their parents.

Almost another quarter of the students believed it was a joint role between students and teachers: 'The school should provide basic guidelines on how to study, be motivated etc. but it is up to us as students to motivate ourselves and set goals' (Respondent 63/256 of student survey 2012). The respondents in this category did not feel the parents had a role to play: 'I think it is the teacher's role to keep me motivated to want to learn and engage and participate in the learning in class. However, it is my role to keep organised, manage my time effectively, study and set goals because it is my schooling not my parents' (Respondent 151/256 of student survey 2012).

The majority of students felt that it was at least in part the teachers' responsibility to develop SRL as only 10% of the student participants believed the teacher did not have a role in developing self-regulated learners as one student explained: 'I believe it is my responsibility to be motivated, organise, manage my time, study, and set my own goals. I don't believe the school has a role in this part of my learning' (Respondent 182/256 of student survey 2012). 36% of students did not believe that they personally had any role in developing their own self-regulated learning skills with one student stating the role is 'a combination of the school and parents - they have more experience and knowledge' (Respondent 26/256 of student survey 2012). However a small group (5%) believed it was solely up to them: 'I think it's my role to help myself learn in these ways because you can't be forced to do work, it's self-motivated. It is my future and no one else can do it for me' (Respondent 33/256 of student survey 2012).

### *Part 3: Teachers' Perceptions of Whose Role it is to Develop Students as Self-Regulated Learners*

As with the students, the largest consensus with teachers was that developing SRL is a shared responsibility between teachers, parents and students. Unlike the parent and student respondents, none of the teachers believed that developing SRL was solely the province of the students.

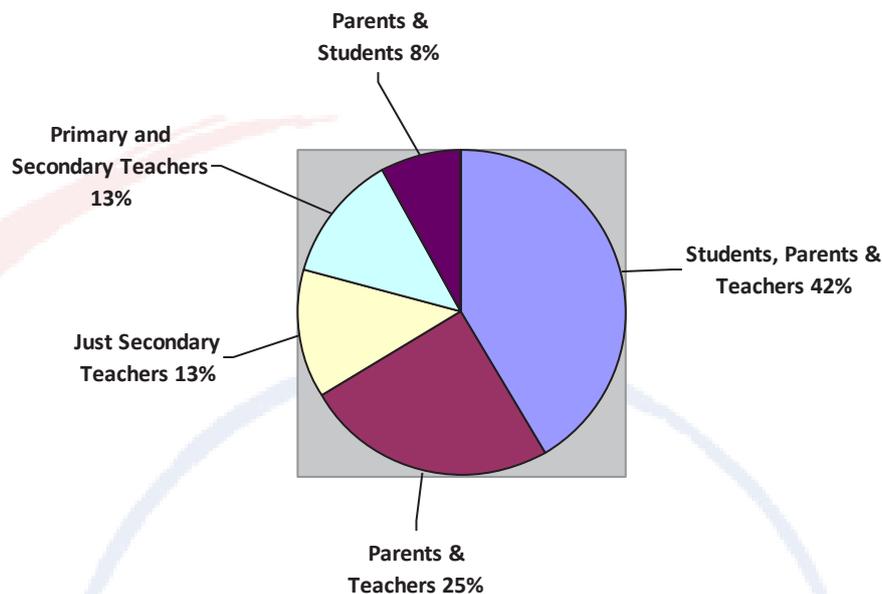


Figure 3: Teacher perceptions: whose role it is to develop SRL skills (n=24).

Although only 24 teachers completed the survey questions, it was interesting to see the range of responses within even such a small sample. 42% of the teacher respondents believed it was the joint responsibility of the school community to develop students as self-regulated learners: teachers, parents and students all had a role to play. One teacher explained: ‘It is my belief that it takes a ‘village to raise a child’, and there are valuable contributions that can be made by everyone in the community’ (Respondent 5/24 of teacher survey 2012).

However, 13% of teachers believed the responsibility should lie solely with the secondary school teachers and school leadership, one teacher emphasizing that ‘it is a whole-school task if the development is to happen’ (Respondent 9/24 of teacher survey 2012). An additional 13% of teachers also thought it was the responsibility of teachers but cited both primary and secondary teachers. Only 8% of teachers believed the primary responsibility was with the parents as ‘parents set the standard from a young age’ (Respondent 4/24 of teacher survey 2012), while also conceding that teachers also had a role as ‘many parents lack the skills and understanding to foster this in their children’ (Respondent 1/24 of teacher survey 2012).

One teacher expressed the following opinion which echoes the need to develop the ‘skill’ and the ‘will’ in students:

In terms of developing a positive attitude towards self-regulated learning skills, a child must firstly develop the skills required and then develop the motivation to use those skills. This is where the school needs to have a regulatory process in place to hold the students accountable for their behaviours. Schools need to develop processes so the completion of learning activities ‘is just what we do’. It is not dependent on the parents cajoling their children to complete the work in a negative environment. If

the school has a process where there are real and consistent consequences for non-completion, they complete the expectation. Then, over time, they develop normalcy about that behavior (Respondent 1/24 of teacher survey 2012).

## Discussion

There has been little research into the attitudes, beliefs and perceptions of students, parents and teachers with respect to SRL, especially in contemporary, Australian secondary contexts. This study therefore leads to greater insights into the perspectives and views as well as the roles each group may play in developing SRL, challenging traditional assumptions as to where perceptions of responsibility for developing SRL may lie in contemporary schools.

As all teachers, parents and students bring different experiences to their perception of who is responsible for developing SRL, it is not possible to generalize from this study. Appendix 1 illustrates the differences in viewpoints between the data from the pilot school and the case school highlighting the marked difference that may occur in perspectives between different schools. This study demonstrates the need for schools to interrogate the views of stakeholders in order to understand expectations of their particular school community and to inform the approach taken by the school to developing SRL. An important finding from this research was that few in the school community believed it was solely the province of the student to develop their own self-regulated learning skills, with most stakeholders believing that both parents and teachers had a role to play. This strengthens the argument for the need for further investigation into a whole-school approach to developing SRL and how the school can provide the support that students, parents and teachers need.

While there was consensus that students alone are not responsible for developing their own SRL skills, the findings illustrated diverse views between students, parents and teachers as to how this responsibility should be shared. This highlights the need for schools to clarify the roles they require of their teachers, students and parents in developing self-regulated learners and explicitly communicate these expected roles to all parties in order to ensure the community has a shared understanding of the particular SRL approach taken by the school. Without this transparency, there will be conflicting views within and between each group, unmet expectations and a poor chance that students will develop as self-regulated learners. A cohesive and consistent approach would ensure that all students and teachers in the school were clear what their school expects of them and parents also would know what they could expect from their school and how they too will be expected to contribute. Once the school had clarified expectations and communicated these to all parties, a plan would need to be established to provide appropriate training and support in developing SRL to all parties, to ensure all parties had the appropriate tools to fulfill the roles outlined by the school. The research also highlights the need for secondary schools to further explore the role of primary schools in developing self-regulated learners and if this role is feasible given the nature of transition in Australian secondary schools.

A number of possible future directions for research are therefore indicated. Large scale studies interrogating the viewpoints of students, parents and teachers regarding their roles in the development of students' SRL skills could uncover generalisations to be made across particular demographics. Greater investigation is also needed to

determine how schools can best clarify and communicate their approach to developing SRL, given the particular viewpoints of their community. Exploring effective whole-school approaches to developing SRL would also be a significant step forward in broadening the field.

The significance of this study is that it challenges school leaders to examine and define not only their approach to developing SRL, but also how this approach is communicated to all parties and how support is provided so that parents, teachers and students can fulfill the roles envisioned by the school. Further research and evaluation in this area could provide invaluable support not only to parents, teachers and students, but also to school leaders and decision makers.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, serif font. The logo is surrounded by two large, overlapping, semi-transparent circular arcs. The upper arc is light blue and the lower arc is light red, both curving around the central text.

## References

- Brown, AL, Bransford, JD, Ferrara, RA & Campione, JC 1983, 'Learning, Remembering, and Understanding', in P Mussen (ed.), *Handbook of Child Psychology: Cognitive development*, John Wiley and Sons, New York.
- Commonwealth of Australia 2010, Department of Education, Employment and Workplace Relations, viewed 16 July 2010, <<http://www.deewr.gov.au/Schooling/Pages/overview.aspx>>.
- EU Council 2002, Council resolution of 27 June 2002 on life-long learning, *Official Journal of the European Communities*, p.9.
- Kember, D, Jamison, QW, Pomfret, M & Wong, ETT 1995, 'Learning approaches, study time and academic performance', *Higher Education*, vol. 29, no. 3, pp.329-343.
- Merriam, SB 2009, *Qualitative Research: A Guide to Design and Implementation*, Jossey-Bass Publishers, San Francisco.
- Miller, S, Heafner, T & Massey, D 2009, 'High-School Teachers' Attempts to Promote Self-Regulated Learning: 'I may learn from you, yet how do I do it?''', *The Urban Review*, vol. 41, no. 2, pp. 121-140.
- Nolen, S 1988, 'Reasons for studying: Motivational orientations and study strategies', *Cognition and Instruction*, vol. 5, no. 4, pp. 269-287.
- NSW Department of Education 2003, *Quality teaching in NSW public schools*, Sydney.
- Paris, SG, Byrnes, JP & Paris, AH 2001, 'Constructing Theories, Identities, and Actions of Self-Regulated Learners', in BJ Zimmerman & DH Schunk (eds.), *Self-Regulated Learning and Academic Achievement: Theoretical Perspectives*, 2nd edn, Erlbaum, Mahwah, New Jersey, pp. 253-288.
- Patton, MQ 2002, *Qualitative research & evaluation methods*, 3rd edn, Sage Publications, Thousand Oaks, California.
- Renzulli, JS & Reis SM 1985, 'Scope and sequence approach to process development', *Gifted Child Today*, vol. 37, pp. 2-6.
- Romeo, G 2004, 'Teaching, learning and Technology: Research, Reform, Realise the Potential', Paper presented at the *South Australia Australian Computers in Education Conference*, Adelaide, Australia.
- Salter, P 2012, 'Developing self-regulated learners in secondary schools', *Proceedings of Joint International Conference of the Australian Association for Research in Education (AARE) and the Asia Pacific Educational Research Association (APERA)*, Sydney, Australia: University of Sydney.

Schunk, DH 2001, 'Social cognitive theory and self-regulated learning', in BJ Zimmerman & DH Schunk (eds.), *Self-regulated learning and academic achievement: Theoretical perspectives*, 2nd edn, Erlbaum, Mahwah, New Jersey, pp. 125-152.

Schunk, DH & Ertmer 2000, 'Self-regulation and academic learning self-efficacy enhancing interventions', in M. Boekaerts, PR Pintrich & M Zeidner (eds.), *Handbook of Self-regulation*, Academic Press, San Diego, California.

Schunk, DH & Zimmerman, BJ 1998, 'Preface', in DH Schunk & B Zimmerman (eds.), *Self-Regulated Learning: From Teaching to Self-Reflective Practice*, The Guilford Press, New York, pp. 203-224.

Stake, RE 2005, 'Qualitative case studies', in NK Denzin & YS Lincoln (eds.), *Handbook of Qualitative Research*, 3rd edn, Sage Publications, Thousand Oaks.

Tait, H & Entwistle, J 1996, 'Identifying students at risk through ineffective study strategies', *Higher Education*, vol. 31, no. 1, pp. 97-116.

Weinstein, CE 1996, 'Self-Regulation: A commentary on directions for future', *Learning and Individual Differences*, vol. 8, no. 3, pp.269-274.

Weinstein, CE 1988, 'Assessment and training of student learning strategies', in RR Schmeck (ed.), *Learning Strategies and Learning Styles*, 1st edn, Plenum Press, New York, vol. 1, pp.291-316.

Weinstein, C & Mayer, R 1986, 'The Teaching of Learning Strategies', in MC Wittrock (ed.), *Handbook of Research on Teaching*, 3rd edn, Macmillan, New York.

Weinstein, C, Ridley, DS, Dahl, T, & Weiner, S 1988, 'Helping Students Develop Strategies for Effective Learning', *Educational Leadership*, vol. 46, no.4, pp. 17-19.

Wigfield, A 1994, 'The Role of Children's Achievement Values in the Self-Regulation of Their Learning Outcomes', in DH Schunk and BJ Zimmerman (eds.), *Self Regulation of Learning and Performance - Issues and Educational Applications*, Lawrence Erlbaum Associates, New Jersey.

Wingate, U 2006, 'Doing away with 'study skills'', *Teaching in Higher Education*, vol. 11, no. 4, pp. 457-469.

Wood, E, Motz, M & Willoughby, T 1998, 'Examining Students' Retrospective Memories of Strategy Development', *Journal of Educational Psychologist*, vol. 90, no. 4, pp. 698-704.

Zimmerman, BJ 1986, 'Becoming a Self-Regulated Learner: Which Are the Key SubProcesses?', *Contemporary Educational Psychology*, vol. 11, pp. 307-313.

Zimmerman, BJ 2000, 'Self-Efficacy: An Essential Motive to Learn', *Contemporary Educational Psychology*, vol. 25, pp. 82-91.

Zimmerman, BJ 2002a, 'Achieving Academic Excellence: A Self-Regulatory Perspective', in M Ferrari (ed.), *The Pursuit of Excellence Through Education*, Lawrence Erlbaum Associates, Mahwah, New Jersey, pp.85-112.

Zimmerman, BJ 2002b, 'Becoming a self-regulated learner: An overview', *Theory into Practice*, vol. 41, no. 2, pp. 64-72.

Zimmerman, BJ 2002c, 'Achieving Self-Regulation: The Trial and Triumph of Self-Regulation', in F Pajares & T Urden (eds.), *Academic Motivation of Adolescents*, Information Age Publishing Inc., Greenwich, Connecticut, pp. 1-28.

Zimmerman, BJ & Cleary, T 2009, 'Motives to self-regulate: A social-cognitive account', in K Wentzel and A Wigfield (eds.), *Handbook on Motivation at School*, Lawrence Erlbaum Associates/Taylor & Francis, Boca Raton, Florida, pp. 247-264.

Zimmerman, BJ & Martinez-Pons, M 1986, 'Development of a Structured Interview for Assessing Students Use of Self-regulated Learning Strategies', *American Educational Research Journal*, vol. 23, pp. 614-628.

Zimmerman, BJ & Martinez-Pons, M 1988, 'Construct Validation of a strategy model of student self-regulated learner', *Journal of Educational Psychology*, vol. 80, no. 3, pp. 284-290.

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## Appendix 1

Table 1

*Comparison of parents' perceptions between case school and pilot school.*

<b>Parents' Perception of Whose Role it is to Develop SRL</b>	<b>Case School</b>	<b>Pilot School</b>
Parents and teachers	56%	0%
Students, parents and teachers all have a role to play	16%	43%
Students, parents and teachers (including Primary teachers) all have a role to play	0%	17%
Parents and teachers including Primary teachers	16%	0%
Church and sporting groups, friends, other avenues	6%	0%
Secondary teachers only	1.5%	13%
Students should work it out themselves	1.5%	17%
Primary teachers only	1.5%	8%
Parents and primary teachers	1.5%	0%

Table 2

*Comparison of students' perceptions between case school and pilot school.*

<b>Students' Perception of Whose Role it is to Develop SRL</b>	<b>Case School</b>	<b>Pilot School</b>
Students, parents and teachers all have a role to play	34%	18%
Just teachers	25%	6%
Teachers and students	23%	10%
Teachers and parents	8%	15%
Just students	5%	13%
Mentioned others such as peers	3%	4%
Parents and students	2%	5%
Just Parents	0%	8%
Primarily the role of the students but teachers can help	0%	9%

Primarily the role of the students but teachers and parents can help	0%	8%
Primarily the role of the students but teachers can help	0%	4%

Table 3

*Comparison of teachers' perceptions between case school and pilot school.*

<b>Teachers' Perception of Whose Role it is to Develop SRL</b>	<b>Case School</b>	<b>Pilot School</b>
Students, parents and teachers all have a role to play	42%	100%
Parents and teachers	25%	0%
Just secondary teachers	13%	0%
Primary and secondary teachers	13%	0%
Parents and students	8%	0%

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*A lens comparison of Vocational Education and Training in the beauty sectors in Taiwan and the UK*

I-Chun Hsiao, Emily Baines

De Montfort University, UK

0240

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Abstract

A number of studies have highlighted the importance of effective interaction between vocational education and industry in nurturing professionals. A common strategy is to build a partnership between industry and education to ensure that graduates meet the requirements of industry, in preparation for employment.

Using a lens comparison approach, which provides the capability to draw on ethnographic experiences, this paper explores and compares the relationship between industry and vocational education in the beauty sectors of Taiwan and the UK. The overall method included observation, informal interviews and documentation analysis.

Significant differences were found not only in culture and levels of vocational education structure, but also in the unified standard and levels of skill formation, which are key points in preparing graduates' confidence and competence. In Taiwan, the lack of a body with responsibility for regulations, the overlapping levels in qualifications and ineffective communication between education and industry have led to beauty graduates lacking confidence in their ability, adversely impacting on their aspirations. Whereas, in the UK, based on a unified structure, the learners' educational and working experiences are recognised by both education and industry. Findings from this study will be beneficial for curriculum design and individual career development in this field and may also form a broader concept for use in other fields.

**Keywords:** Vocational Education and Training, Beauty, Industry, Competence

## 1. Introduction

This paper outlines the different approaches to nurturing beauty professionals in Taiwan and the UK, to identify important features necessary to develop a beauty professional's competence. A gap exists between education and industry in the Taiwanese beauty sector (Tsai 2003), which may be causing graduates to lack confidence in their employability. This is supported by survey evidence that also indicates the competence level of Higher Education (HE) graduates falls short of industrial requirements, in Taiwan (Wu & Lin 2010). This point is also strengthened by interviews of Taiwanese industrial experts, indicating that the overall employability of HE graduates from beauty programmes is low, due to their inadequate training and lack of aesthetic appreciation. There is increasing concern that some beauty professionals are being disadvantaged due to the demand of the beauty market changing from beautifying to greater emphasis on high-tech and medical procedures. These changes have occurred more quickly than the establishment could react (Yang et al. 2005): to overcome such challenges, close collaboration between education and industry has become essential. These issues have revealed the impact of the fragmented nature of the Vocational Education and Training (VET) system and the ineffective communication between education and industry in Taiwan. Tsai (2003) suggests that it is necessary to promote mutually beneficial collaboration between education and industry, so that, for instance, the educational sector provides knowledge of theory to industry, whilst industry offers training and skills updates.

The Taiwanese government has declared the objective of ensuring a seamless transition from education to employment. In order to achieve this, funding projects such as 'The Last Mile Program' (Zhou, 2013:p98), 'Team teaching' (Chen, 2011; Zhou, 2013), the 'Industry-University Cooperation Program (Ministry Of Education (MOE), 2012; Xu, 2013)' and so forth, have demonstrated their intentions. These projects aim to bring industrial elements into academia and lecturers have been requested to gain up-to-date practice in industry. It is believed that not only will these projects prepare graduates' competence for employment, but also improve the lecturers' industrial experience, as two thirds of technological college/university lecturers lack this (Chang, 2012), but there is no long term scheme to facilitate such collaborations. The unemployment rate in Taiwan has remained high and employers claim that they cannot find the required talents (Zhang, 2013), which may suggest that government policies merely treat the symptoms instead of remedying the underlying problem.

According to Zhuang (2007), the UK has pioneered the development of Vocational Education and Training (VET) systems. Examining the UK VET system, it may be seen that the relationship between education and industry has been broadly coordinated through government and professional bodies, although a technical skills gap is still evident (Habia 2007). However, document analysis indicates that skill gaps identified in the UK have been filled by including new updated knowledge/techniques into educational curricula and/or industrial training. Wu (2011) argues that Taiwan may learn from the UK's experience of developing its VET system, making the UK a suitable case study.

### 1.1 *The beauty profession*

The interest of this study has fallen on beauty, beauty practice and beauty professionals, three significant and closely-linked elements of the beauty profession. The beauty professional transmits the message of ideal beauty through their beauty practices. A broad term 'beauty profession' is employed in this study because it is commonly used to cover a heterogeneous range of practices. The 'beauty practitioner/professional' in the beauty related industries is generally known as a 'Beauty Therapist', 'Beautician/Cosmetologist', 'Make-up Artist' or 'Hairdresser'. Gimlin (2002) uses the sociological term 'body worker' to categorise these practitioners, due to their role being to work on the transformation of the human body and mind. This has also been defined as 'emotional labour' and 'aesthetic labour' in social analysis (Toerien & Kitzinger 2007; Black & Sharma 2001; Black 2004). Although beauty practice is usually considered to be an occupation, not a profession, Sheen (2006) argues it could be a profession in the future.

Recently, there has been increased interest in the beauty industry with a few studies identifying that the beauty salon holds a vital social position closely linked to culture, beauty and health (Felicia et al. 2004; Black 2004). The level of intimacy and interaction between practitioner and client, reflects the trust within this profession and the beauty salon has also been identified as a suitable environment to deliver health messages through trained and licensed cosmetologists (Linnan et al. 2001; Felicia et al. 2004). A key feature that has been studied is the dialogue between the beauty professional and the customer (Toerien & Kitzinger 2007).

To date, there has been little discussion of what 'beauty practice' actually involves. The rapid development of technology has also shaped the beauty industry and diverse new technological equipment has been developed as beauty aids for non-invasive surgery, whilst cosmetic surgery is more affordable than a decade ago. For example, Microneedle Therapy System (MTS) or microdermabrasion, requiring different levels of invasion of the skin (Keris Advanced Beauty Clinic 2011), may be performed by qualified therapists or cosmetologists. Similarly, permanent cosmetics/make-up involves skin penetration, which brings risks if undertaken by unqualified beauty therapists or make-up artists. Such treatments will require practitioners to have advanced knowledge, operating skills and a certain level of professional judgement. Also, biotechnological developments have been applied to cosmetics requiring beauty professionals to upgrade their knowledge of products and usage, to maximise the benefit of using these products.

Therapeutic beauty approaches may include holistic therapy and complementary and alternative medicine therapy, which provide an alternative beauty remedy option, either in spas and/or beauty clinics. Some of the treatments are medically involved: therefore, they need to be performed by qualified beauty therapists either unsupervised or under some degree of supervision. However, the complexity of this work may have been overlooked and the therapists' education and training journey may also have been undervalued. This is demonstrated by media and other reports of controversy over beauty practices (TVBS 2012a; Hayt 2002; Adams 2002). The beauty practitioners' competence has been questioned as their training is, in fact, frequently inadequate and the argument raised by Adam (2002) and Brody et. al. (2003) is whether supervision is truly carried out by medical professionals and

whether beauty practitioners are actually competent, or authorised, to carry out procedures. Both the beauty industry and the medical profession have taken advantage of these ambiguous boundaries (Brody et al. 2003), leaving the public vulnerable.

According to Habia's report (2007), the UK beauty industry is female dominated, as in Taiwan, and is mostly micro-businesses or self-employment. The report also addresses a major issue in the beauty industry: that employers cannot afford the cost of training, especially the employee time away from the workplace, even though most employers agree that training is important for business growth. A further difficulty is that the self-employed may not be aware of their own training needs to maintain the currency of their knowledge and competence. These needs could be met through Continuing Professional Development (CPD) programmes provided by professional bodies and/or learning institutions, thus improving the prospects of addressing concerns over professional competence and entitlement to practice. So, the success of the application of beauty relies on the beauty professional's ability, which needs to be kept up-to-date through on-going professional development.

### *1.2 Overview of beauty education and industry in Taiwan*

Taiwanese government policy has relaxed educational regulations since 1996, permitting technical colleges to upgrade to technological university status and allowing more practical-based learners to progress into higher education: however, this rapid reform has also caused an imbalance between quality and quantity in vocational education (Chang, n.d.; Huang, n.d.; Zheng, 2007). Zhang (2012) questions whether a higher education is actually necessary in some occupations, citing the beauty industry as an example. Wang (2013) suggests that this rapid expansion of higher vocational education has led to an over-supply of over-educated employees.

In Taiwan, the beauty education field has developed rapidly due to demand in the labour market since inception in 1974 (Xu 1996; Chen & Lin 2007), but the first beauty skill certification did not appear until 1991, since when it has gradually become too dominant a feature despite its lack of currency (Yeh & Chen 2006). There is a similar curriculum standard across the Further Education (FE) sector, established by the Ministry of Education in Taiwan (Chen & Lin 2007). The curriculum design in the HE (Higher Technological and Vocational Education: HTVE) sector overlaps with FE. This research indicates that the scope of the HE and FE beauty curricula is broad and lacks depth compared to the UK. The current established beauty programmes in HTVE may be categorised into three main domains: cosmetic sciences; cosmetology and styling; beauty and health related programmes. Although each domain claims its own features and the flexibility to develop its own characteristics, the curriculum is rather similar across all the categories, but contains a small proportion of specialised subjects. For instance, cosmetology and styling-related modules can be seen in the curriculum of cosmetic science and vice versa.

The supply from beauty education and the demand from the beauty industry are not synchronised (Tsai 2003). Also, teaching professionals' field experience has been criticized as inadequate (Chen, 2000; Huang, 2003; Wang, 2013), which may lead to a gap between industry and academia, resulting in graduates lacking confidence when

entering the job market. Hong and Huang (2003) and Hsu (2003) have reviewed Taiwanese beauty education in comparison with Japanese aesthetic education and revealed that beauty education in Taiwan is lacking cultural and aesthetic components, which tends to reinforce the opinion of industrial experts who state that graduates lack aesthetic appreciation, as found by this study. Chen et.al (2006) argue that the sense of aesthetics and cultural understanding should be an important component of being a beauty professional. This paper suggests that the ability to convey the ethos of aesthetics to the client through beauty practice is fundamental to this profession.

Due to the focus on skill training, the theoretical and practical knowledge behind techniques has been paid very little attention. The lack of in-depth knowledge related to the subject has also limited the development of the profession, whilst the training also lacks a holistic perspective. Learners may be able to perform techniques, but the entirety of the task is more than just skills. With holistic training, beauty graduates should be able to perform an entire service including communicating with clients, consulting and identifying clients' needs, planning and performing one or more treatments with a rational sequence and providing appropriate care advice. They also need to be able to respond to and take appropriate action if an incident and/or accident occurs in the workplace.

The consumption patterns of Taiwanese consumers are fast moving (Hung 2006): this characteristic was also recognised by the research interviewees, who commented that the beauty industry required constant changes in the beauty packages offered. Zeng (2009) points out that vicious price competition in the beauty industry has distorted service quality, resulting in increased risks to customers and reduced profit margins. So far, however, very little is found in the literature on the issue. The lack of enforced regulation in this field inevitably aggravates the risks of dubious practices in the beauty sector. At the same time, beauty practice has evolved from simple skin care/make-up advice to hi-tech and/or medically involved treatments, so beauty professionals should upgrade their competence accordingly (Zeng 2009).

### *1.3 Overview of beauty education and industry in the UK*

The VET system in the UK provides various options and flexible learning structures for school leavers to choose their career pathway. In 2010, there was a reform of the UK qualification framework, which changed from the National Qualifications Framework (NQF) to the Qualifications and Credit Framework (QCF) (Harris 2010). The QCF aims to provide a flexible, transferable and recognisable qualification system (Blinko 2011). QCF starts from entry level to level 8 and each level comprises units, which contain credit values (QCDA 2010). However, an analysis from Lester (2011) argues that there are issues over the integration of HE and the professional qualification system within the QCF.

In FE, Hair and Beauty, which are two major sectors of the beauty industry, are divided into two distinctive training programmes of Beauty Therapy (including makeup and nail technology related qualifications) and Hairdressing. Beauty Therapy was launched by City and Guilds of London Institute in 1970 (Taylor 2000, p5). In the UK, the standard of beauty education and industry codes of practice are established by the Hair and Beauty Industry Authority (Habia) appointed by the UK

government (Habia 2007). A variety of awarding bodies, such as City & Guilds (C&G), Vocational Training Charitable Trust (VTCT) and Edexcel, awards different types and levels of vocational qualification, such as National Vocational Qualifications (NVQs), Vocational Related Qualifications (VRQs) and Higher National Certificate (HNC)/ Higher National Diploma (HND). However, all these qualifications are developed based on National Occupational Standards (NOS), which are the benchmarks developed by industry and other stakeholders for describing the competence required of an individual to accomplish good practice when performing a task in the workplace (NOS 2013). It is also strongly recommended and promoted that NOS should be implemented at the HE level of vocational qualifications (Swales et al. 2004). The progression route to HE for beauty related programmes is mainly offered at sub-degree level, such as HNC, HND, Foundation degrees (Fds), and at undergraduate degree level (NARIC 2005). The top-up final year at degree level is available after taking sub-degree level courses, in order to complete a bachelor's degree, awarded by HE institutions.

The upgrading of beauty education and training in 2001 has been an important step to open up the HE route to FE graduates (Gallacher et al. 2012; Anderson & Hemsworth 2005). The beauty related HE route is more advanced and specialised in related subject areas, such as Advanced Beauty Therapy, management related programmes such as Salon or Spa Management and Make-up Studies in the theatre, TV and films. Those programmes are included within the 'more applied subjects' (Hoelscher et al., 2008:p145), which are mostly set up as a sub-degree in the FE sector. The availability of specialised technical equipment, facilities and human resources in FE, dictates that the majority of HE beauty programmes take place in local FE colleges (Bathmaker et al. 2008; Parry et al. 2012). Yet, it is still debatable whether this progression opportunity is a valuable investment for FE graduates. Parry et al. (2012) revealed that the 2008-2010 results from The National Student Survey (NSS) show that there is low satisfaction from the HE learners in an FE setting.

The quality of assessment is also assured by external and internal verifiers to ensure standards are maintained during training. Based on the agreed standard implemented into learning outcomes and performance criteria of these vocational qualifications, beauty practices should be performed in a very similar fashion across sectors, even though the application may vary according to the type of treatment/design. More importantly, the skills and knowledge are transferrable because this recognised standard can be applied to different organisations. In order to ensure that the practice standard is maintained at a professional level, professional bodies provide short courses/activities for professionals to update and maintain their competence (Lester 1999).

There is also collaboration between education and industry, which has been embodied in Apprenticeships (Brockmann et al. 2010), Work-Based Learning modules/programmes (Brennan 2005) and work placements. Due to the use of NOS, the competence of learners may be assessed in the workplace, by internal or external assessors, and to meet the standard, employer input must adhere to a similar training framework as the education sector. But it is also suggested by Little et al. (2003) that employers need to engage more in VET and be aware of changes to qualifications and policies.

In the UK, all training programmes in education and industry have to be developed based on NOS and the regulations related to hygiene, health and safety relevant to treatment(s) must also be complied with. A core aspect of the teaching is that learners form a habit of performing all tasks from planning through operation to completion, as a complete process, rather than thinking of each skill as a complete procedure. In the salon setting at the institutions, the practice must be supervised, follow the code of practice and meet all the regulations, including health and safety. The customer is clearly informed that the service is part of a taught course, which is performed under supervision. The purpose is to encourage learners to work on a real paying client in preparation for employment.

This brief review shows that although the ultimate aim of the UK and Taiwanese VET systems is to produce competent beauty practitioners, there are significant differences in how this objective is approached by the respective governments, educational bodies and industry stakeholders.

## **2. Research methods**

'Lens comparison' (Walk 1998) was employed because both countries' VET systems are very different. The objective of this study is to find a strategy to improve Taiwanese beauty professional's competence. UK professional qualifications such as International Vocational Qualifications (IVQs) have been introduced to Taiwan and suggested as an extra qualification alongside the main qualification, apart from the national skill certificate. Understanding the UK's approach of nurturing beauty professionals was chosen as the framework for reviewing Taiwan's VET system. It was considered that the best method to adopt for this investigation was to use the concept of ethnography to gain inside knowledge of the UK's VET structure, based on a previous personal learning background and working experience in the beauty field in Taiwan. Since the ethnographer is claimed as the most important instrument in this type of method (Fetterman 2010), the ethnographer with a full set of experiences in the field could be considered as an asset to this project, even though this study is more of an ethnographic experience than ethnographic research itself. In order to establish a holistic view of how the VET system in the UK prepares the beauty professional's competence, participant observation was a suitable form of action (Atkinson & Hammersley 1994).

The ethnographic participation that occurred in different settings included observation and a series of unstructured informal interviews. In the education institutions, teaching and learning, cultural differences, attitudes, assessment measures and so forth were considered, including in the role of the participant, learner, lecturer and assessor. While in the industrial setting, the analysis of work experiences in beauty salons, theatres, studio and location photo shoots during employment, freelance and voluntary work were included. The comparative analysis occurred throughout this ethnographic experience within both formal and informal environments over an extended period. This approach has not previously been used in the beauty field. Prior and subsequent to the unstructured informal interviews, formal interviews and document analysis were employed to complement the participant observation.

The subject groups studied in the participant observation include FE and HE beauty learners, practitioners and professionals in education and industry in the UK. The

identification of the ethnographer as being a participant and a research student was, to some extent, acknowledged by others, but very few people were interested in the research itself. Meanwhile, document analysis of curricula, programme specifications, performance criteria and so forth was adopted to compare the structure of the beauty programme and the training approach in both countries. Semi-structured interviews and formal observations were also undertaken in the Taiwanese beauty education and industry sectors.

### 3. Discussion

Findings from the review and analysis of documents indicate differences between Taiwan and UK's VET systems, shown in the figure below, demonstrating that the UK's QCF is more straightforward and flexible. Each stage of the qualification framework is denoted as a 'level' (QAA 2008). The learners have a choice to stop or continue their learning journey without much overlap: whereas, in Taiwan, the qualifications are larger and without interim awards, which does not give learners such flexibility to manage their career. In addition, entrance requirements in Taiwan are mainly based on written examinations: therefore, learners coming from a mixed background increase the challenges for teachers, forming a barrier to the delivery of advanced skill training (Yang et al. 2005). Also, the curriculum of beauty education, in Taiwan, covers greater breadth in hair, skin care and make-up: whereas, in the UK, the curriculum has demonstrated more depth and progression between levels.

Taiwan educational structure		Level	UK educational structure
4-year HTVE	2-year Senior College		Level 6 (BA)
	2-year Junior College		Level 5 (Fd/HND)
3-year Vocational High School (VHS)		5-year Junior College	Level 4 (HNC)
			Level 3
		FE	Level 2
			Level 1

\* Source: The researcher constructed the diagram according to literature from Ministry of Education in Taiwan and the UK Qualifications Credit Framework (QCF)

The approach in teaching and learning is also very different. For instance, in Taiwan, teaching and learning has greater focus on delivering skill itself, rather than the entire service task. The practising of skills is sometimes a 'performance' and used only as a means of passing the national skill certification, which Huang (n.d.) describes as distorting the VET system and has been criticised as outdated and failing to measure the competence of a professional (Yeh & Chen 2006; TVBS 2012b). Skills, knowledge and attitude should be embodied within the entire service task, which may then form the core of the taught content, including compliance with health and safety. To a large extent, in the UK, the safe and effective conduct of beauty practice is regulated through legislation, regulations and codes of practice, which is reflected in the teaching. However, in Taiwan, insufficient emphasis is placed on habituating learners to consider and perform health and safety procedures as a fundamental component of the transformation process. Consequently, the Taiwanese beauty sector has been practising and surviving within a controversial grey zone, with regard to the quality and safety of delivery of services (üho 2013; TVBS 2012b).

From ethnographic experiences in the UK, the current training approach for beauty practitioners can be discussed in three major respects. Firstly, the progression route

from FE to HE offers beauty practitioners more advanced theoretical knowledge and practical skills, although there is very little discussion about the transition from FE to HE. The identified skill shortages and gaps have been addressed within education and training programmes (Habia 2007), so education does respond to industrial needs. Also, practitioners can update their skills through CPD courses provided through the professional bodies or by upgrading to a higher level within the QCF structure to obtain, or maintain, their career development and employment.

Secondly, the approach to assessment reflects the teaching and learning. The learning environment may not necessarily be in a (simulated) workplace, but the assessment will be required to perform as if it were. Learners may be assessed by lecturers or any assessor provided they are qualified to assess the subjects. In this case, standardisation in teaching and assessment across the board appears more significant, as the standardisation is not only for minimising differences between lecturers and assessors, but also requires the sharing of good practices between staff. Learners may appeal if they disagree with the assessment result: this requires re-assessment by a different assessor, thus helping to ensure quality assurance of assessment.

The third aspect is that techniques and theoretical knowledge are embedded in the teaching of treatment procedures complying with health and safety considerations. This training, recognised within industry, concerns not only an ability to perform techniques, but also a competence to complete the entire task, in a safe manner. The training structure allows learners to apply their knowledge and skills to real world practice, which helps to build a graduate's confidence.

The skills at different educational levels involve varying degrees of complexity and show a progressive structure. For example, facial treatment at Beauty Therapy Level 2 only requires the performance of the manual skill, but Level 3 develops this manual skill to incorporate the use of electrical equipment. Upgrading to Level 4 and 5 involves hi-tech or medical equipment such as laser and light treatments for skin rejuvenation, which require in-depth physiology and dermatology knowledge. The preparation, consultation and care advice also involve different levels of complexity. Additionally, a service could incorporate more than one treatment, further challenging the practitioner's competence.

By comparison, in Taiwan, through observing professionals' performance in the workplace, it was found that there was a lack of standardisation in the service processes and approaches. As a result, service structure and quality in the workplace may appear to vary. This diversity increases uncertainty and demands pre-job training by employers. Thus, from an ethnographic viewpoint, without pre-job training from the employer, the practitioners may experience a feeling of incompetence. The professionals can execute a treatment, but may not necessarily be able to perform a consultation, or even a contra-indication check to prevent exacerbating a skin condition and preventing infection and/or cross-infection. The research findings confirm that training at institutions focuses more on techniques than the ability to execute an entire task. However, a number of companies, such as SHISEIDO and Kenyon in Taiwan, have developed their own independent standardised service procedures, but these may not be transferable. In addition, in Taiwan, an awareness of health and safety procedures has not been embedded successfully into the curriculum,

to engender graduates' appreciation of the importance of these issues during their career, because the regulations are not specifically highlighted to the beauty learners.

The curriculum design in Taiwan for beauty programmes gives a breadth of knowledge and skills, but the lack of depth results in graduates' competence appearing too generalised. The student has limited interest in theory and their lack of academic ability disadvantages their professional development. Also, the work placement to develop their professional competence, can have limited effectiveness due to its method of implementation. From the evidence of the semi-structured interviews and ethnographic experience, a successful collaboration depends on both stakeholders having an equal contribution. Work placements in Taiwan can be seen as having a reduced value due to a lack of input from employers, but education providers should be more pro-active in understanding industrial needs and future trends in order to prepare and negotiate training opportunities. Improvements to work placement should enhance the beauty graduates' confidence and employability, whilst also providing benefits to the industry and clients, thus addressing elements of the problems outlined above.

To summarise, the lack of standards and regulations for the Taiwanese beauty industry suggests a predominantly laissez-faire attitude on the part of the government, shifting responsibility onto beauty practitioners. Ethnographic experience, in the UK, indicates that an effective policy would be to establish an impartial Taiwanese professional body to regulate the related beauty associations, effectively monitor practices, identify the needs of industry and improve communication between education and industry. Furthermore, implementing protocols for learners to integrate theory into practice through their learning journey and experience working in and managing a simulated workplace could help learners to become familiar with a real working environment.

#### **4. Conclusion**

The research recognises the existence of a gap between what Taiwanese beauty education provides and what the beauty industry requires from graduates. In the UK, government triangulates professional bodies, education and industry to develop training programmes and practice based on the same standard, with an audit mechanism to ensure that quality of training and practice are maintained. This approach could be adopted in Taiwan to promote an individual's life-long learning opportunity and career. It is recommended that an authorised professional body is established, the benefit of which is to utilise its resources to identify industry needs and monitor industry practice. Every practitioner/professional should register with the professional body and their practice should be monitored. Also, the professional body may play a role as liaison between education and industry and it could provide courses for professionals to update their competence. The Taiwanese government has made an effort to fund additional projects alongside the main qualification to prepare graduates' competence in their subject field. However, it may be ineffective if that which is learned by beauty graduates is not recognised by and transferable into industry.

From the findings, the development and establishment of a national occupational standard that specifically fits the Taiwanese cultural features, educational structure

and industrial setting would provide an effective guidance for education providers. The standard would be embedded in the curriculum of the VET programme and applied to develop its structure into different progressive levels to ensure that different levels of talent are cultivated. The development of taught content should aim to effectively habituate learners to think holistically and consider, appreciate and perform aesthetic theory, skill and health and safety.

The above should be promoted to industry, to ensure that education practices and standards are transferrable to industry and integrated into real world practice. These recommendations may overcome the core issues of Taiwanese beauty graduates lacking confidence in their employability and employers not being satisfied with the graduates' competence.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The text is surrounded by two large, overlapping, curved lines that form a partial circle. The upper line is light blue and the lower line is light red, both with a soft, feathered edge.

## 5. References

- Adams, M.E., 2002. Body Authorities: Clinicism, Experts, and the Science of Beauty. *The Journal of American Culture*, 25(3-4), pp.282–289.
- Anderson, A. & Hemsworth, D., 2005. *Higher Education for Hairdressing and Beauty Sector Professionals*, University Vocational Awards Council
- Atkinson, P. & Hammersley, M., 1994. Ethnography and Participant Observation. In N. Denzin & Y. Lincoln, eds. *Handbook of Qualitative Research*. London: Sage, pp. 248–260.
- Bathmaker, A.-M. et al., 2008. Dual-sector further and higher education: policies, organisations and students in transition. *Research Papers in Education*, 23(2), pp.125–137.
- Black, P., 2004. *The Beauty Industry: Gender, Culture, Pleasure*, London: Routledge.
- Black, P. & Sharma, U., 2001. Men are real, Women are “made up”: beauty therapy and the construction of femininity. *The Sociological Review*, 49(1), pp.100–116. Available at: <http://dx.doi.org/10.1111/1467-954X.00246>.
- Blinko, L., 2011. New employer-led vocational qualifications now available. *British Journal of Healthcare Assistants*, 5(3), pp.141–143. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2010999112&site=ehost-live>.
- Brennan, L., 2005. *Integrating Work-Based Learning into Higher Education: A guide to Good Practice*,
- Brockmann, M., Clarke, L. & Winch, C., 2010. The Apprenticeship Framework in England: a new beginning or a continuing sham? *Journal of Education and Work*, 23(2), pp.111–127.
- Brody, H.J., Geronemus, R.G. & Farris, P.K., 2003. Beauty Versus Medicine: The Nonphysician Practice of Dermatologic Surgery. *Dermatologic Surgery*, 29(4), pp.319–324. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=9386948&site=ehost-live>.
- Chang, Y.-N., 高等技職教育體制改革之探討 (The Study on System Reform of Higher Technological and Vocational Education). , pp.1–18.
- Chen, G.-F., 2000. 美容教育的省思. 技藝教育, 28, pp.23–25.
- Chen, L.-W. et al., 2006. An Analysis of the Development of Beauty and Hairdressing Industry from the Point of View of Technology Education. *Ling Tung Academic Research of General Education*, 1(3), pp.1–14.
- Chen, L.-W. & Lin, J.-C., 2007. Investigating The Analysis of Establishing The Beauty Business Industry. *The Journal of International Esthetic Science*, 4(2), pp.104–112.
- Chen, W.-Y., 2011. When academy meets industry: A case study of team teaching between academic and industrial teachers. In *Technology Management in the Energy Smart World (PICMET), 2011 Proceedings of PICMET '11*: pp. 1–5.
- Felicia, M.S. et al., 2004. Observational Study in Ten Beauty Salons: Results Informing Development of the North Carolina BEAUTY and Health Project. *Health Education & Behavior*, 31(6), pp.790–807. Available at: <http://ejournals.ebsco.com/direct.asp?ArticleID=498C98C88156A971E35A>.
- Fetterman, D.M., 2010. *Ethnography: Step by step* 3rd ed., London: Sage.

- Gallacher, J., Ingram, R. & Reeve, F., 2012. Are Vocational Qualifications Vocational? In M. Pilz, ed. *The Future of Vocational Education and Training in a Changing World*. VS Verlag für Sozialwissenschaften, pp. 381–401.
- Gimlin, D.L., 2002. *Body work: beauty and self-image in American culture*, Berkeley: University of California Press.
- Habia, 2007. *Habia Skills Survey of the Beauty Therapy Industry*, Doncaster. Available at: [http://www.habia.org/uploads/Bty\\_Report\\_Final\\_v3\\_210607\\_-\\_20\\_July\\_2007.pdf](http://www.habia.org/uploads/Bty_Report_Final_v3_210607_-_20_July_2007.pdf).
- Harris, S., 2010. Out with the NVQs, in with the diplomas. *Nursing & Residential Care*, 12(12), pp.569–571.
- Hayt, E., 2002. Whose Hand Holds the Laser? *New York Times*, CLI(52,032), p.9.
- Hoelscher, M. et al., 2008. The transition from vocational education and training to higher education: a successful pathway? *Research Papers in Education*, 23(2), pp.139–151. Available at: <http://dx.doi.org/10.1080/02671520802048679>.
- Hong, J.-X. & Huang, Y.-C., 2003. Taiwanese Esthetic Education in Respond to Japanese Esthetic Scientific Education. *Economics, Journal of Chinese Home*, 33, pp.43–56.
- Hsu, M.-R., 2003. Remarks on Distinguishing Features of Educational Institutions and Business Related to Cosmetology in Japan. *Educational Research & Information*, 11(3), pp.113–132.
- Huang, W.-Z., 在校生技能檢定政策對高職實習教學之影響. , pp.1–14. Available at: <http://aca4.saihs.edu.tw/pps/download/03-06.pdf> [Accessed March 13, 2010].
- Huang, Y.-C., 2003. *Analysis of the Professional Competencies of Manager in the Beauty Saloon*. 國立台灣師範大學.
- Huang, Z.-F., 淺論我國技職教育的發展. Available at: <http://www.shs.edu.tw/works/essay/2010/10/2010103116513949.pdf> [Accessed October 11, 2013].
- Hung, Y.-C., 2006. *The Future Trend Moving Fast Goods Consumer*. National Sun Yat-sen University.
- Keris Advanced Beauty Clinic, 2011. Treatments. Available at: <http://www.kerisclinic.co.nz/treatment> [Accessed October 28, 2013].
- Lester, S., 1999. Professional bodies , CPD and informal learning : the case of conservation. *Continuing professional Development*, 3(4), pp.110–121.
- Lester, S., 2011. The UK Qualifications and Credit Framework: a critique. *Journal of Vocational Education & Training*, 63(2), pp.205–216. Available at: <http://www.tandfonline.com/doi/abs/10.1080/13636820.2011.560394>.
- Linnan, L.A. et al., 2001. Working with Licensed Cosmetologists to Promote Health: Results from the North Carolina BEAUTY and Health Pilot Study. *Preventive Medicine*, 33(6), pp.606–612. Available at: <http://www.sciencedirect.com/science/article/pii/S0091743501909338>.
- Little, B. et al., 2003. *Vocational higher education - does it meet employers' needs?* Unknown, ed., London.
- Ministry Of Education (MOE), 2012. 教育部推動產學攜手合作計畫2013. , pp.1–113.

- NARIC, 2005. Description of Higher Education in England, Wales and Northern Ireland. *UK NARIC*. Available at: [http://www.ecctis.co.uk/europass/documents/ds\\_description.pdf](http://www.ecctis.co.uk/europass/documents/ds_description.pdf).
- NOS, 2013. Introduction to National Occupational Standards. *National Occupational Standards (NOS)*, pp.1–4. Available at: [http://nos.ukces.org.uk/eguides/eguide\\_introduction\\_to\\_nos.pdf](http://nos.ukces.org.uk/eguides/eguide_introduction_to_nos.pdf) [Accessed October 21, 2013].
- Parry, G. et al., 2012. *Understanding Higher Education in Further Education Colleges*, London.
- QAA, 2008. The framework for higher education qualifications in England, Wales and Northern Ireland. *The Quality Assurance Agency (QAA)*, (August), pp.1–47. Available at: <http://www.qaa.ac.uk/Publications/InformationandGuidance/Documents/FHEQ08.pdf> [Accessed September 4, 2012].
- QCDA, 2010. The Qualifications and Credit Framework ( QCF ) and higher education: Working together to benefit learners Contents. *Qualifications and Curriculum Development Agency (QCDA)*, pp.1–36. Available at: [http://www.linkington.ac.uk/downloads/cats/QCF\\_HE\\_brochure\\_web.pdf](http://www.linkington.ac.uk/downloads/cats/QCF_HE_brochure_web.pdf) [Accessed August 21, 2012].
- Sheen, J.G., 2006. *The professionalisation of aromatherapy: a case study of the professionalisation of complementary and alternative medicine in the Australian health care system*. Lismore: Southern Cross University.
- Swales, S., Roodhouse, S. & Hemsworth, D., 2004. *A Higher Education Context for National Occupational Standards*, Available at: [http://www.uvac.ac.uk/wp-content/uploads/2010/08/s\\_wailes\\_NOS\\_report\\_final1.pdf](http://www.uvac.ac.uk/wp-content/uploads/2010/08/s_wailes_NOS_report_final1.pdf).
- Taylor, R.W., 2000. *The Place of Underpinning Knowledge and Understanding in National Vocational Qualifications : A Case Study in Beauty Therapy A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy University of Huddersfield Dec.* University of Huddersfield.
- Toerien, M. & Kitzinger, C., 2007. II. Emotional Labour in the Beauty Salon. *Feminism & Psychology*, 17(2), pp.162–172. Available at: <http://fap.sagepub.com/content/17/2/162.abstract>.
- Tsai, Y.-R., 2003. 美容從業人員教育訓練與生涯發展. National Chung Cheng University.
- TVBS, 2012a. 〈獨家〉美容師若無使用證照 擅用醫材恐違法. Available at: [http://www.tvbs.com.tw/news/news\\_list.asp?no=anita198920120316190338](http://www.tvbs.com.tw/news/news_list.asp?no=anita198920120316190338) [Accessed April 8, 2012].
- TVBS, 2012b. 考題21年沒變！盼分類提升美容專業. *TVBS*. Available at: <http://news.tvbs.com.tw/entry/11747>.
- üho, 2013. 婦人雷射洗眼線打破視網膜險失明. *Yahoo*.
- Walk, K., 1998. How to Write a Comparative Analysis. *Harvard University*. Available at: <http://writingcenter.fas.harvard.edu/pages/how-write-comparative-analysis> [Accessed April 15, 2011].
- Wang, J.-L., 2013. 漸進推動課程學位分流. *Higher Education, Technological & Vocational Education Newsletter*, pp.1–3. Available at: [http://www.news.high.edu.tw/pages\\_d.php?fn=topic&id=398](http://www.news.high.edu.tw/pages_d.php?fn=topic&id=398) [Accessed October 7, 2013].

- Wu, C.-K. & Lin, T.-C., 2010. A Theoretical Reflection on the Development of Higher Technological & Vocational Education in Taiwan. *Bulletin of National Institute of Education Resources and Research*, 47, pp.1–24.
- Wu, R.-F., 2011. The Development of Vocational and Training System in the UK. *Bulletin of National Institute of Education Resources and Research*, 55, pp.103–128.
- Xu, G.-H., 2013. 產學合作發展方向之研析. *The Journal of Chaoyang University of Technology*, 18, pp.1–16. Available at: [http://ir.lib.cyut.edu.tw:8080/retrieve/31827/1\\_%E6%9C%9D%E9%99%BD%E5%AD%B8%E5%A0%B1\\_%E8%A8%B1%E5%85%89%E8%8F%AF\(%E4%BF%AE\).pdf](http://ir.lib.cyut.edu.tw:8080/retrieve/31827/1_%E6%9C%9D%E9%99%BD%E5%AD%B8%E5%A0%B1_%E8%A8%B1%E5%85%89%E8%8F%AF(%E4%BF%AE).pdf).
- Xu, N.-X., 1996. 美容從業人員專業能力之研究. Taiwan: 中國文化大學.
- Yang, M.-Y., You, M. & Chen, F.-C., 2005. Competencies and qualifications for industrial design jobs: implications for design practice, education, and student career guidance. *Design Studies*, 26(2), pp.155–189. Available at: <http://linkinghub.elsevier.com/retrieve/pii/S0142694X04000651> [Accessed August 15, 2013].
- Yeh, J.-H. & Chen, M.-C., 2006. The Related Implementations and Characteristics of Professional Skill Certification for Cosmetology Department in Senior Secondary Education in Domestic. *Journal of Kaohsiung Hospitality College*, 8.
- Zeng, J.-M., 2009. Marketing Management of Professional Salons: From the Perspective of Service Characteristics. *The Journal of Esthetic Science*, 6(1), pp.214–232.
- Zhang, W.-C., 2012. 教育理念:技職教育出了什麼問題?. *CASEdu (國立臺灣大學科學教育發展中心)*, pp.2–3. Available at: [http://case.ntu.edu.tw/CASEDU/casedu\\_uptest/?cat=13&paged=10](http://case.ntu.edu.tw/CASEDU/casedu_uptest/?cat=13&paged=10) [Accessed October 14, 2013].
- Zhang, Z.-J., 2013. 課程分流大挑戰. *Higher Education, Technological & Vocational Education Newsletter*, pp.1–4. Available at: [http://www.news.high.edu.tw/pages\\_d.php?fn=topic&id=396](http://www.news.high.edu.tw/pages_d.php?fn=topic&id=396) [Accessed October 5, 2013].
- Zheng, L.-Q., 2007. 淺談我國技職教育現況問題. *Taipei County Education*, pp.87–88. Available at: <http://te.ntpc.edu.tw/ezfiles/6/1006/img/47/062-18.pdf> [Accessed October 11, 2013].
- Zhou, C.-D., 2013. 台灣推動產學合作的策略模式 – 產學研發與人才培育. *The Journal of Chaoyang University of Technology*, 18, pp.85–109. Available at: [http://ir.lib.cyut.edu.tw:8080/retrieve/31831/5\\_%E6%9C%9D%E9%99%BD%E5%AD%B8%E5%A0%B1\\_%E5%91%A8%E7%87%A6%E5%BE%B7.pdf](http://ir.lib.cyut.edu.tw:8080/retrieve/31831/5_%E6%9C%9D%E9%99%BD%E5%AD%B8%E5%A0%B1_%E5%91%A8%E7%87%A6%E5%BE%B7.pdf) [Accessed November 22, 2013].
- Zhuang, G.-Z., 2007. 英國技術與職業教育, Yunlin, Taiwan.

*Why Virtual Mentoring? Impacts on Professional Learning and Development*

Hazel Owen

Ethos Consultancy NZ, New Zealand

0241

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Abstract

Population growth, demographics, advances in technology, globalisation and associated economic imperatives are a few of the drivers behind the changes we are experiencing. In response, some research studies suggest that we will see a shift in social values (Wilson, 2009), as well as a re-framing of notions of what constitutes 'knowledge'. These factors have significant implications of the 'how', 'what', 'where' and 'why' of learning, including education practitioner Professional Learning and Development (PLD). Issues such as sustainability will become increasingly important, as will the ability to respond rapidly to novel situations and ill-defined problems. These all call for alternative approaches to PLD.

The range of affordances of a virtual environment, when complemented by virtual mentoring and an online Community of Practice (CoP), can be exploited to provide PLD that has flexibility of location, choice, time and approach. Educators can therefore, within their own context, build and shape their knowledge and skills. Virtual mentoring has great potential to support this form of PLD, in part by developing learning partnerships based on mutual respect and trust. The virtual mentor wears many 'hats' in this role, including offering support for innovative practice, boosting confidence, help with career options and progress, and asking the 'hard questions'.

The paper has two main aims; 1) to describe the roles of a virtual mentor working in a Virtual PLD initiative that has been offered in New Zealand from 2010 to date; and 2) to present and discuss key findings from the associated research study, including evidence of changes in the participants' roles, which have resulted in, for example, shifts in beliefs about learning and teaching, corresponding changes in professional practice, and an increase in the development of students' metacognitive skills.

**Keywords:** virtual mentoring, professional development, online communities of practice.

## 1. INTRODUCTION

It may sound rather clichéd, but it is worth re-stating: the world is changing; and population growth, demographics, advances in technology, globalisation and associated economic imperatives are some of the drivers behind this change. In response to these changes, some research studies suggest that a shift in social values will occur (Wilson, 2009), including a re-framing of notions of what constitutes 'knowledge'. These factors have significant implications for the 'how', 'what', 'where' and 'why' of learning, including education practitioner Professional Learning and Development (PLD). Issues such as sustainability will become increasingly important, as will the ability to respond rapidly to novel situations and knotty problems. These all call for alternative approaches to PLD.

Shifts towards contextualised, personalised, self-paced learning experiences, underpinned by the development of an online professional social identity, are already challenging notions of what actually comprises PLD provision. This challenge means that change is not a simple process because it requires wider understandings around expectations of what PLD should be and what it should provide (Stoll, 2004), and also requires "leadership support and professional development ... [to] facilitate adoption" (Davis, 2011, p. 143).

There are a range of affordances available in a virtual environment, when complemented by virtual mentoring and participation in an online Community of Practice (CoP). These can be exploited to provide PLD that retains flexibility of location, choice, time and approach. Educators can therefore, within their own context, build and shape their knowledge and skills. Virtual mentors can help develop learning partnerships based on mutual respect and trust, whereby they can offer support for innovative practice, boost confidence, help with career options and progress, and ask the 'hard questions'.

This paper has two main aims: 1) to describe the roles of a virtual mentor working in a Virtual PLD initiative that has been offered in New Zealand from 2010 to date; and 2) to present and discuss key findings from the associated research study, including evidence of changes in the participants' roles, which have resulted in, for example, shifts in beliefs about learning and teaching, corresponding changes in professional practice, and an increase in the development of students' metacognitive skills.

## 2. PROFESSIONAL DEVELOPMENT

It is hypothesised that the context in which knowledge and skill development occurs affects how, or if, it is applied in other situations and settings (Lave, 1997). For example, Carraher, Carraher, and Schliemann (1985) found that a trader could perform complex calculations while trading on the street, but was not able to perform the same calculations within a formal education setting. As such, it can be postulated

that an education practitioners' professional knowledge is inextricable from their domains and contexts (Cranefield, Yoong, & Huff, 2011), beliefs about learning and teaching (Cranefield, Yoong, & Huff, 2011), interpretive frameworks (Richardson, & Placier, 2001), and routines and practices (Handal, 2004).

Contextualised PLD, which recognises the sociocultural considerations of learning, has been reported to also have a positive impact on student learning. Timperley (2008) explained this is because there is a direct connection between principles of effective teaching practices, recognition of relevance, and consequent adaptation of those practices to local circumstances. As such, educators are more likely to apply strategies to address known issues around student learning in their specific learning community (Timperley et al, 2007). While engaging in this process they also engage in the exploration, development and application of conceptual frameworks that encourage consideration of their students in a new light (Timperley et al, 2007).

Sherry and Gibson (2002) identify further critical aspects of PLD. These include access to resources and expertise over an extended period of time, as well as clear recognition of the mutual benefits to all stakeholders who will be affected by any changes that occur. Additional complexity is created by the fact that virtual PLD provisions "cannot be separated from their ecological contexts, or from the educational activities that they enhance" (Peled, Peled, and Alexander, 1994, p. 49). Sherry (1998) explained the aim of PLD is:

to bring about major change in all of the interconnected ecological systems, including classroom accommodations, school modifications, centralized policies, visions of learning, and beliefs and attitude-based behaviours (p. 141)

As such, the focus cannot be only individual participants, but must include other key stakeholders and policy making bodies.

## 1. VIRTUAL MENTORING

By definition, virtual mentoring is based on practices developed in face-to-face contexts, but which occur at a distance via, in this paper, computer mediated communication (CMC) (including mobile devices). Virtual mentoring may also be known as distance mentoring, remote mentoring, tele-mentoring, and eMentoring. With all except tele-mentoring (which tends to specify mentoring over the phone), a virtual mentor works with a mentee using both synchronous (webinar, text chat, VOIP such as Skype, and phones, for example) and asynchronous (including emails, discussion forums, blog posts, and comments on posts) tools. The processes are similar in that they relate to two people working together in a mentoring relationship, although in different geographic locations. In other words, a virtual mentor might be located in Kaitaia (on the North Island of New Zealand) and working with someone in Dunedin (on the South Island of New Zealand). The virtual mentor may be working from home, partly based in an office environment, or completely based in an office.

Mentoring, either face-to-face or virtual, has many definitions, and these often vary depending on the context in which the mentor relationship is formed. In part, the range of definitions indicate some of the complexities of mentoring. In this paper the author has selected a definition by Hay (1995) as it is inclusive of a range of mentoring environments:

Mentoring is a developmental alliance between equals in which one or more of those involved is enabled to: increase awareness, identify alternatives, initiate actions and develop themselves (p. 3).

One of the key things to note in this definition is Hay's focus on the developmental aspect of mentoring, as opposed to a more functional approach. Where there is a developmental approach, the mentor works with a mentee to help them develop personally and professionally. There is trust that, when a school, institution or organisation is funding the initiative, the mentee's development will benefit all parties involved. In a developmental model, therefore, there is respect for the individual, as well as a focus on school, institutional and/or organisational goals.

Hay's definition was underpinned by the understanding that the mentee is given voice so that both the mentor and mentee became as Stokes explained (2011) more aware of shifts in perspectives and thinking, "eventually introducing conflict to promote self-examination and further development of alternative perspectives" (p. 8). Other factors Stokes identified as critical to the mentoring relationship were motivation, recognition and celebration of positive growth, and the provision of "a mirror... to extend the...[mentee's] self-awareness" (Daloz, 1986, in Stokes, 2011, p. 8). These factors helped mentor and mentee watch for indications "that the relationship may be transformative and growth producing for both partners" (Stokes, 2011, p. 8).

### 3. OVERVIEW OF THE VPLD

The VPLD initiative was instigated and funded in October 2009, by the NZ Ministry of Education<sup>1</sup>. The VPLD model and approach was trialled and evaluated in 2010 with with nine secondary and primary school teachers and one tertiary teacher across a wide range of disciplines. It was then rolled out in 2011 with a total of twenty teachers and principals. This number increased to 26 in 2012, and 46 in 2013. In 2013, there are 5 funded virtual mentors. Two are contracted for 0.6 (project leader) and 0.7 EFTs. Three are contracted for 0.1 and they work purely with the mentees, rather than being involved in project administration and research.

The aim of the VPLD programme, and associated research study, was to develop a model of Professional Learning and Development (PLD) for education practitioners

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based on authentic and meaningful learning and teaching contexts using virtual tools and services. Key foci were:

- improving student achievement;
- improving capability of participants;
- creating effective learning communities;
- facilitating virtual mentoring; and
- working with wider education communities.

The VPLD programme has no formal 'content', associated accredited institution, or formal assessment. Instead, the programme offers a customisable, individualised PLD experience in which there are multiple ways to participate (see Fig 1). The programme is of three years in duration; in the first two years education practitioners work on projects that interest them, driven by their own investigation and based on the needs of their students, school and school community. In the third year, participants focus on transitioning into a mentor role, or choose to continue work on their original project. The PLD itself is subsumed within the participant's role of being part of their own school's/institution's community, rather than being the central focus as can happen with more traditional approaches to PLD.

The VPLD programme has three main online spaces:

1. An online CoP (Ning);
2. A 'sandpit' area and access to self-paced resources (Moodle); and
3. Adobe Connect (a webconferencing tool that enables interactive synchronous communication)

The VPLD online CoP is an active space, with 230 members at the time of writing, which offers a comfortable environment to discuss and challenge theories, and views about pedagogy and practice. This activity is enhanced by the participants' eclectic combination of disciplines and sectors. Social structures (including agreements about interactions, processes, norms, and rules) are negotiated on an ongoing basis.

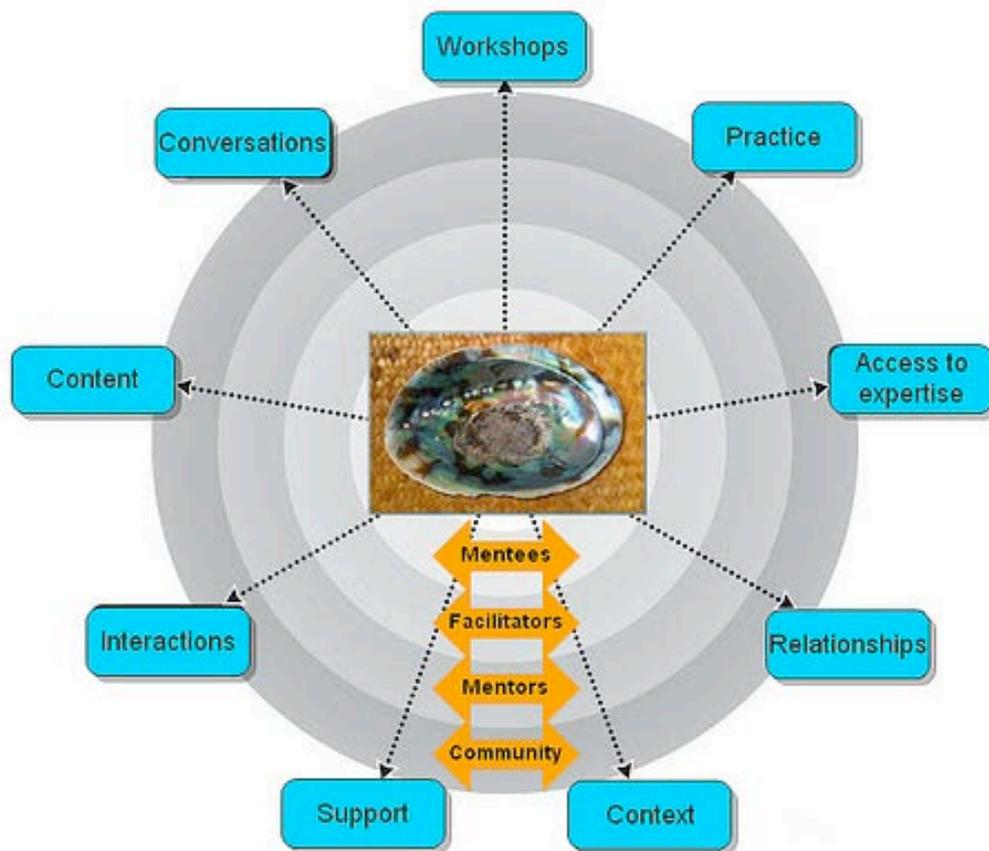
A variety of community building strategies are employed, including sending out a monthly e-newsletter that highlights conversations and contributions in the online CoP, as well as showcasing the work of community members and celebrating successes. There are also all-community webconferencing sessions, either to mark specific events, such as the end of the year celebration, or with a specific pedagogical and/or skills focus.

Each participant in the programme is partnered with a virtual mentor with whom they meet online, using Adobe Connect, Skype, or Google Hangouts, once a month for between forty-five to ninety minutes. Mentoring strategies are customised to suit the needs of both the mentee and the mentor, and during monthly meetings a variety of subjects are discussed including pedagogy, what the participant has been working on with their students, and how their students have reacted. The participant also identifies areas of support they need, and plans for 'next steps' and interim goals.

#### 4. RESEARCH

Since inception the VPLD was studied by the author who aimed to collect qualitative and quantitative data to generate a rich, examinable body of evidence, which performs an iterative feed-forward function as well as providing outcomes and comparative longitudinal evaluation data.

The longitudinal research approach was included to capture evidence of emerging patterns and tendencies through repeated observations of the same variables over an extended period of time. Due to repeated observation on an individual level over time,



Owen, 2011 (Adapted from Digital Habitats, Wenger, White & Smith, 2009, p. 152)

Fig 1: Components of Virtual PLD that meets diverse requirements and interests of participants (Owen, 2012, adapted from Wenger, White, & Smith, 2009)

longitudinal studies, unlike cross-sectional studies in which different individuals with same characteristics are compared, make the observation of changes in attitudes, beliefs, and behaviours, more accurate (Anderson, 2005).

Five research questions were developed, including the main research question pertaining to this paper is: How does working with a virtual mentor affect participants' opinions about their own efficacy and teaching practice?

The tools used to collect data included (but are not limited to) three online surveys per year (January, June, and November/December), recorded discussions and notes from virtual mentor meetings, contributions from all areas of the VPLD online CoP, Webinar sessions, and emails. The surveys, designed with mainly open-ended questions, aimed to gather richer, fuller understandings of the experiences of the VPLD participants. The quantitative data were exported into Excel, analysed and interpreted. A qualitative approach was used to interpret the open-ended survey responses. Recurring words were noted as possible emergent themes and used as codes. Comparative methods of analysis were used during coding (Charmaz, 2008).

## 1. Results and discussion

Drawn from the large amount of data collected, the author has chosen to highlight and discuss emerging themes and trends. Each highlight or theme is illustrated with comments and observations gathered during the study.

### **Affective factors**

An analysis of emerging categories and comments suggest that affective factors play an essential role in the mentoring experiences. The relationships built, along with feelings of bonding, support, empathy, and trust are as important, if not more important, than professional 'knowledge' and skills acquired. Respondents consistently indicated that virtual mentors provide timely support and engage in conversations that are directly related to their particular needs (*"I would have left teaching by now without the fresh new vision for education that the support of the VPLD programme and my mentor has given me"*, survey response 2013).

Fostering a positive environment that embraces non-cognitive factors also enables robust, informative discussions, where alternative points of view can be explored, as well as similar interests and goals. Virtual mentors were seen as playing a central part in this process:

*Having a mentor to share ideas with, use as a sounding board ... and even from time to time vent frustration on...is a key element of the VPLD. It gives you an independent, completely understanding and knowledgeable critical friend to help.... (survey response, 2011); and*

*Having a great mentor...has allowed me to express ideas and thoughts and expand on these to focus and refine my thinking on many issues*

*that I encounter or think about* (survey response, 2013).

The reference to a 'sounding board' was revealing. The respondent saw their virtual mentor as a someone who would listen to their ideas, with no risk or adverse consequences because the mentor is external to their direct working environment. In addition, the mentor challenges thinking and actions, offer alternative perspectives, and can also "see when...[a] leader is part of the problem and highlight when (s)he needs to consider their own contribution to the situation" (Perry, 2013, Para. 5).

*It is the contact that is always there reinforced by...[my mentor's] guidance, expertise and never ending patience. Her approach has been one that has been centered on the outcomes of both me and my students. It is also her genuine interest in all that we are doing and trying to achieve* (end of year reflection, 2010).

As such, the strengthening of identity and feeling of socially-mediated shared understandings and experiences can help decrease the sense of isolation, and strengthen resilience in the face of change. This combination appears to enable the individualised, long-term support of education practitioners, where they are also encouraged to build networks, thereby fostering the improved connections that form part of the sustainability of the approach ("*X has made every effort to link me with teachers who have common interests as myself within the...wider community as well*" - survey response, 2011).

### **Flexible individualised contextualised PLD**

As described earlier in the paper, the VPLD programme utilises approaches to PLD that exploit the affordances of the virtual nature of the programme. As such, the participant does not have to be physically present at scheduled sessions, and the practitioner can tailor their participation to their ongoing work commitments.

*I think it is really 'real' how the mentees are mentored in their own school setting so they can be honest about what they are experiencing and access support straight away - [they are] not taken out of school on special days for pd - it is integrated*

One respondent commented that "*I don't feel overburdened. Everything works alongside things I am already doing, and my current inquiry focus*" (survey response, 2012). Another participant commented that I "*see this as the way of the future and the most accessible, available professional learning for these current times*" (2011, survey response).

Vygotsky (1978, 1987) developed the notion of the zone of proximal development (ZPD), which suggests that opportunities can be provided where the gap between a learner's already assimilated knowledge or skills, and knowledge or skills yet to be

assimilated, can be bridged when assisted by a more advanced peer or teacher - a concept known as 'scaffolding'. In the process the participation and guidance are "mutual efforts...that can result in advances in learning for all participants." (Mentis, Ryba, and Annan, 2001, p. 3). The data from the VPLD study suggest that a virtual mentor, when working with an education practitioner to unpick various aspects of their practice and knowledge, while also helping to provide 'just in time' upskilling, support and access to resources, is in an ideal position to provide individualised scaffolding. As one participant indicated

*monthly meetings with my mentor C have made all the difference. He has been able to support me when I encountered barriers, push me in new directions, provide encouragement and network me with the wider e-Learning community. He has been a huge resource....* (mentor notes, 2011)

Adoption of alternative approaches occurs when the participant either sees it as addressing their concerns (Davis, 2008) or their dissatisfaction with the status quo (Davis, 2008). The educators who do so appear more open to developing their own practice via, for instance, collecting student voice and outcomes as way of measuring the effectiveness of their own shifts (Sherry, Billig, Tavalin, & Gibson, 2000). As mentioned previously, VPLD participants identify and work on their own inquiry project, and develop their own goals, while being scaffolded through the process by their virtual mentor. One participant explained that "*Setting goals...and sharing them with a mentor has...been invaluable for my own personal reflection on my professional practice*" (webinar recording, 2011), and another mentioned the "*wonderful discussions...[that] provoke much thought and reflection*" (survey response, 2011).

### **Impact on teaching practice / student achievement**

Theories of learning and teaching, and pedagogy are constantly revisited and discussed by participants, especially during meetings with their virtual mentor. The results suggest that individuals participating in the VPLD programme develop a sense of self-efficacy that motivates them to trial alternative approaches, and to initiate an iterative cycle of trial, error, and improvement ("*We have had time to try our ideas, to make our mistakes and to reflect upon our success*", survey response, 2010). Each participant's sense of self-efficacy is reinforced as they share their experiences with their virtual mentor and with other members of the VPLD online community, where their efforts are recognized and acknowledged, and development of 'voice' is encouraged.

*It's hard to put this into words as it has been invaluable to my growth and development over the past 3 years. The power of mentors is amazing* (survey response 2013).

This has led to, for example, the design of pedagogically informed blended programmes of learning that align with standards and curriculum requirements. In one

example a respondent explained they had engaged in:

*the progressive resolution of how to develop the middle-school math program to support the standards...at NCEA level, with corollary aims of enhancing the relevance of math to students' lives", survey response, 2010), while also enabling high levels of differentiation ("Introduced moodle [sic] into my classroom as an additional way for extending able students, end of year reflection, 2011)*

At the same time the mentoring relationship enables high levels of differentiation. One mentee explained the actions they had taken and the provision of authentic learning opportunities:

*[I] ...introduced moodle [sic] into my classroom as an additional way for extending able students (end of year reflection, 2011).*

Another participant reported that:

*My students have commented that I am different, and teach differently. It's great" (survey response, 2013).*

In addition, there have been positive behaviours from students reported such as this from an end of year teacher reflection.

*I see my students bouncing into the classroom, and where before they might be packed up and ready to go 10 minutes before the end of a lesson, now it's often tricky to get them to stop working!/" (end of year reflection, 2011).*

Many students have become empowered co-constructors of outcomes and facilitators of sessions, as well as more confident, engaged learners who are "*empowered ...to learn on their own terms*" (survey response, 2011). One respondent commented that his "*students' work has improved in quality and some parents are now coming to ask what I've done to their kids because they really want to do their homework*" (survey response, 2011). While it is problematic to suggest a direct causal effect between this PLD intervention and impact on student achievement of learning outcomes, improvements were reported, along with increased in the the assimilation and application of key competencies. One teacher, for example, after collating and analysing the eAsTTle data (numeracy) for 18 students, shared with their mentor that they felt as a result of being part of the VPLD programme,

*It has been pleasing to see the positive movement of most of the students in their understanding and learning with a couple even going up 3 sub levels especially those students that were in the lower quarter for the initial results (mentor notes, 2012)*

### **The ripple effect: Emerging leaders and change agents**

In 2011 a trend emerged from the study, that was termed ‘the ripple effect’, whereby it was observed that participants chose to undertake some type of either formal or informal roles, in their school and/or wider community, electing to work with between 1 and 200 colleagues each. This trend continued, and in 2012, the VPLD programme had 26 participants working with 829 staff, and in 2013 there are 46 participants working with 2,139 staff.

The participants taking on the roles appear to be self-motivated leaders and change agents, who carry forward learnings and guidance to their professional community and students. In part, this is because of increased confidence in skills and knowledge “*knowing that i have things to offer as well*” (mentor notes, 2011); and “*in my school community seeing myself as a mentor*” (survey response, 2012). Sherry and Gibson (2002) describe a similar result whereby “*experienced teachers expanded their roles...shared their improvements in practice with their peers, and taught new members of their virtual learning community*” (p. 182). In other words, a VPLD mentor working with one self-motivated teacher/school leader can potentially influence the professional learning and development of a large number of other practitioners, therefore increasing the impact on positive outcomes for students and the wider community.

One participant did indicate, however, that “*I would have loved to do something with PD with teachers this year. Unfortunately I haven't been given an opportunity to do so*” (mentor notes, 2012), which suggests that further work with school leadership and the wider education community is required.

Bandura (1963) asserted most learning is shaped by our experiences and we are likely to imitate, and in part, replicate what we have participated in; in the words of the oft used cliché is ‘we teach as we have been taught’. The implications of this - given their immersion into a learning experience that recognises each individual's political, social, economic and personal drivers, while embracing them in a community of practice - is that VPLD participants working with colleagues are likely to replicate these experiences, at least in part. This tendency in turn may well have a significant impact on leadership and practice, as well as perhaps policy and the shape of education (including teacher education) in future years.

### **Challenges**

As with most forms of PLD, there are challenges, some of which influence the effectiveness of, and satisfaction with, the VPLD programme. Some factors identified were beyond the control of the project team, but are still essential to be aware of.

Participants’ frustrations were often linked to issues with the technology as opposed to technical skills (something that was also identified by Sandholtz and Reilly, 2004). While the roll out of ultra-fast broadband in New Zealand may help address some

challenges, others will still be faced. For instance, one respondent commented that

*We have had an interesting yet frustrating start to our year with the technology the students should be using. We still have the issues now created for remote access, using our LMS, and in some cases even having the wireless disappear....To top that off it has been found that half the school is working off a switch so decrepit and old that, of the 50 schools the Tech who looked at it today works in, he has only seen one other (Survey response, 2013).*

Buy-in from senior management around initiatives is important, and where support may not be quite as strong as it might, working with a virtual mentor and an online CoP can be a lifeline. As one participant indicated

*The role I hold is so very singular in my school. It's isolating and vulnerable without this resource. With it, I have ammunition to counter the cynics, and resources to share with my willing but under-skilled colleagues. It's fantastic (survey response, 2013).*

Finding enough time to participate fully was identified as an issue by a few respondents, although the accessibility of the PLD was felt to mitigate the time issue to some extent; as one member mentioned virtual PLD is “good use of time rather than travelling to PD. [I] can do it at a time that suits...usually evenings” (mentor notes, 2011). In addition, it must be acknowledged that in any self-motivated learning environment, participants will have a range of responsibilities, as well as the freedom to choose whether to engage (with or without genuine enthusiasm), and some will decline to embrace the opportunity (Bruckman, 2004).

### **The importance of self-nominated participants**

Data has been collected that strongly indicates individuals, who are *nominated* for the VPLD programme<sup>2</sup>, do not participate with the level of commitment required for transformation in teaching practice and related positive impact on student achievement. These findings align with literature that suggests that to be effective participants need to be self-nominating (e.g. Cameron, 2007). With self-nominated participants within the VPLD programme the speed of transformation of professional practice has been significantly higher than with nominated participants (80% of nominated participants from 2010 have taken 1 to 2 years to show shift, along with possible impacts on student learning outcomes). In contrast 80% of the 2012 intake are showing significant shifts in practice, and are reporting improvements in student achievement.

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□ For the pilot in 2010 all (10) VPLD participants were nominated. In 2011 (20) and 2012 (26) VPLD participants were mainly self-nominated then went through a rigorous selection process. In 2013 all (46) VPLD participants were self-nominated then went through a rigorous selection.

## 5. CONCLUSION

This paper has described the roles of a virtual mentor, and has illustrated some of the dynamics and possible results for education practitioners participating in a VPLD programme. Key findings from the associated research study have been presented and discussed. The results provide insights into the perceptions of participants about the impact of working with a virtual mentor, in particular on their own practice and professional identity and the knock-on effect for students' learning experiences. In addition, there are implications for PLD providing sustainable support for education practitioners as 'change agents' and leaders.

Virtual mentoring fits neatly alongside other forms of PLD - both formal and informal. Therefore, PLD can be tailored exactly to the needs and interests of the mentee, and they are empowered to choose what, how and where they participate. A final benefit is, virtual mentoring as a form of PLD is portable. If a mentee or mentor move context or location, they can still continue to work together.

Whenever we learn anything we are influenced by other people, our culture, our beliefs, by experiences we've had, the understandings we've developed about the world and the way it works, our current context...and how open we are to learning itself. Every human being's learning is therefore shaped by the people around them, even when they are not directly seeking to learn collaboratively. Virtual mentors can work to create spaces and opportunities where mentees can learn together, even when they are geographically disparate.

It might be argued that participation in the VPLD programme not only increases practitioners' ability to cope with change, but also helps participants develop strategies that help them celebrate and embrace change. It is important to note the role of the virtual mentor is critical for the personalised guidance and motivation that they provide, especially when participants are under stress. The combination of individualised support and guidance, a community of peers with whom to tease out and develop ideas, and access to relevant resources appears to have created a powerful, flexible system of contextualised PLD. In this safe, supportive environment participants have enthusiastically trialled and evaluated new approaches, developing skills and ways of thinking that can have a profound far-reaching impact (*"It has been a career changer for me,...I think that as a member of VPLD you feel truly valued as an educator but it does not stop there, as you make goals and advance"* - survey response 2013).

There are affordances built into the VPLD model that encourage and enable teachers to move at their own pace, in a supported, supportive environment, with access to all that they need to scaffold their learning journey: *"Thanks for the opportunity. I've learned much and been inspired over time, without pressure of instant results. That's what PD should be about"* (end of year reflection, 2010). Thus, if it is accepted that

student outcomes frequently mirror teacher performance (although this is a somewhat simplistic relationship), it would therefore follow that if teachers can be mentored and guided in their own continual professional development and thinking around learning and teaching philosophy(ies), there is a strong potential that the overall learning experience for students can be enhanced. However, it is still incumbent upon the wider education structures to act to minimise constraints that discourage, prevent or enforce.

The logo for the International Association for Educational Research (iafor) is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, serif font. The text is surrounded by two large, overlapping, brush-stroke-like arcs. The upper arc is a light red color, and the lower arc is a light blue color, matching the text. The arcs are thick and have a slightly irregular, hand-drawn appearance.

## 6. REFERENCES

- Anderson, B. (2005). The value of mixed-method longitudinal panel studies in ICT research. Transitions in and out of 'ICT poverty' as a case in point. *Information, Communication & Society*, 8 (3), 343–367. London: Routledge.
- Bandura, A. (1977). *Social Learning Theory*. New York: General Learning Press.
- Bruckman, Amy (2004). Co-Evolution of Technological Design and Pedagogy in an Online Learning Community. In S. Barab, R. Gray, & J. Gray (Eds.), *Designing for Virtual Communities in the Service of Learning*. Cambridge, UK: Cambridge University Press.
- Cameron, M. (2007). *Learning to teach. A literature review of induction theory and practice*. Wellington: New Zealand Teachers Council.
- Carraher, T. N., Carraher, D. W., & Schliemann, A. D. (1985). Mathematics in the streets and in schools. *British Journal of Developmental Psychology*, 3(1), 21-29.
- Charmaz, K. (2008). Grounded theory as an emergent method. In S. Hesse-Biber & P. Leavy (Eds.), *Handbook of Emergent Methods* (pp. 155-170). New York: The Guilford Press.
- Cranefield, J., Yoong, P., & Huff, S. (2011). Driving change through online brokering practices in an online community ecosystem. *Proceedings of PACIS 2011* (pp. 1-13). Brisbane: Queensland University of Technology.
- Davis, N. (2008). How may teacher learning be promoted for educational renewal with IT? In J. Voogt & G. Knezek (Eds.), *International handbook of information technology in primary and secondary education* (Vol. 20, pp. 507-519). Boston, MA: Springer US.
- Davis N.E. (2011). Global interdisciplinary research into the diffusion of IT innovations in education. In A. McDougall, (ed.), *Researching IT in Education: Theory, Practice and Future Directions*. (142-149) London: Routledge.
- Fadel, C. (2008). Multimodal learning through media: what the research says. Cisco, Retrieved from <http://www.cisco.com/web/strategy/docs/education/Multimodal-Learning-Through-Media.pdf>
- Handal, B. (2004). Teachers' Instructional Beliefs about Integrating Educational Technology. *E-Journal of Instructional Science and Technology*, 17(1), 1-10.
- Hay, J. (1995). *Transformational Mentoring: Creating Developmental Alliances*. New York, NY: McGraw-Hill Publishing Co.
- Lave, J. (1997). The culture of acquisition and the practice of understanding. In D. Kirshner & J. A. Whitson (Eds.), *Situated cognition: Social, semiotic, and psychological perspectives* (pp. 63-82). Mahwah, NJ: Erlbaum.
- Peled, Z., Peled, E., & Alexander, G. (1994). An ecological approach for information technology intervention, evaluation, and software adoption policies. In E.L. Baker, & H.F. O'Neil, Jr. (Eds.), *Technology Assessment in Education and Training*. Hillsdale,

NJ: Erlbaum.

Perry, R. (2013). The Value of a Sounding Board or Who Should Leaders Listen to? Retrieved July 22, 2013 from <http://www.i-change.biz/soundingboard.php>.

Richardson, V., & Placier, P. (2001). Teacher Change. In V. Richardson (Ed.), *Handbook of Research on Teaching* (4th ed., pp. 905-947). Washington, DC: American Educational Research Association.

Mentis, M., Ryba, K., & Annan, J. (2001). Creating Authentic On-Line Communities of Professional Practice. *Proceedings Australian Association for Research in Education Conference*, Fremantle, 2001. Retrieved November 10, 2004, from [http://www.ascilite.org.au/ajet/e-jist/docs/Vol5\\_No1/full\\_papers\\_5.htm](http://www.ascilite.org.au/ajet/e-jist/docs/Vol5_No1/full_papers_5.htm)

Sherry, L. (1998). An Integrated Technology Adoption and Diffusion Model. *International Journal of Educational Telecommunications*, 4(2), 113-145. Charlottesville, VA: AACE.

Sherry, L., & Gibson, D. (2002). The path to teacher leadership in educational technology. *Contemporary Issues in Technology and Teacher Education*, 2(2), 178-203.

Sherry, L., Billig, S., Tavalin, F., & Gibson, D. (2000). New Insights on Technology Adoption in schools. *T.H.E Journal*, 27(7), 5.

Stokes, M. (2011). Mentoring in Education: The Mentor as Critical Friend. Retrieved February 14, 2013 from <http://ebookbrowse.com/d2-1-coaching-mentoring-handbook-v3-240107-htfinal-pdf-d51727958>.

Stoll, L. (2004). Developing professional learning communities: Messages for learning networks. Retrieved May 13, 2010, from <http://plc.washington.org/cms/lib3/WA07001774/Centricity/Domain/42/developing-PLCs.pdf>.

Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). Teacher professional learning and development. Best Evidence Synthesis Iteration [BES]. Retrieved from [http://www.educationcounts.govt.nz/\\_data/assets/pdf\\_file/0017/16901/TPLandDBE\\_Sentire.pdf](http://www.educationcounts.govt.nz/_data/assets/pdf_file/0017/16901/TPLandDBE_Sentire.pdf)

Vygotsky L.S. (1978). *Mind and society*. Cambridge: Cambridge University Press.

Vygotsky L.S. (1987). *Thinking and speech* (N. Minick, Trans.). In R.W. Rieber & A.S. Carton (Eds.), *The collected works of L.S. Vygotsky* (pp. 37-285). New York: Plenum.

Walsh, M. (2005). Multimodal Learning Environments [Electronic Version]. Retrieved August 10, 2009 from <http://www.slav.schools.net.au/downloads/08pastpapers/13think/multimodal.ppt>.

Wenger, E., White, N., & Smith, J. (2009). *Digital habitats: Stewarding technology for communities*. Portland, OR: CPsquare.

Wilson, R. (2009). Summative report: The future of work and implications for education. Retrieved October 9, 2012 from

<http://www.beyondcurrenthorizons.org.uk/summative-report-the-future-of-work-and-implications-for-education/>.

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*Changing Teachers' Perceptions of Low-Achieving Students' Cultural Capital and Habitus*

Rachel Lee, Susan Gwee

English Language Institute of Singapore, Singapore

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Abstract

In general, low-achieving students in Singapore schools have been reported to perform well in literacy tests (PIRLS), compared to their counterparts in other countries. However, for these students to achieve an even higher level of literacy skills in English, as promoted by the latest English Language Syllabus, classroom discourse patterns will need to change. The purpose of this study is to highlight the negative classroom discourse which contributes to the limited literacy experience in the lower stream classroom. Using Bourdieu's framework of cultural capital and habitus, we examined four transcripts from the lower stream in non-elite primary and secondary school classrooms to show that students, aged 11 and 15 years respectively, in these classes received a limited literacy experience. Our data sources come from two studies, one of which is part of a large scale study, which sought to study classroom practices in Singapore schools, whereas the second one was ethnographic in its methodology which used interviews with teachers in its analysis. The preliminary findings indicate that teachers ascribed low linguistic capital and habitus to low-achieving students, and characterized them as a community of poor readers and writers. We will show how these transcripts can be transformed to encourage and motivate students towards higher expectations of their English competence. Teacher educators in pre- and in-service education could use these modified transcripts to highlight and transform the classroom discourse of low-achieving students, especially in terms of the identity teachers ascribe to students.

## Introduction

This paper examines two teachers' perceptions of their students' cultural capital and habitus, specifically the linguistic capital and habitus, of low-achieving students in one primary and one secondary school. It draws on the theoretical notions of cultural capital and habitus by Bourdieu (1991). These two teachers' perceptions of these students' abilities seemed to affect the way they constructed and enacted their classroom talk. This paper proposes the use of productive classroom talk (Mercer and Littleton, 2007) to remediate the literacy experiences of low-achieving students.

### Cultural and Linguistic Capital and Habitus

Carrington and Luke (1997) define Bourdieu's cultural capital as the physical and psychic embodiment of a person's durable dispositions in their families and communities, i.e., their embodied skills and competencies in those areas. Linguistic capital, according to Bourdieu and Passeron (1977), a component of cultural capital, represents the speech and style of a person, acquired unconsciously from social interactions with his family and school mates. These linguistic dispositions form the *habitus* of an individual that orients their actions and inclinations in daily life. The quote below from Bourdieu (1980) summarizes the concept of *habitus*:

“Les conditionnements associés à une classe particulière de conditions d'existence produisent des *habitus*, systèmes de dispositions durables et transposables, structures structurées prédisposées à fonctionner comme structures structurantes, c'est-à-dire en tant que principes générateurs et organisateurs de pratiques et de représentations qui peuvent être objectivement adaptées à leur but sans supposer la visée consciente de fins et la maîtrise expresse des opérations nécessaires pour les atteindre, objectivement 'régliées' et 'régulières' sans être en rien le produit de l'obéissance à des règles et, étant tout cela, collectivement orchestrées sans être le produit de l'action organisatrice d'un chef d'orchestre”. (Bourdieu, 1980: 88-89).

Bourdieu (2003) explains that linguistic utterances or expressions are produced in a particular context or market, which assigns a certain value to these linguistic products. Speakers of more valued linguistic products possess more linguistic capital, and occupy a more desirable spot in the social space compared to speakers of less valued linguistic products. Bourdieu (2003) argues that this has implications for members of the lower classes, whose *habitus* is different from that of the upper classes.

### Linguistic Capital in the Singapore Context

In Singapore, although there are four official languages, English, Mandarin, Malay and Tamil, the values assigned to these languages are not equal. Apart from the fact that English is the medium of instruction in primary, secondary, and tertiary educational institutions, it also has a gatekeeping function which allows, or prevents, continued education and, thus future job opportunities for the individual. Thus, compared to other languages, it is the most valued linguistic resource in Singapore. In Table 1 below (adapted from the Singapore Department of Statistics, 2010), it is clear

that the occurrence of English as the predominant household language increased along with the higher education qualifications held by the head of household. The more highly educated the head of the household is, the more likely it is for him/her to speak predominantly English at home. For instance, 9.5% of primary school graduates speak English most frequently at home compared to 53.6% of university graduates. There appears to be an association between English and the attainment of a degree.

**Table 1**

**Resident Households by Predominant Household Language and Highest Qualification Attained by Head of Household**

Language	Total	No Qualification	Primary	Lower Secondary	Secondary	Post Sec (non-Tertiary)	Polytechnic	Other Diploma	University
English	32.1%	5.6%	9.5%	17.4%	33.4%	33.5%	43.2%	49.7%	53.6%
Mandarin	35.4%	36.2%	45.4%	46.1%	35.9%	35.9%	36.8%	29.1%	26.6%
Chinese Dialects	15.8%	11.4%	24.5%	18.2%	11.7%	9.1%	7.6%	8.8%	5.3%
Malay	10.5%	2.9%	16.7%	14.6%	15.2%	17.0%	6.6%	4.8%	1.5%
Indian Languages	4.9%	3.9%	3.9%	3.6%	3.1%	4.1%	5.0%	6.1%	8.8%
Others	1.2%	0%	0%	0%	0%	0.3%	0.9%	1.6%	4.1%

*Source:* Adapted from Department of Statistics (2010)

It is important to note that in Singapore, linguistic capital refers to the ability to understand and use educated speech, which is Standard Singapore English instead of the local varieties of English (Sullivan, 2001). Speakers of the non-standard variety of English, Singlish, are not taken as seriously as speakers of Standard Singapore English in Singapore as it is not considered to be a legitimate language (Rubdy, 2005).

**The relationship between productive teacher-student talk and educational success**

Given that school functions as a site of social stratification (Lin, 1999; Luke, 1996) where the display of linguistic (or other forms of) capital is concerned, teachers play an important role in creating learning opportunities for all students. The literature has shown that the quality of teacher-student talk contributes to students' learning opportunities (Alexander, 2004; Seehouse, 1996; Walsh, 2010). For example, Mercer and Littleton (2007) argue that classroom talk is the main pedagogical tool for teachers to create shared experiences with students, without which some students from disadvantaged homes may not gain access to some useful ways of using language as a tool for reasoning, learning and working collaboratively. While these studies have shown the benefits of engaging students in productive classroom talk, which facilitates the co-construction of knowledge and therefore projects students' voice, other studies have revealed that the occasions in which students are involved in either productive or non-productive classroom talk are related to the cultural capital students display in class (Black, 2004; Caughlan and Kelly, 2004; Johnston and Hayes, 2008; Kramer-Dahl and Kwek, 2010). In Black's (2004) study, it was found that when a student demonstrated forms of cultural capital in his/her behaviour, the teacher formed high expectations of that student, accorded him/her certain communicative rights, and was less controlling. Conversely, teachers held lower expectations of students with little or no cultural capital, and reduced students'

involvement to passive, monosyllabic responses. This not only prevented the student from actively taking ownership of the meaning under discussion, but also signalled to everyone involved that her/his identity was one of non-participation.

## **Context of the study**

### **Data sources**

There are two data sources in this paper. The first data source comprises transcripts of two English lessons of a low-ability Grade 5 class ( $n = 19$ ), which took place in 2004. The teacher was a diploma-holder of Malay ethnicity with eight years of teaching experience. The transcripts were part of a larger study conducted by the Centre of Pedagogy and Practice at the National Institute of Education, Singapore. The transcripts featured two reading comprehension lessons based on the journal of Robinson Crusoe.

The second data source consists of two transcripts of English lessons of a low-ability Grade 9 class ( $n = 39$ ). The first transcript featured the pre-writing stage consisting of decoding and scaffolding activities while the second transcript showed the teacher's review of her students' personal response essays. These lessons took place in 2010 in a government 'neighbourhood' school. In the Singapore educational context, schools located in public housing estates are classified as 'neighbourhood', compared to the elite independent or government-aided schools located in more upmarket districts. In the co-educational school, the majority of the students came from a low socio-economic background which is non-English speaking. The teacher was a degree holder of Chinese ethnicity with three years of teaching experience.

The transcripts from these two data sources were analyzed for evidence of the teachers' perceptions of students' linguistic capital and habitus. To derive a thematic coherence represented in the data analysis, we adopted an interpretive approach (Strauss and Corbin, 1998) to coding the data.

## **Findings and discussion**

In this paper, we will focus primarily on findings derived from the analysis of these transcripts. The data analysis revealed the teachers' perceptions of the linguistic capital and habitus of their students in terms of: (a) their choice of reading material selected before the lesson and (b) the interactions during the lesson.

The seven excerpts shown below, indicating these teachers' perceptions, are organized in the following themes:

- (a) a community of poor readers with poor dispositions;
- (b) a community of readers who had difficulty in reading and reading comprehension;
- (c) a community of lazy readers;
- (d) a community of poor writers; and
- (e) a community of poor writers without a personal voice.

Excerpts 1 to 4 were taken from the transcripts of the Grade 5 English lessons where the focus was on the oral reading and the explanation of the meanings of the words

found in the reading text. In both lessons, these were followed by an exercise on a worksheet. We will show through these excerpts the teacher's perceptions of her students' linguistic capital.

### A community of poor readers with poor dispositions

In Excerpt 1, the teacher began the lesson by telling them to read the Robinson Crusoe text silently. Note that words in italics show that the teacher is using the non-standard English variety. She went on to remind them that if they did not want to read, they would not do well in any paper even though the paper might be simple (lines 2-4). Her words seemed to imply that the students might not have the disposition to be good readers.

After asking the class to pronounce words such as 'large' and 'sticks', she explained that she would go through the meaning of the words in the reading passage later because she had wanted the class 'to cultivate the habit of guessing the meaning' of words (lines 37-38). This implies that she perceived the students as not having the habit of guessing meanings of words.

#### Excerpt 1

1	Teacher	<i>Yah</i> okay, sure. Okay, so I would like you to conduct your silent
2		reading. Remember <i>ah</i> , I've been telling you, you don't want to
3		read, there's no way you can do well in any paper even if the
4		paper is a simple paper. If there are words that you do not know. I
		will...
5	Male	Underline.
	Student	
6	Teacher	Go through them later. I would like you to underline the words
7		that you do not know.
8	Male	Okay.
	Student	
9	Teacher	You just read through the passage. I will give you five minutes,
10		<i>yah</i> ?
11		[After a few minutes]
12		Have you underlined the words that you do not know how to read
13		or maybe words that you do not know its meaning? <i>Yah</i> .
14	Male	I only do from here to here.
	Student	
15	Teacher	Very good. I can see that most of you have already finished. If
16		that's the case, can you look up so that I can continue? Very good.
17		Now, we will go through the whole passage in a systematic way,
18		okay. Now before I proceed, before I go into the actual lesson, I
19		just want to go through the first paragraph. Look at the first
20		paragraph.
21	Male	(Tea)cher, relaxation.
	Student	
22	Teacher	Let us go through some of these words which I think you might
23		find difficult, <i>yah</i> ? I'm looking at November 1.
24	Male	Large.

	Student	
25	Teacher	What is this word here?
26	Class	Large.
27	Teacher	Large. Am I right? <i>Yah</i> , did some of you identify this word?
28	Class	Yes.
29	Teacher	What is the meaning of 'large'?
30	Male Student	Big.
31	Teacher	Big. Very good. What about this word? How do you pronounce this word?
32		
33	Male Student	Sticks.
34	Teacher	Everyone pronounce sticks
35	Class	Sticks.
36	Teacher	Very good. Later in the lesson, I will go through their meaning.
37		Right, because I keep telling you that I want to cultivate the habit
38		of guessing the meaning, right? Okay, so right now, I'm not going
39		to give you the meaning.

In Excerpt 2, the teacher wanted her students to take the exercise seriously probably because she did not think they could pronounce the words well. By asking her students to practise reading, she seemed to signal that this class did not have the linguistic capital to read words properly or to make the appropriate pauses during reading, and that it needed extensive practice because it was not ready to sit for the oral examination.

### Excerpt 2

1	Teacher	Very good. Now can we go through the first passage? You are going
2		to see these words in the passage, <i>yah</i> ? So I would like you to read
3		them clearly when you come across them. Let's, <i>ah</i> , read. [Stutter]
4		November one. Are you ready?
5	Class	I...
6	Teacher	<i>Ah</i> . For the end. Wait, hold on. For the end of the year you will be
7		tested for oral.
8	Male Student	Huh.
9	Teacher	Your oral will be tested. One part will be reading, the other part will
10		be, <i>ah</i> , your oral conversation. Similar to your SA (Semester
11		Assessment) one. So I want you to take this opportunity to practise,
12		understand?
13	Class	Yes.
14	Male Student	Practise?

### A community who had difficulty in reading and reading comprehension

From Excerpt 3 taken from the second lesson of the unit, the teacher showed that she had low expectations of the linguistic capital of her students when she commented that they would not know the meaning of 'improve' (lines 4-5). However, some students showed that they knew by offering the synonyms 'upgrade' (line 15) and 'becomes good' (line 16). Therefore, although she might perceive her students to lack the linguistic capital to understand the meaning of difficult words in the text, they showed that they understood the words by providing the synonyms of these 'difficult' words.

#### Excerpt 3

1	Class	After my morning walk, I went to work on my table again and
2		finished it. However, it was not to my liking and it wasn't long
3		before I learned to improve it.
4	Teacher	Very good. One of the words which I think you will not know is this
5		word.
6	Male Student 1	Improve.
7	Male Student 2	I know, I know. Improve.
8	Teacher	You know how to read the word, what is the meaning of the word?
9		<i>Yah</i> , so what does it mean? When you use the word 'improve', what
10		are you trying to show?
11	Male Student 1	<i>Ah, like I study not good, ah?</i>
12	Male Student 1	Upgrade.
13	Teacher	Studies not good, I improved. So studies not good, when you
14		improved what happen?
15	Male Student 1	Upgrade.
16	Male Student 2	Becomes good.
17	Teacher	Upgrade, <i>yah</i> . Do you go higher or you go lower?
18	Class	Higher.
19	Teacher	<i>Yah</i> . It's to make something better, right? Yes, or no?
20	Class	Yes.

### A community of lazy readers

The teacher also perceived her students to be part of a lazy community who were not motivated to learn Standard English. In Excerpt 4, she gave an example about her students not doing their homework in order to explain the meaning of the word 'journal'. Her comment (line 3) suggested that her students formed a lazy community who did not do their English homework, and who needed to study harder because their school performance was not good enough.

#### Excerpt 4

1	Teacher	...For example today, you didn't do your homework. Then I say, how
2		could you, huh? You, you should study harder, you know. You'll be so
3		lazy and then you go home you get so angry because Teacher said that
4		and you write down in your diary, right?...

Excerpts 5 to 7 were taken from a writing lesson of a personal response essay for low-achieving ninth graders. In Excerpt 5, the teacher focused on the drafting stage of writing the text type; whilst in Excerpts 6 and 7, she reviewed students' essays with them.

#### A community of poor writers

It followed from an earlier lesson in which the teacher focused on the procedural knowledge of writing personal response essays: use of present tense; connectors for sequencing and adding information; and organisational structure related to paragraphing. In the excerpt, the teacher found that her students did not have the ability to write the text type, despite having been given some scaffolding. She then told them that that they must have the same opening paragraph (lines 10-11). This could be the result of her perception that they did not have the linguistic capacity to craft the introduction to an essay.

#### Excerpt 5

1	Teacher	First paragraph, I think I'll help you start.
2		[Teacher writes on the board]
3		If you still have this paper, you can take it out and refer to it for
4		elaboration. This one, you give two finger spacing. So, you explain to me
5		what exactly is this – the programme. Class, I start off the introduction for
6		you: <i>Through-Train is program that is especially designed to enable the</i>
7		<i>better NA students to skip O-levels exam, and to allow them to enter</i>
8		<i>polytechnic. From here, you can continue a bit more: They can choose the</i>
9		<i>course they like in polytechnic so as to save one year. So, first paragraph, I</i>
10		want everyone to have this opening. Then after that, you can continue with
11		second paragraph.

In Excerpt 6, the teacher focused on the problem of having few passes (line 2) and that the paragraphs were poorly written (lines 3 and 10). Although she explicitly showed them how to organise the structure of the essay (lines 5-7 and 11), she did not encourage her students to actually justify their choice of school rule (lines 5-6). Instead, she instructed them to simply 're-write the paragraphs' for corrections (line 4).

### Excerpt 6

1	Teacher	Class, I want you to do corrections. Those who didn't do well, you'll
2		have to rewrite one. Many of you. In fact, I only have a few passes.
3		Those passes, whatever paragraphs that are not good enough, I want
4		you to re-write the paragraphs...So, these are just some
5		pointers...Firstly one paragraph, it could be by elaboration...I want to
6		see the structure this way. So, that will be four paragraphs. So
7		conclusion, last paragraph...Out of the various rules you have
8		implemented, you select one and explain why that one is important.
9		[Teacher writes instructions on board]
10		Class, I want you to re-write the essay. This one is really badly done.
11		So I give you the pointers here. If you manage to finish it today, it's
12		even better.

### A community of poor writers without a personal voice

Excerpt 7, which was based on the same lesson as Excerpt 6, shows the teacher giving the class her feedback on their personal response essay. For the entire lesson, she analysed some selected essays with the whole class. On the whole, the class did not do as well as she had expected. The main problem, according to her, was that they used an inappropriate register, as though they were writing a narrative.

When it came to Ismail, she said that she 'managed to pass him' (lines 1-2), indicating that it was difficult for her to do so because she felt that his writing was too poor. She could have asked Ismail to comment on or clarify his intentions in relation to school attendance (lines 8-9) and homework (lines 11-12). She could also have invited the rest of the class to contribute their thoughts, as allowing students the opportunity to articulate their personal voice was essential in meaning-making. Instead of making use of the opportunity to engage with and elicit responses from individuals when she posed the question 'Do you find this a sweeping statement?' (lines 4-5), she abruptly finished reviewing his work with 'I've no idea what he's trying to say' (lines 10-11) and 'So, what is the new rule you are trying to maintain?' (lines 12-13), without showing him how to connect his disjointed ideas. Overall, there was minimal engagement with students on the development of personal voice in the use of English language as envisaged by the syllabus.

### Excerpt 7

1	Teacher	...Ismail <i>one</i> , I read through, I feel this that it is quite OK. I
2		managed to pass him. So over here, 'school rules are always
3		important because the students will know what they should do and
4		what they should not do. If the school rules are perfect, the students
5		will also be perfect." Do you find this a sweeping statement 'the
6		students will be better behaved'?...and one thing, he also has the
7		habit of collapsing all the points into one paragraph...Third point,
8		"the students must maintain attendance" If it is below 75, what will
9		happen? So this one can be one individual paragraph by itself... but
10		the concluding paragraph is not that strong. I've no idea what he's
11		trying to say... "Students do not always complete their daily

12		assignments or homework given.” So what is the new rule you’re trying to maintain?
13		

### Changing teacher-student interactions

In this section, we attempt to re-construct the teacher talk using a framework of dialogic talk adapted from the works of Alexander (2004), and Wegerif and Mercer (1997) so that it reflects a productive kind of teacher-student interaction that would draw students into a shared understanding of the activities in which they were engaged. We suggest four types of talk teachers could use to engage their students in their interactions: (a) clarifying, (b) sharing, (c) explanatory, and (d) cumulative.

Clarifying talk is characterized by the teacher asking questions that invite students to clarify what they mean in an earlier statement. Sharing talk occurs when the teacher opens up discussion to alternative perspectives and allows students to respond by stating their position. Explanatory talk refers to a relatively demanding form of classroom talk in which the teacher asks students to give reasons or explanations for the initial statement. In cumulative talk, the teacher uses repetitions, confirmations, and elaborations to, positively but uncritically, build on students’ contributions. This kind of talk is characterised by the teacher acknowledging and incorporating contributions by students and using them to make connections between various ideas, thus facilitating the construction of common knowledge.

We applied these four levels of talk to Excerpt 7 and propose an alternative outcome to the actual classroom talk. In Example 1, instead of simply telling Ismail that his concluding paragraph was far from ideal, the teacher could engage him in sharing and explanatory talks. Following that, she could open the discussion to members of the class by engaging them in cumulative talk.

#### Example 1

Actual Classroom Talk	What Could Have Been?	Talk
Do you find this a sweeping statement “the students will be better behaved”?	Ismail, why did you think if the school rules were perfect, then students would be perfect as well?	Sharing talk Explanatory talk

In Example 2, the teacher could ask Ismail to elaborate on his comment. She could then engage her students in sharing talk, which could lead further into cumulative talk and involve the class in the co-construction of knowledge. It is also important that she allow sufficient wait time for students to respond to her questions.

### Example 2

Actual Classroom Talk	What Could Have Been?	Talk
Third point, “the students must maintain attendance”... what will happen?	Class, let’s consider the third point “the students must maintain attendance...” Ismail, can you tell me what you mean by...?	Clarifying talk
	Can someone tell me what the purpose of school rules is?	Sharing talk, leading to Cumulative talk

Most importantly, as shown in Example 3, she could explain how Ismail could improve his concluding paragraph by using explanatory talk, and by reiterating it with specific examples.

### Example 3

Actual Classroom Talk	What Could Have Been?	Talk
But the concluding paragraph is not that strong. I’ve no idea what he’s trying to say.	Ismail, what’s needed in the concluding paragraph? How could you better support your ideas?	Explanatory talk
So what is the new rule you’re trying to maintain?	Ismail, can you tell us the new rule you’re trying to set up?	Clarifying talk
	If the main idea is repeated in the concluding paragraph, the reader will understand better what he’s trying to say.	Explanatory talk

### Conclusion

The findings in this study suggest that there is a mismatch between the teachers’ perceptions of their students’ linguistic capital and their actual linguistic ability. To the teachers, their students lacked ‘the necessary linguistic capital to produce sentences that are likely to be understood and acceptable in all situations in which there is occasion to speak’ (Bourdieu, 2003: 55). The primary school students were perceived by their teacher as not having the linguistic capital and habitus which were congruent with the demands of school, leading to a choice of materials that was not congruent with the students’ actual linguistic ability. As Haycock (2001) pointed out, such students are systematically given less challenging literacy instruction in school as the curriculum materials provided are not challenging enough to allow opportunities for productive talk. Being repeatedly told that they lacked this crucial capital during lessons might also result in students being less motivated to improve

their command of Standard English. Consequently, this might lead to lower student outcomes and eventually lower economic capital.

The teacher's low expectations of her secondary school students' linguistic capital might lead to students being regularly involved in non-productive student-teacher interactions. We propose that by establishing a more dialogic pattern of teacher-student interaction might help students to have more voice in the classroom. However, teachers could be sensitive to students' contributions in expanding and enriching the semantic dimensions of the lesson.

It should be noted that the findings of this paper are limited to the classroom talk found in four lessons conducted by two teachers. More research is needed to explore further teachers' perceptions of low-achieving students' linguistic capital and habitus in Singapore.

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## References

- Alexander R (2004) *Towards Dialogic Teaching: Rethinking Classroom Talk*. Cambridge: Dialogos.
- Black L (2004) Differential participation in whole-class discussions and the construction of marginalised identities. *The Journal of Educational Enquiry* 5: 34-54.
- Bourdieu, P. (1980) *Le Sens Pratique*. Paris: Éditions de Minuit.
- Bourdieu P (1991) *Language and Symbolic Power*. Cambridge: Harvard University Press.
- Bourdieu P (2003) Participant objectivation. *Journal of the Royal Anthropological Institute* 9: 281-194.
- Bourdieu P and Passeron JC (1977) *Reproduction in Education, Society and Culture*. London: Sage.
- Carrington V and Luke A (1997) Literacy and Bourdieu's sociological theory: A reframing. *Language and Education* 11: 96-112.
- Caughlan S and Kelly S (2004) Bridging methodological gaps: Instructional and institutional effects of tracking in two English classes. *Research in the Teaching of English* 39: 20-62.
- Haycock K (2001) Closing the achievement gap. *Educational Leadership* 58: 6-11.
- Johnston K and Hayes D (2008) 'This is as good as it gets': Classroom lessons and learning in challenging circumstances. *Australian Journal of Language and Literacy* 31: 109-127.
- Kramer-Dahl A. and Kwek D (2010) 'Reading' the home and reading in school: Framing deficit constructions as learning difficulties in Singapore English classrooms. In: Wyatt-Smith C (ed) *Multiple Perspectives on Difficulties in Learning Literacy and Numeracy*. New York: Springer
- Lin A (1999) Doing-English-lessons in the reproduction or transformation of social worlds? *TESOL Quarterly* 33: 393-412.
- Luke A (1996) Genres of power? Literacy education and the production of capital. In: Hasan R and Williams JG (eds) *Literacy in Society*. London: Longman.
- Mercer N and Littleton K (2007) *Dialogue and the Development of Children's Thinking: A Sociocultural Approach*. New York: Routledge.
- Rubdy R (2005) Remaking Singapore for the new age: Official ideology and the realities of practice in language in education. In: Lin AMY and Martin PW (eds) *Decolonization, Globalization: Language-in-Education Policy and Practice*. Clevedon: Multilingual Matters, 55-73.
- Seehouse P (1996) Learning talk: A study of the interactional organisation of the L2 classroom from a CA institutional discourse perspective. Unpublished doctoral dissertation, University of York.
- Singapore Department of Statistics (2010) *Singapore Census of Population 2010*. Available at: [www.singstat.gov.sg](http://www.singstat.gov.sg).
- Strauss A and Corbin J (1998) *Basics of Qualitative Research Techniques and Procedures for Developing Grounded Theory*. London: Sage.
- Sullivan A (2001) Cultural capital and educational attainment. *Sociology* 35: 893-912.
- Walsh S (2010) Developing interactional awareness in the second language classroom through teacher self-evaluation. *Language Awareness* 12: 124-142.
- Wegerif R and Mercer N (1997) *A Dialogical Framework for Investigating Talk*. Available at: [http://elac.ex.ac.uk/dialogiceducation/userfiles/dialframe\(1\).pdf](http://elac.ex.ac.uk/dialogiceducation/userfiles/dialframe(1).pdf).

*Motivating Japanese Students to Speak English in a Monolingual Setting*

Frances Shiobara

Kobe Shoin University

0252

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One of the biggest problems for English teachers in monolingual language classrooms is encouraging students to speak to each other in English during the class. This can be especially problematic when students have low levels of English ability, but it is not always related to English language ability. In my experience some students try to speak English as much as possible, but others try to avoid using English in the English class. I feel that this is a motivational problem. Everyone starts out as a beginner, but only some students go on to develop communicative competence in a foreign language. For example, in my class when I call the register I ask students to call out “Yes” or “Here”. This must be the easiest act of communication, yet some students will continue to say the Japanese “*hai*” even after constant reminders.

To achieve proficiency in a foreign language you must practice speaking the target language. Why do some students continually revert to their native language in the English class, but others struggle to use English even when their English ability is very low? Having tried for many years with different styles of teaching and classroom management in order to encourage my students to practice speaking English in the classroom, I decided to try to find out why the students thought that they were using their native language rather than English. Although a lot of research has been done on motivation in general, there is very little focusing on the spoken component of the language classroom. In this paper I have tried to discover when students feel the need to speak their native language, rather than English, and consequently how English teachers can set up their classes to encourage students to speak English as much as possible. A likert scale questionnaire was used with ten questions. The questionnaire was given to approximately 200 first and second year students of two Japanese Universities.

In Lambert and Gardner’s (1978) study, they found that strong integrative motivation was a better indicator of language success than instrumental motivation. The initial studies were done with Canadians and focused on their attitudes to French speakers. However, in a later study carried out in the Philippines they found that instrumental motivation was the stronger motivational force. The situation in the Philippines is far more similar to Japan, with groups of monolingual speakers needing English only for work. This evidence would indicate that if Japanese students can be made to realize the instrumental value of being able to speak English, they might become motivated to speak more. Dornyei (1990) also suggests that instrumental motivation might be more important than integrative motivation for foreign language learners, such as the students taught in universities across Japan.

In Dornyei’s process model (2001), motivation is divided into three stages; generating initial motivation, maintaining and protecting motivation, and positive self-reflection. The generation of initial motivation can be very difficult in compulsory foreign language classrooms. I often encounter classes where very few students had even been abroad, let alone wish to live abroad for study or any other purpose. Thus integrative motivation is largely lacking. Instrumental motivation in the form of getting a good job is there to some degree, but students in the first and second years at Japanese universities don’t even seem to realize that they will need English for work. Students see that speaking is not necessary to get a good score on standardized tests such as TOEIC and TOEFL. Because of these factors it is very difficult to generate initial motivation to speak English.

Noels, et al (2000) defined ‘amotivation’ as the situation in which students see no relationship between their actions and the consequences. In the framework of this study that would correspond to students who did not realize that they needed to practice English in order to improve their English speaking skills. However in this study the response to the questions

*‘I did not realize that it was important to speak in English in class.’*

*‘I know that it is very important to practice speaking English as much as possible.’*

were inconclusive with a large percentage of neither agree nor disagree responses to the statements. However, when asked explicitly by the teacher the majority of students said that they know that they need to speak in English, to improve their English skills. The majority of students also said that they want to be able to speak English fluently, either for their future job, or to be able to speak with foreigners. I wanted to discover why they did not connect speaking English in class with these goals. Bankier and Wright (2012) state that, ‘It is vital that students view high levels of language proficiency as a result of effort rather than an innate ability.’ Sadly I often heard students say that the higher English proficiency students were “good at learning English,” as if they could never achieve that level because they were not good language learners. Without the belief that they can become good at English, students will not have strong motivation in English classes.

### **Research Methodology**

I based my research on five hypotheses as to why students might speak in their native language (in this case Japanese) instead of the target language;

- a. Subject material is too difficult and students cannot do the task in English.
- b. There is no need or incentive for students to speak in English. (They can accomplish the task in Japanese) and there is no grade component in speaking English.
- c. Students do not understand the need to speak in English.
- d. Peer pressure. All their friends speak Japanese so they do not want to stand out.
- e. In the past all their English classes were conducted in Japanese so they are accustomed to using Japanese in the English class.

These were based on my experience as a teacher as well as informal interviews with students. Although some colleagues have pointed out other factors such as embarrassment of their low ability, and the inherent unnaturalness of speaking English to another native speaker of Japanese, I felt that these five hypotheses offered some opportunities to change the language classroom if found to be true.

### **Questionnaire Design**

The questionnaire (Appendix A) was designed on a likert scale of 1 to 5 from strongly agree to strongly disagree. The five hypotheses were made into pair questions one asking when students chose to speak English the other asking when students chose to speak Japanese. In this way I hoped to investigate what motivated their decision to

choose English or Japanese for an activity. The questions were all translated into Japanese so that all students could understand fully whatever their English ability.

## **Participants**

The participants were about two hundred first and second year students in compulsory English classes at two private Japanese universities. Some classes were mixed ability, but some classes were divided by ability into high and low level. It is a very common situation in Japan for students to take on average four English classes in their first and second year, whatever their major. Because of the compulsory nature of the course, students tend to have low motivation to study English. Another problem is that classes are often mixed ability, so that some students find the material too easy, whereas others find it too difficult. The students who find it too easy sometimes intimidate the lower English ability students, raising their affective filter and discouraging them from speaking in English. On the other hand the higher English ability students sometimes think the class is too easy, and just can't be bothered to speak English, creating an atmosphere where no one in the class wants to speak English. I observed all of these behaviors in these classes on occasions.

## **Results**

The results were divided into four sections. First, affective factors including feelings about speaking to their peers and feelings about how an English class should be conducted based on past experience. Second, language learning difficulties based on the task difficulty from the point of view of lexical difficulty and lack of schema. Third, instrumental factors, in this case wanting to get a good grade. Finally, students' knowledge of language learning and specifically if they know that they need to speak English in order to improve their English skills.

### **Affective Factors**

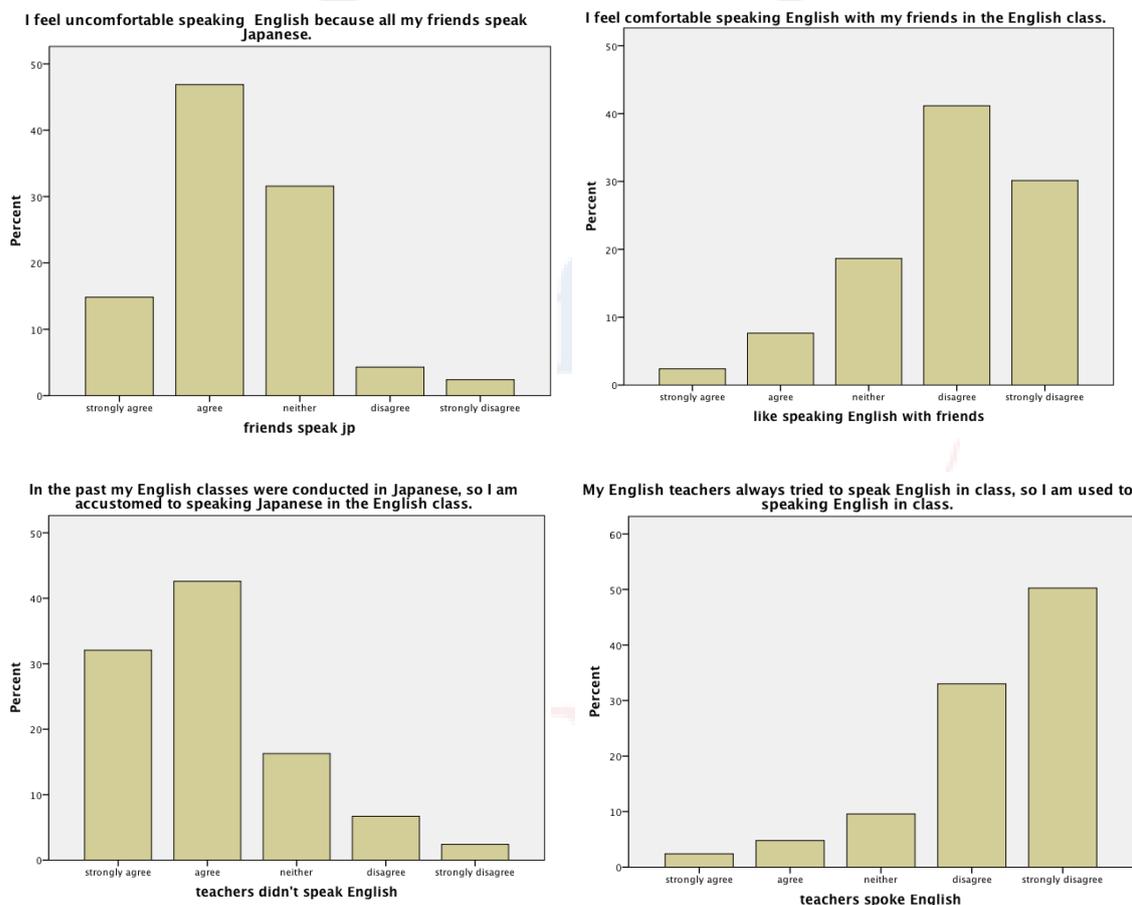
The strongest result from this research was that their English teachers in the past had spoken in Japanese in the English class. 75% of students stated that they either 'agree' or 'strongly agree' that they are accustomed to teachers speaking Japanese in English classes, while 83% 'disagree' or 'strongly disagree' that their English teachers have always tried to speak in English. Although we cannot say that this would make the students more likely to choose Japanese as their classroom language, it would certainly not create an atmosphere in which all students felt that it were natural and they were comfortable speaking English with other Japanese students. The second strongest result is that they feel uncomfortable speaking English with their native Japanese speaking friends. 62% chose 'agree' or 'strongly agree' to the first statement:

*I feel uncomfortable speaking English because all my friends speak Japanese.*

71% of students chose 'disagree' or 'strongly disagree' to the second statement:

*I feel comfortable speaking English with my friends in the English class.*

Both of these are affective aspects of the classroom. It suggests strongly that teachers need to create an atmosphere in which students feel comfortable and natural speaking in English. One way to do this is to make it clear that this class is very different from their previous English classes. When the teacher acts as a model students will follow. However sometimes in large classes groups will have their own dynamics. Tuckman (1965) established that groups went through four stages. The first stage is one where people form the group, they are testing the group and dependent on a leader. In an English class, if the leader spoke in English this would become the norm for the whole class. In the case of small classes the leader might be the teacher, but in large classes each small group in the class will have its own leader. As the groups move through the different stages to the final cohesive group the language choice of the group will have been set. It is very difficult to force students to choose English, but if you could have a leader in each group with strong English skills it could set the tone for the class and entire course.



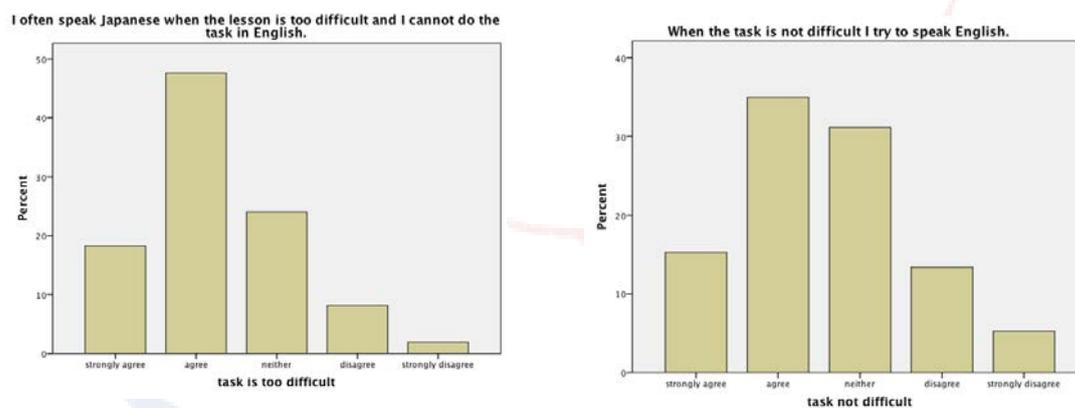
### Solution

It is vital that the teacher should be a role model from the beginning. Starting a course by speaking in Japanese and trying to switch to English after the students get used to you is not a good idea. The teacher needs to be a leader in English usage from the beginning when the group is forming. Dornyei and Csizer (1998) agree stating that teachers setting an example with their own behavior will be very influential on student motivation. Furthermore, student attitudes towards language learning are mostly modelled after their teachers. In Gardner's and Lambert's model (1978) they

found that integrative motivation was the most powerful indicator that students would improve in their language learning. As the teacher is the only example of the target culture in the monolingual classroom it is essential that they have enthusiasm for the target culture. Dornyei and Csizer (1998) also state that a tense classroom is one of the strongest factors to reduce student motivation in an L2 classroom, so the teacher needs to create a good atmosphere. I would also recommend making small groups by mixing the class up. It has been my experience that students are more likely to follow the teacher as a leader when they are not sitting with their friends. When they are in groups of friends the students become leaders and can form a Japanese speaking norm for the group. If possible putting one strong personality with good English skills in each group encourages all group members to speak in English. Unfortunately this is very difficult to do in the first lesson as the teacher usually doesn't know the students' English ability or personality yet.

### Language Limitations

The third strongest result was that task difficulty plays a large part in language choice. 65% chose 'agree' or 'strongly agree' for the statement: *I often speak Japanese when the lesson is too difficult and I cannot do the task in English.* 50% chose 'agree' or 'strongly agree' for the statement: *When the task is not difficult I try to speak English.* In this case students are using Japanese as a survival technique when they feel that they cannot accomplish the task in English. It is all very well to challenge students to achieve their  $i+1$  (Krashen, 1981), but if you misjudge what is slightly beyond their current ability and give them a task to accomplish, which they think is far too difficult, they will use Japanese defeating the object of the activity. Difficulty of the task can take two forms; vocabulary and grammatical complexity, and lack of schema or knowledge of the topic.



### Vocabulary and Grammatical Complexity

Controlling the vocabulary and grammatical complexity are tied to the task. In speaking activities the teacher should pre-teach some of the vocabulary and have sample sentences that students can use. It can be very difficult to judge which level to aim for in a mixed ability class. If you want all students to speak then you must aim at the lowest level student in the class. It is also possible to offer extra scaffolding for lower level students. For example offering model sentences that the students can just read off the paper. This enables very low English ability learners to participate in the class, but it does not need to prevent higher English ability students from creating their own sentences. Teaching students how to ask for help and support from their

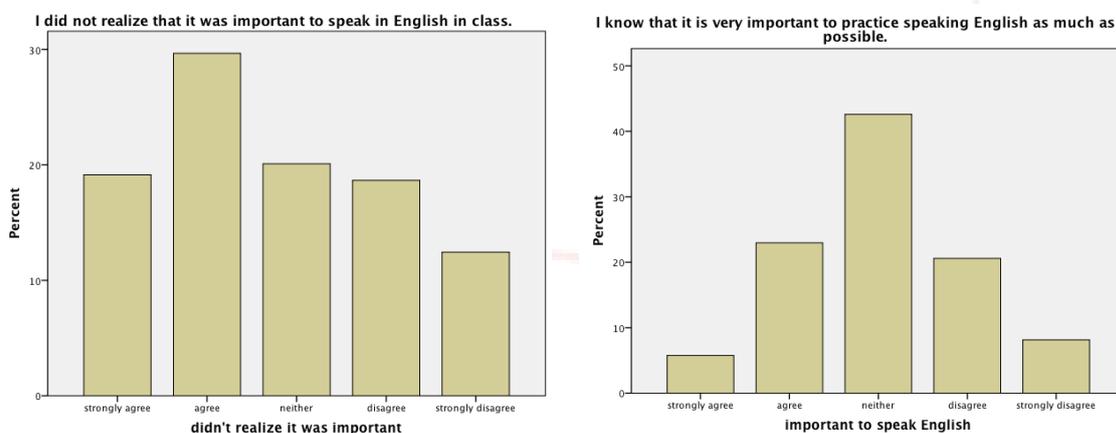
teacher and peers through formulaic sentences for example, “How do you say ‘shizuka’ in English?” can help to keep the classroom language in English.

### Lack of Schema or Knowledge of the Topic

Textbook writers, frequently have topics which appeal to the teachers, who will choose the textbooks rather than the students. Recently I was teaching a class, and the topic of the textbook was the Vietnam War Memorial in Washington D.C. My students said they had never heard of the Vietnam War, they had never been to America, and they had never visited a war memorial. In this situation students could not talk about the topic in Japanese let alone English. Some teachers feel that they want to teach students about the world in general, which I fully agree with. However, if we are language teachers, our first goal should be to enable the students to use the language. Having topics completely outside the students’ world knowledge is self-defeating, they will not learn language or content. Too often textbooks are based on teachers’ interests rather than students’ interests.

### Students’ Knowledge of Language Learning

49% of students stated that they ‘agree’ or ‘strongly agree’ with the statement: *I did not realize that it was important to speak in English in class.* However the result was very evenly balanced for the statement: *I know that it is very important to practice speaking English as much as possible.* Most students answered that they neither ‘agree’ nor ‘disagree’ and an equal number agreeing and disagreeing. A large percentage of students did not know that they needed to practice speaking in order to improve their speaking skills.



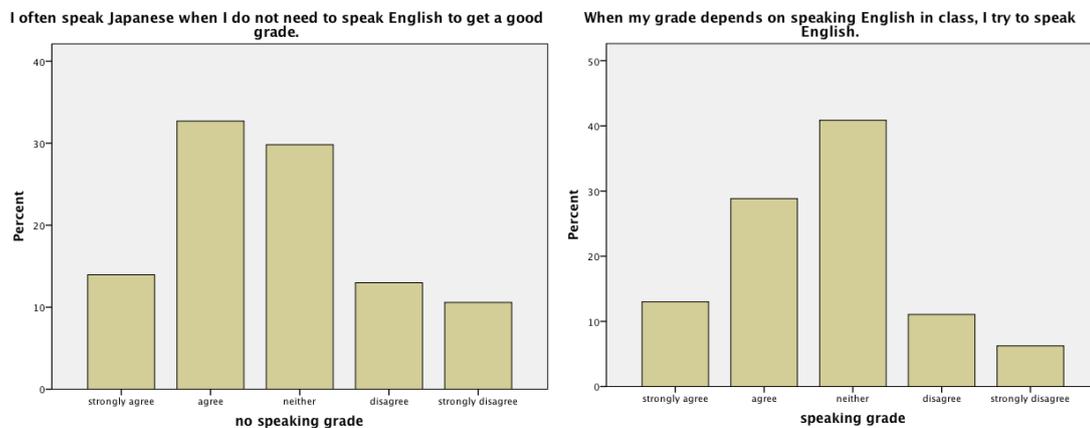
### Solution

It would be valuable for teachers to explain explicitly to students at the beginning of the course why students need to practice speaking in English. It seems that some students did not realize that their speaking skills would not improve without speaking.

### Including Speaking in the Course Evaluation

46% of students stated that they ‘agree’ or ‘strongly agree’ that they spoke Japanese when they did not need to speak English to get a good grade. On the other hand 41%

stated that they 'agree' or 'strongly agree' that they try to speak English if their grade depends on it. Although this does not seem like a strong result, in both cases a large percentage stated that they neither 'agree' nor 'disagree'. This indicated to me that the students were somewhat instrumentally motivated, but not strongly. This would make sense to me in Japan, where it is difficult to enter university, but relatively easy to graduate. Students want to pass their courses, but are not so focused on getting a high grade. Including some sort of clear evaluation of spoken effort and ability might increase their motivation to speak in English during the class. This might be in the form of rewards for speaking English or punishments for not speaking English. I have always favored the carrot over the stick. I think students genuinely want to improve their spoken English skills, punishing them for using Japanese, especially when this study has indicated that affective factors and language ability may be the reasons that students use Japanese, would not be productive. Classes with speaking tests and graded presentations encourage students to speak in English.



## In Conclusion

I started this research with the aim to discover why students speak their native language during the English classes. As the results show a strong affective cause for native language use, this is very difficult to change. However I think that the questionnaire might have acted as a consciousness raising tool, encouraging students to check themselves for native language use. I never thought that the students made an active decision to use their native language, but by questioning students they might monitor themselves for native language use.

As the strongest reason that students use their native language in the class is probably affective, classroom atmosphere and management are crucial to encourage English usage in the language classroom. A variety of techniques could help, the most important being to create an English-speaking atmosphere from the start of the course. Making students feel that they are in a different environment can change their attitudes. If specialized 'English only' rooms are available this can be very effective. Task level and design are also crucial in encouraging students to speak in English. In terms of spoken activities aiming at a slightly lower level might aid oral communication. Finally encouraging students to speak English by including it in the course evaluation might also have an effect. The lack of oral English on university entrance tests and internationally recognized tests, such as TOEIC and TOEFL gives the impression that speaking English is not as important as some of the other skills. In

recent years there has been an effort to include more oral aspects, but it is time consuming and difficult with large numbers of students.

The purpose of this study was to move the 'blame' for speaking in their native language away from the students, and to give teachers ideas on class management and task design that would encourage oral communication. I hope that it offers teachers some insight into what they can do, rather than either giving up and accepting mostly native language use, or becoming frustrated with the students. In the future I would like to implement some of the solutions presented in this paper to see if the percentage of native language in the English classroom could be changed.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is surrounded by two large, overlapping circular arcs. The outer arc is light blue and the inner arc is light red, both with a soft, feathered edge.

## Bibliography

- Bankier, J. & Wright, A., 2012. *Applying Dornyei's motivational strategies..* Tokyo, JALT, pp. 43-52.
- Crookes, G. & Schmidt, R., 1991. Motivation: Reopening the Research Agenda. *Language Learning*, December, 41(4), pp. 469-512.
- Dornyei, Z., 1990. Conceptualizing motivation in foreign language learning. *Language Learning*, Volume 40, pp. 45-78.
- Dornyei, Z. & Csizer, K., 1998. Ten Commandments for Motivating Language Learners: Results of an Empirical Study. *Language Teaching Research*, pp. 203-229.
- Gardener, R. & Lambert, W., 1978. *Attitudes and Motivaton in Second Language Learning*. Rowley, Massachusetts: Newbury House.
- Krashen, S., 1981. *Second Language Learning and Second Language Acquisition*. Oxford: Pergamon.
- Noels, K., Pelletier, L. G., Richard, C. & Vallerand, R. J., 2000. What are you learning a second language? Motivational Orientations and self-determination theory. *Language Learning*, 50(1), pp. 57-85.
- Noris-Holt, J., 2001. Motivation as a Contributing Factor in Second Language Acquisition. *The Internet TESL Journal*, June.VII(6).
- Oxford, R., 1999. New Pathways of language learning motivation. In: R. Oxford, ed. *Language Learning Motivation: Pathways to a new century*. Honolulu: University of Hawai'i, pp. 1-8.
- Sakui, K. & Cowie, N., 2012. The Dark Side of Motivation: teachers' perspectives on unmotivation. *ELT Journal*, April, 66(2), pp. 205-213.
- Stroud, R., 2013. Task-based learning challenges in high schools:What makes students accept or reject tasks?. *The Language Teacher*, March/April.37(2).
- Thanasoulas, D., 2002. Motivatiog and Motivation in the foreign classroom. *The Internet TESL Journal*, November.VIII(11).
- Tuckman, B., 1965. Developmentatl Sequence in Small Groups. *Psychological Bulletin*, 63(6), pp. 384-399.
- Watanabe, M., 2013. Willingness to Communicate and Japanese High School English Learners. *JALT Journal*, 35(2), pp. 153-172.

Appendix A

# Speaking Japanese in an English Class Questionnaire

Please answer this honestly about your feelings and reasons for using Japanese in the English class.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. I often speak Japanese when the lesson is too difficult, and I cannot do the task in English. 学習内容が難しすぎて、なかなか英語では対応できないから授業中日本語で話す。	1	2	3	4	5
2. I often speak Japanese when I do not need to speak English to get a good grade. 授業で英語を話さなくても、最終的には良い点がとれるから授業中日本語で話す。	1	2	3	4	5
3. I did not realize that it was important to speak in English in class. 英語で話す必要がないと思うから授業中日本語で話す。	1	2	3	4	5
4. I feel uncomfortable speaking English because all my friends speak Japanese. 友達が皆授業中、日本語で話しているから自分も日本語で話す。	1	2	3	4	5
5. In the past all my English classes were conducted in Japanese, so I am accustomed to speaking Japanese in English classes. 過去の英語の授業では皆日本語で話していたから、それに慣れてしまった。	1	2	3	4	5
6. When the task is not too difficult I try to speak English. 学習内容があまり難しくなければ、授業中英語で話す。	1	2	3	4	5
7. When my grade depends on speaking English in class, I try to speak English. 授業中英語で話さないと良い点がとれなければ、授業中英語で話す。	1	2	3	4	5
8. I know that it is very important to practice speaking English as much as possible. 英語で話す必要性がしっかり理解できているから、授業中英語で話す。	1	2	3	4	5
9. I feel comfortable speaking English with my friends in the English class. 友達と気楽に英語で話せる。	1	2	3	4	5
10. My English teachers have always tried to speak English in class so I am used to speaking English in class. 過去の英語の授業では、皆英語を話していたからそれに慣れた。	1	2	3	4	5

Appendix B

**In the past all my English classes were conducted in Japanese, so I am accustomed to speaking Japanese in English classes.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly agree	67	32.1	32.1	32.1
agree	89	42.6	42.6	74.6
neither	34	16.3	16.3	90.9
disagree	14	6.7	6.7	97.6
strongly disagree	5	2.4	2.4	100.0
Total	209	100.0	100.0	

**My English teachers have always tried to speak English in class so I am used to speaking English in class.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly agree	5	2.4	2.4	2.4
agree	10	4.8	4.8	7.2
neither	20	9.6	9.6	16.7
disagree	69	33.0	33.0	49.8
strongly disagree	105	50.2	50.2	100.0
Total	209	100.0	100.0	

**I feel uncomfortable speaking English because all my friends speak Japanese.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly agree	31	14.8	14.8	14.8
agree	98	46.9	46.9	61.7
neither	66	31.6	31.6	93.3
disagree	9	4.3	4.3	97.6
strongly disagree	5	2.4	2.4	100.0
Total	209	100.0	100.0	

**I feel comfortable speaking English with my friends in the English class.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly agree	5	2.4	2.4	2.4
agree	16	7.7	7.7	10.0
neither	39	18.7	18.7	28.7

disagree	86	41.1	41.1	69.9
strongly disagree	63	30.1	30.1	100.0
Total	209	100.0	100.0	

**I often speak Japanese when the lesson is too difficult, and I cannot do the task in English.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly agree	38	18.2	18.3	18.3
agree	99	47.4	47.6	65.9
neither	50	23.9	24.0	89.9
disagree	17	8.1	8.2	98.1
strongly disagree	4	1.9	1.9	100.0
Total	208	99.5	100.0	
Missing System	1	.5		
Total	209	100.0		

**When the task is not too difficult I try to speak English.**

	Frequency	Percent	Valid Percent	Cumulative Percent
strongly agree	32	15.3	15.3	15.3
agree	73	34.9	34.9	50.2
neither	65	31.1	31.1	81.3
disagree	28	13.4	13.4	94.7
strongly disagree	11	5.3	5.3	100.0
Total	209	100.0	100.0	

**I know that it is very important to practice speaking English as much as possible.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly agree	12	5.7	5.7	5.7
agree	48	23.0	23.0	28.7
neither	89	42.6	42.6	71.3
disagree	43	20.6	20.6	91.9
strongly disagree	17	8.1	8.1	100.0
Total	209	100.0	100.0	

**I did not realize that it was important to speak in English in class.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly agree	40	19.1	19.1	19.1
agree	62	29.7	29.7	48.8
neither	42	20.1	20.1	68.9
disagree	39	18.7	18.7	87.6
strongly disagree	26	12.4	12.4	100.0
Total	209	100.0	100.0	

**I often speak Japanese when I do not need to speak English to get a good grade.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly agree	29	13.9	13.9	13.9
agree	68	32.5	32.7	46.6
neither	62	29.7	29.8	76.4
disagree	27	12.9	13.0	89.4
strongly disagree	22	10.5	10.6	100.0
Total	208	99.5	100.0	
Missing System	1	.5		
Total	209	100.0		

**When my grade depends on speaking English in class, I try to speak English.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly agree	27	12.9	13.0	13.0
agree	60	28.7	28.8	41.8
neither	85	40.7	40.9	82.7
disagree	23	11.0	11.1	93.8
strongly disagree	13	6.2	6.3	100.0
Total	208	99.5	100.0	
Missing System	1	.5		
Total	209	100.0		

*The Literacy Practices of Adolescents in a Digital World*

Szu-Yu Ruby Chen

Chung Yuan Christian University, Taiwan

0264

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Abstract

This paper examines adolescents' language and script choice employed in digital literacy, with a particular focus on grammatical functions and further scrutinises how these functions affect their digital writing in online environments. Based on McLellan's (2005) study related to grammatical classification of word classes in discussion forums, this paper is to examine how diverse multimodal affordances of digital texts are employed by adolescents in a digital environment. The results demonstrate that although digital texts are multimodal with a mixture of visual images, onomatopoeic sounds and scripts, grammatical functions influence digital literacy practices in some respects. Adolescents produce digital texts mingling with grammatical features and make use of the affordances to establish a link between others.

**Keywords:** digital literacy, language choice, grammatical functions, multimodal

## **1. Introduction**

### **1.1 Aim of the study**

In a multilingual society, a wide variety of language choices and writing systems is relatively fertile. As computer-mediated communication technology has increasingly entered one's life, to exchange information or to communicate with others by mixing languages or scripts in online environments becomes ubiquitous. Language choice indeed has a social function, both as a means of communication and as the identification of membership of social groups. Therefore, the study of language choice not only interprets linguistic features, but also is affected by social values assigned to communities (Carter and Fung, 2007). How people adopt and adapt language choice to interact in a context with spatiotemporal limits for maintaining social contact and establishing their identity through language choice becomes an important issue to discuss.

Research on digital texts is of relevance as computer-mediated communication, hereafter CMC, has become a mainstream medium in modern society. In CMC, linguistic features of informality and written stylisations of speech occur significantly more in CMC than they did in traditional, printed texts (Hinrichs, 2005). However, studies on CMC languages or scripts remain relatively few, leaving this area generally unexplored and under-researched. The existing theoretical approaches in the analysis of language choice in spoken discourse may not apply to the ones in online written texts. Therefore, in this study, the researcher explores this territory by analysing digital literacy practices on message boards with a focus on the switches of languages or scripts, differing from previous studies which have mostly studied code switches in informal conversations.

### **1.2 Overview**

The aim of this study to contribute new insights in digital literacy practices in terms of grammatical functions by focusing on language choices and writing scripts manifested in online written texts composed by adolescents, age twenty to twenty-four. As a primary focus, the researcher explained the dominant language and writing scripts employed on Mandarin-based message boards. Concurrently, the researcher explored grammatical functions of the texts collected in the study in terms of McLellan's (2005) categorisation in word classes.

The research questions the researcher plans to address are:

- (1) *What grammatical functions characterise adolescents' digital literacy practices on Mandarin-based message boards?*

(2) *Are there any specific grammatical patterns that determine participants' language choice and writing scripts?*

This paper aims to break new ground by exploring language or script choice in CMC, in contrast to previous works which have mostly focused on informal spoken conversations. In the following section, a brief introduction to research background including languages and writing scripts in Taiwan is provided.

## **2. Research Background**

### **2.1 Language in Taiwan**

Taiwan is a multilingual community where Mandarin Chinese and Taiwanese (Tai-gi) are mainly used in day-to-day interaction. There are twenty other native languages in Taiwan, including Hakka, and other indigenous languages (Grimes, 1996). According to Grimes (1996), the number of languages listed for Taiwan is twenty-nine. Of those, twenty-two are living languages and seven are extinct.

### **2.2 Writing and Word Processing in Taiwan**

Section 2.2 explains the dominant writing system and word processing in Taiwan. Mandarin Chinese writing system is morphosyllabic. Each character has its meaning with a single syllable pronunciation (DeFrancis, 1984). Since Mandarin Chinese characters are completely different from the Roman alphabets, the keyboard used in word-processing contrasts as well. There are a variety of methods of entering Mandarin Chinese text into the computer. Some special software is required. According to Huang (2004), there are mainly three types of methods to enter Mandarin Chinese texts: by encoding (Cangjie), by pronunciation (Zhuyin), or by the structure of the characters (Bushou). Su (2003) further points out that there are two mainstream methods for computer users to enter texts in Taiwan. One is called *Bushou*, input by the structure of characters, *Zhuyin*, input by sound, which is probably the most accessible to the public, especially to adolescents in Taiwanese communities.

The figure below (Figure 2.1) represents thirty-seven symbols, each of which is part of a Mandarin Chinese character. The thirty-seven phonetic symbols are similar to English phonetic sounds in general.

Figure 2.1 Comparison of phonetic symbols and English phonetic sounds

ウ <sub>B</sub>	文 <sub>P</sub>	ㄇ <sub>M</sub>	ㄟ <sub>F</sub>
ㄉ <sub>D</sub>	ㄊ <sub>T</sub>	ㄋ <sub>N</sub>	ㄌ <sub>L</sub>
ㄍ <sub>G</sub>	ㄎ <sub>K</sub>	ㄏ <sub>H</sub>	
ㄐ <sub>J</sub>	ㄑ <sub>Q</sub>	ㄒ <sub>X</sub>	
ㄓ <sub>ZH</sub>	ㄔ <sub>CH</sub>	ㄕ <sub>SH</sub>	ㄩ <sub>R</sub>
ㄗ <sub>Z</sub>	ㄘ <sub>C</sub>	ㄨ <sub>S</sub>	
ㄨ <sub>I, YI</sub>	ㄨ <sub>U, W...</sub>	ㄩ <sub>Ü, YÜ</sub>	
ㄚ <sub>A</sub>	ㄛ <sub>O</sub>	ㄜ <sub>E</sub>	ㄝ <sub>E, YE</sub>
ㄞ <sub>AI</sub>	ㄟ <sub>EI</sub>	ㄠ <sub>AO</sub>	ㄡ <sub>OU</sub>
ㄢ <sub>AN</sub>	ㄣ <sub>EN, N</sub>	ㄤ <sub>ANG</sub>	ㄥ <sub>..NG</sub>
ㄝ <sub>ER</sub>			

An understanding of the language background and the general use of word inputting in computer processing in Taiwanese communities enables the reader to understand why this research inquiry into literacy practices focuses on the mixture and switches of languages and scripts. Having outlined the research background, I now proceed to the relevant literature in Section 3.

### 3. Literature Review

#### 3.1 CMC and Language Choice

Herring (1996) explains that CMC is a highly interactive genre of writing – an insight reflected in the early use of the term, ‘interactive written discourse’ by Ferrara et al. (1991). In this ‘interactive online writing’, individual identity is constantly performed; identity construction thus becomes dynamic. The interactive online literacy practices of adolescents such as code-switching or code-mixing, reveal the constructed identity of each Internet user.

When people use a particular and creative language, code or symbol, they indicate both their view of themselves and their relationship with other participants in the community (Myers-Scotton, 2006). In this study, participants represent themselves by using particular codes or symbols to ‘index’ themselves. Language choices are regarded as an ‘indexical sign’, which can be verbal or non-verbal (Myers-Scotton, 2006).

### **3.2 Code Switches**

Although the aim of the study is to explore written electronic texts, it is significant to review the notion of code switches in spoken discourse in general. As a code-switching theoretical forerunner, Gumperz (1982) defined code switching as, “juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems.” Blom and Gumperz (1972) proposed two types of practices in code switches. The first one is *situational switching*, caused by a change in the situation or social setting such as topic, setting, and relationship between participants, community norms and values. In this particular situation, only one language was appropriate, and people needed to change their choice of language to keep up with the changes in situational factors in order to maintain that appropriateness.

The other one is *metaphorical switching*, referred to speakers switching the language when the situation remained the same. In some situations, speakers switched from one language to another in order to complete particular communicative results without the change of setting. Gumperz regarded metaphorical code-switching as symbolic of alternative interpersonal relationships and is of relevance as the sociolinguistic focus. Myers-Scotton (1983) further developed the theory by proposing the ‘Markedness Model (MM)’ of language choice. In the theory, people used language choice to negotiate interpersonal relationships. MM focused on the idea that participants switched languages or choices because of their own goals. Having reviewed language choices and switches in CMC, Section 4 outlines the methodology adopted for this present study.

## **4. Methodology**

### **4.1 Qualitative Research**

This research adopted a qualitative approach, text analysis, in electronic written texts. Despite time-consuming transcription required in researching spoken discourse, the use of the computer-mediated communicative written texts minimizes transcribing tasks and allows researchers to analyze the texts directly as people posted in the discussion forums (McLellan, 2005). However, in written discourse, peripheral symbols or codes should be considered as well as language itself.

### **4.2 Data Collection**

All the posts (around 100 posts) collected randomly on message boards are drawn from the category of campus life on PTT, which is the largest message board and the first Mandarin Chinese-based one. During peak hours, Internet users on PTT exceed

over ten thousand people. The majority of the participants chat or post messages related to their day-to-day lives on the message boards. In this system, the messages are posted chronologically. In most cases, participants will not use their real name on the board. Instead, they will register on the system with pseudonyms or anonymously. Those who have not registered yet, so called 'guests,' can also read messages without making any comments or thread-up response.

Following the review of the research methodology and the rationale for the choice of analytical method in this study, the findings of the study are presented in the fifth section.

## **5. Findings**

### **5.1 Overview of Language/ Script Choice**

This section presents the findings from an analysis of grammatical functions in language choices on message boards. Before moving the focus to grammatical functions, the researcher explained the language or codes possibly found in Mandarin Chinese-based CMC. In Chen's (2011) taxonomy, there are mainly six writing scripts in Mandarin Chinese-based message boards: 1. *Mandarin Chinese (MC)*, 2. *Standard English (SE)*, 3. *MC English (MCE)*: the practice of using MC to convey English, 4. *MC Taiwanese (MCT)*: the practice of using MC to convey Taiwanese, since there is no official writing system in Taiwanese, 5. *English Taiwanese (ET)*: the practice of using English to convey Taiwanese, 6. *Martian Language (ML)* so-called Zhuyin Wen: referring to thirty-seven Phonetic symbols is coined as *Martian Language*, means words beyond common knowledge in the Chinese speaking cyberspace in Taiwan.

### **5.2 Grammatical Functions**

The 'interactive written discourses' in online environments are differentiated from formal academic writing in institutional contexts (Benwell and Stokoe, 2006). The grammatical analysis in this study is therefore characterised by looser regulation, such as subject, pronoun or preposition deletion. In terms of grammatical functions in the context, the researcher examined word classes in particular, and focused on the switches between Mandarin Chinese and Standard English, since these two writing systems are the most common languages with formal and systematic grammatical rules. Taiwanese is not included in this section. ML is also excluded since it is a non-standardised writing system. In this part, the researcher foregrounded grammatical functions with formal language systems, i.e. MC and SE.

The subsequent categories of the grammatical function in the word classes adapted are in terms of McLellan's (2005) classification of online message boards. Six categories of word classes from McLellan's classification of online message boards are listed below:

- 5.1 Nouns
- 5.2 Discourse markers
- 5.3 Conjunctions
- 5.4 Verbs
- 5.5 Prepositions
- 5.6 Adjectives

### 5.1 Nouns

Analysis of this study showed that nouns switched for the most part from Mandarin Chinese to English. One possible reason was that adolescents could switch between the two different systems without violating the grammatical rules in either language. MC is a monosyllabic writing system. Each character represents both the meaning and pronunciation of a word or morpheme. However, this depends on the relationship between the languages in question. In this category, the nouns being switched originate to English and cannot be easily translated into a Mandarin Chinese equivalent.

In all the following examples, the original posts are presented on the first line and followed by Pinyin, i.e. a phonological translation on the second line. The third line is a gloss interpretation with no relation to the meaning. The fourth line is the pragmatic meaning. English translation is provided in parentheses. The last line is a note (optional) with an asterisk at the beginning of the sentence which indicates that an explanatory note is required for those without knowledge of Taiwanese culture. In Example 1, the poster expresses the meaning of 'CHEN SHAN' (T-shirt) in English. He chose to express his intended meaning in English rather than in MC to refer to - CHEN SHAN (T-shirt).

#### Example 1 *T-shirt*

- (1) 猴子圖樣的 T Shirt
- (2) HOU ZI TU YANG DE T Shirt
- (3) (Monkey) (picture) (shape) (CL) T Shirt
- (4) "T-Shirt with a monkey figure"
- (5) \* 'CL' refers to a noun classifier, a noun may or may not be accompanied by a noun classifier which shows a conceptual classification of the referent of a noun and is commonly used when counting.

In MC, it is possible to have a high percentage of switches between nouns. As stated above, in MC, a character is used for an individual syllable, as Example 1 suggests.

### 5.2 Discourse markers

Switches of discourse markers to English function as textual signals indicating a change in a discourse or a change of tone (McLellan, 2005). Li (2000) expands the study of code-switching discourse markers from spoken discourse to written language and terms them orientational mixing. Few common English discourse markers appear in this study. However, the discourse marker ‘by the way’ is used in the dataset in switches from MC to SE as Examples 2 demonstrate:

#### Example 2 *btw*

- (1) btw 那天有帶相機的學弟妹 傳照片啊~~
- (2) btw NA TIAN YOU DAI XIANG JI DE XUE DE MEI CHUAN ZHAO PIAN A~~
- (3) btw (that) (day) (have) (carry) (camera) (CL) (school) (brother) (sister) (send) (photos) (a)
- (4) “By the way, for those who brought a camera on that day, send everyone photos~~”
- (5) \* ‘CL’ refers to a noun classifier, a noun may or may not be accompanied by a noun classifier which shows a conceptual classification of the referent of a noun and is commonly used when counting.

Discourse markers can be abbreviated, such as ‘btw’ (by the way) in Example 2. Examples of ‘btw’ are found commonly in the dataset. This example is also categorised as an ‘acronym’ (Chen, 2011). It illustrates that on MC-based message boards, frequent use of discourse is not only to display the interlocutor’s social identity in literacy practices, but also to attract the attention of other browsers.

### 5.3 Conjunctions

Conjunctions are defined as one type of discourse markers, called ‘discourse connectives’ by McLellan (2005). In the dataset, the most frequent conjunctions being switched to English are ‘and’, ‘or’ and ‘so’, as the examples below demonstrate:

#### Example 3 *or*

- (1) 不知道你是學弟 or 學妹
- (2) BU ZHI DAO NI SHI XUE DE or XUE MEI
- (3) (Not) (know) (you) (are) (school) (brother) or (school) (sister)
- (4) “I don’t know whether you are a male or female first year student.”

#### Example 4 *and*

- (1) 不得已這禮拜日打算在體育館舉行的五打五籃球賽 and 羽球賽臨時取消
- (2) SUO YI BU DE YI ZHE LI BAI DA SUAN ZAI TI YU GUAN JU XING DE WU DA WU LAN QIU SAI and YU QIU SAI LIN SHI QU XIAO

- (3) (Not) (help but) (this) (Sunday) (plan) (in) (gymnasium) (held) (CL) (five) (to) (five) (basketball) (match) and (badminton match) (temporary) (get) (eliminate)
- (4) “I have no alternative but have to cancel the five-a-side basketball and badminton matches held in the gymnasium this Sunday.”

In Example 3, ‘or’ is used to show alternatives. In Example 4, ‘and’ is a coordinator of ideas which has a pragmatic function as a marker for continuation. There are other examples, such as ‘but’, which marks a contrasting action and ‘or’, which marks an option or a choice in the discourse. ‘So’ has a grammatical function showing cause or result. In the dataset, the conjunctions ‘and’ and ‘or’ are easily found, which become the common switches in CMC.

#### 5.4 Verbs

Analysis of the data shows that the verbs being switched are divided into two groups. The first group contains verbs with meanings related to emotion such as ‘love’, ‘like’ or ‘hate’. MC verbs being code-switched to English often connote appeal or gratitude in English. The second group of verbs switched to English possibly relate to terms used in speaking. It means the choices of verbs being switched are similar to those in spoken discourse, as seen in Example 5:

##### Example 5 *check in*

- (1) 關廟休息站 check in
- (2) GUAN MIAO XIU XI ZHAN check in
- (3) (Guan) (temple) (rest) (cease) (station) check in
- (4) “Coffee break and check in.”

Examples of this are ‘check in’ at the hotel or ‘book’ the room. The fifth example shows that participants are deeply influenced by their dialogic interlocution in everyday communication.

#### 5.5 Prepositions

‘By’ occurs frequently in the dataset, and usually occurs at the end of postings to indicate that messages are being posted by specific senders. The researcher suggests that the grammatical rule for the passive voice in MC differs from the one in English. In the English grammatical rule, ‘by’ is attached to the end of sentences in order to signify authorship. In contrast, in the MC grammatical rule, the passive voice, BEI ‘by’ is located in the middle of the sentence as Example 6 shows.

##### Example 6 *by*

- (1) 別忘了明天的比賽 by 助教
- (2) BEI WANG LE MING TIAN DE BI SAI by ZHU JIAO.

- (3) (leave) (forget) (tomorrow) (CL) (compare) (competition) by (assistant) (teach)
- (4) “Don’t forget the competition tomorrow by TA”.

The interpretation is that in order to emphasise that ‘somebody’ does something, the use of ‘by’ at the very end of a posting can attract readers’ attention. ‘By’ here is not simply a passive voice in the verb tense sense, but a preposition to emphasise ‘somebody does something’.

### 5.6 Adjectives

An interesting finding is that some specific nouns are ‘adjectivised’ into adjectives to describe a person. For example,

#### Example 7 *man*

- (1) 太 man 了 @@
- (2) TAI man LE @@
- (3) (Too) (man) (lo) @@
- (4) “Too masculine and manlike @@”
- (5) \*‘@@’ is an emotive icon and refers to a puzzled facial expression

In the above example, ‘man’ refers to ‘masculine’ or ‘manlike’ rather than a male person. It is an example of ‘adjectivisation’ where participants ‘adjectivise’ ‘man’ to convey the masculinity in an MC-based posting.

## 6. Conclusion

In this study, the researcher categorised grammatical functions of language choice between MC and SE on Mandarin-based message boards. The word classes of grammatical function influence how adolescents produce digital text in online environments. For example, in the category of discourse marker, the switched words demonstrate the difference between spoken and written discourse. In spoken discourse, ‘you know,’ ‘I mean’ or ‘well’ accounts for higher percentage of all switches. On the contrary, in written electronic discourse, most words to be switches are ‘and,’ ‘or,’ ‘so,’ and ‘because’ belonging to coordinator connectives. The usage of ‘well,’ ‘you know,’ or ‘I mean’ is rarely found in written electronic texts.

After conducting the study on Mandarin-based message boards, the researcher found that adolescents regarded message boards as a form of online communication to where they could discuss matters relating to their day-to-day lives by switching words in terms of its grammatical functions in the context, rather than as a tool for academic purposes. Through analysing CMC data, studies of whether members on message boards seek to construct gender identities in online environments or of focusing on

choice of pseudonyms and nicknames, along with the biographical details furnished by online users become potential areas of future researches in online environments.

To a certain extent, the styles of postings indicate the identities of the posters. Viewing message boards as one community of practice should not be neglected since a new user has to undergo socialisation to learn to be a fully competent participant within that community.

The logo for the International Association for Educational Research (iafor) is centered on the page. It features the lowercase letters 'iafor' in a light blue, serif font. The text is surrounded by two large, overlapping, semi-transparent circular arcs. The upper arc is light blue and the lower arc is light red, creating a stylized, circular frame around the text.

iafor

## Reference

- Benwell, B. and Stokoe, E. (2006). *Discourse and Identity*. Edinburgh: Edinburgh University Press Ltd.
- Blom, J. P. and Gumperz, J. J. (1972). Social Meaning in Linguistic Structure: Code-Switching in Norway. In J. J. Gumperz and D. Hymes (Eds.), *Directions in Sociolinguistics: the Ethnography of Communication*. New York: Holt, Rinehart and Winston.
- Carter, R. and Fung, L. (2007). Cantonese e-discourse: A new hybrid variety of English. *Multilingua*, 26: 35-66.
- Chen, Szu-Yu Ruby (2011). The Creativity of Adolescents' Digital Literacy Practices. *The Journal: Journal of the Faculty of Liberal Arts*, 7(1): 69-84.
- DeFrancis, J. (1984). *The Chinese Language: Fact and Fantasy*. Honolulu: University of Hawaii Press.
- Ferrara, K., Brunner, H., and Whittemore, G. (1991). Interactive written discourse as an emergent register. *Written Communication*, 8(1): 8-34.
- Grimes, B. F. (Ed.) (1996). *Ethnologue. Languages of the World (13<sup>th</sup> ed.)*, Dallas (Summer Institute of Linguistics).
- Gumperz, J. J. (1982). *Discourse Strategies*. Cambridge: Cambridge University Press.
- Herring, S. C. (Ed.). (1996). *Computer-mediated Communication: Linguistic, Social and Cross-cultural Perspectives*. Amsterdam: John Benjamins.
- Hinrichs, L. (2005). Jamaican Creole on the Internet: Forms and Functions of an Oral Language in Computer-mediated Communication.
- Huang, Daphne L.J. (2004). Language choice and language use in emails. In P. Nelde (ed.) *Multilingualism, Minorities and Language*. St. Augustin: Asgard, pp.49-57.
- Li, D. C. S. (2000). Cantonese-English Code-switching Research in Hong Kong: a Y2K Review. *World Englishes* 19(3): 305-322.
- McLellan, J. A. H. (2005). Malay-English language alternation in two Brunei Darussalam on-line discussion forums. *Department of Language and Intercultural Education, Curtin University of Technology CRICOS*.
- Myers-Scotton, C. (1983). The negotiation of identities in conversation: a theory of markedness and code choice. *International Journal of the Sociology of Language*, 44: 115-136.
- Myers-Scotton, C. (2006). *Multiple Voices: An Introduction to Bilingualism*. Oxford: Blackwell Publishing.
- Su, Hsi-Yao. (2003). The Multilingual and Multi-Orthographic Taiwan-Based Internet: Creative Uses of Writing Systems on College-Affiliated BBSs. *Journal of Computer-Mediated Communication* 9 (1).

*Application of Designers' Sketching Skills in Design Education*

Yuichi Izu<sup>\*1,\*2</sup>, Koichiro Sato<sup>\*3</sup>, Takeo Kato<sup>\*4</sup>, Yoshiyuki Matsuoka<sup>\*3</sup>

<sup>\*1</sup>Graduate School of Keio University, Japan, <sup>\*2</sup>Shizuoka University of Art and Culture, Japan, <sup>\*3</sup>Keio University, Japan, <sup>\*4</sup>Tokai University, Japan

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Abstract

The use of sketches in the generation of design ideas is thought to have various effects. However, previous studies have yet to elucidate exactly how sketching skills influence the expression and development of design solution candidates. Elucidating the role and effects of sketching skills is expected to transform sketching training, in which considerable time is traditionally spent on acquiring sketching skills, into an avenue for the effective acquisition of techniques for generating ideas for design features. We conducted a series of studies in order to clarify the role and effects of sketching skills in relation to the generation of design ideas in the process of product design. In our previous paper, a structural model of sketching skills was proposed upon analyzing the process of acquisition of sketching skills by students. In this study, we verified the usefulness of the proposed structural model of sketching skills for analyzing sketches drawn by designers. Specifically, we compared the differences between sketches of the same subject drawn by designers and students. Then, the usefulness of the model was demonstrated by clarifying the differences in sketching skills between designers and students as well as between individual designers. In addition, the results of analyzing sketches drawn by different designers suggested that the approach to idea generation and the sketching skills influence each other. This knowledge is expected to be of assistance in design education aimed at the integrated acquisition and utilization of comprehensive sketching skills.

**Keywords:** Design Education, Sketching, Structural Model of Sketching Skills

## 1 Introduction

Use of the sketching in design is utilized for many designers as what stimulates a new idea and creativity (1-5). Also in the field of design science, research taking sketching as a guidepost is being conducted to clarify the structure of creative thought in design (6-8). However, almost no research has been conducted that scientifically considers the effect of sketching skills, such as a perspective method and curved surface expression, in the generation of ideas for design features. Therefore, in the present design education, many sketch exercises centering on acquisition of drawing technique are imposed. If the effect of the sketching skills mentioned above can be solved, it is also expected that development of teaching methods centering on the development technique of a design and development of the sketch skill education which specialized idea generation technique are also expected.

In previous research, we modeled the relationship of the sketching skills for the purpose of the elucidation of the effect of sketching skills (9, 10). "The structural model of sketching skills" was proposed by performing the sketch education for students who have not received design education, observing sketching skills acquisition process, and analyzing drawn sketches. However, since this model was proposed based on students' sketches, it is necessary to check usefulness by applying to analysis of sketches of the designers who have already learned sketching skills.

From the above background, this research aimed at the check of the usefulness of "the structural model of sketching skills" towards the elucidation of the effect of the sketching skills in design. Then, this model is applied to analysis of designers' sketching skills, and it checks that this model is useful also in analysis of designers' sketches. First we compared the difference in sketches which designers who work for an electrical equipment manufacturer, college students of design who received design education, and the college student of the faculty of technology without experience which received design education till then drew to the same subject. Next, we compared the difference in sketches between designers.

## 2 Methods

### Structural Model of Sketching Skills

Figure 1 shows a "Structural model of sketching skills." Sketching skills are here divided into "Expression skills", which enable accurate expression of the shape of a design proposal, and "Development skills", which enable the development of numerous candidates for design proposals. "Expression skills" consists of four items of "Skills for expression of three-dimensional form" "Skills for expression of perspective" "Skills for expression of curved form" and "Skills for expression of object image." "Development skills" consists of four items of "Skills for development of structure" "Skills for development of shape" "Skills for development of detailed shape" and "Skills for development of constituent elements." Each skill is typified from its relation with skills in three groups, "Development of shape", "Development of structure" and "Development of element." The arrow shown in a figure expresses the precondition of acquisition, and, in many cases, the skill of the direction shown in

an arrow expresses that it is the skill used as the necessary condition for learning the skill shown in the direction which becomes the origin of an arrow.

### Evaluation of Sketching Skills of Designers and Students

Sketches of designers and students who are in the acquisition stage of sketching skills were collected on the conditions shown below, and evaluation by eight items of skill shown in "Structural model of sketch skill" was performed (Figure 2).

Theme: Liquid crystal projector

Creation time: For 60 minutes

The candidate could be three categories by six designers who work in an electrical equipment manufacturer (following: designer), ten college students of design speciality who received design education (following: design student), and six college students of the faculty of technology without experience which received education (following: engineering student), and a total of 22 persons.

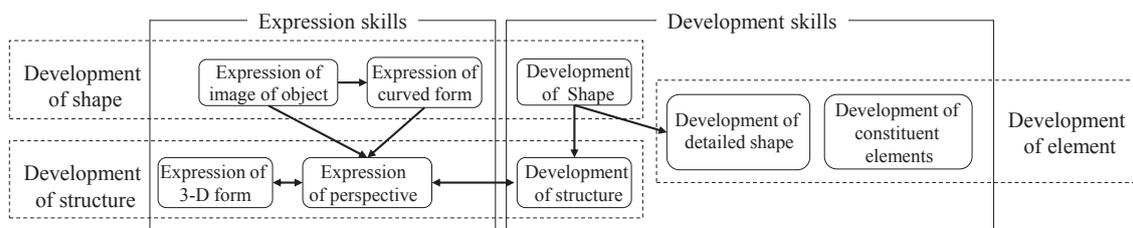


Fig. 1. Structural model of sketching skills

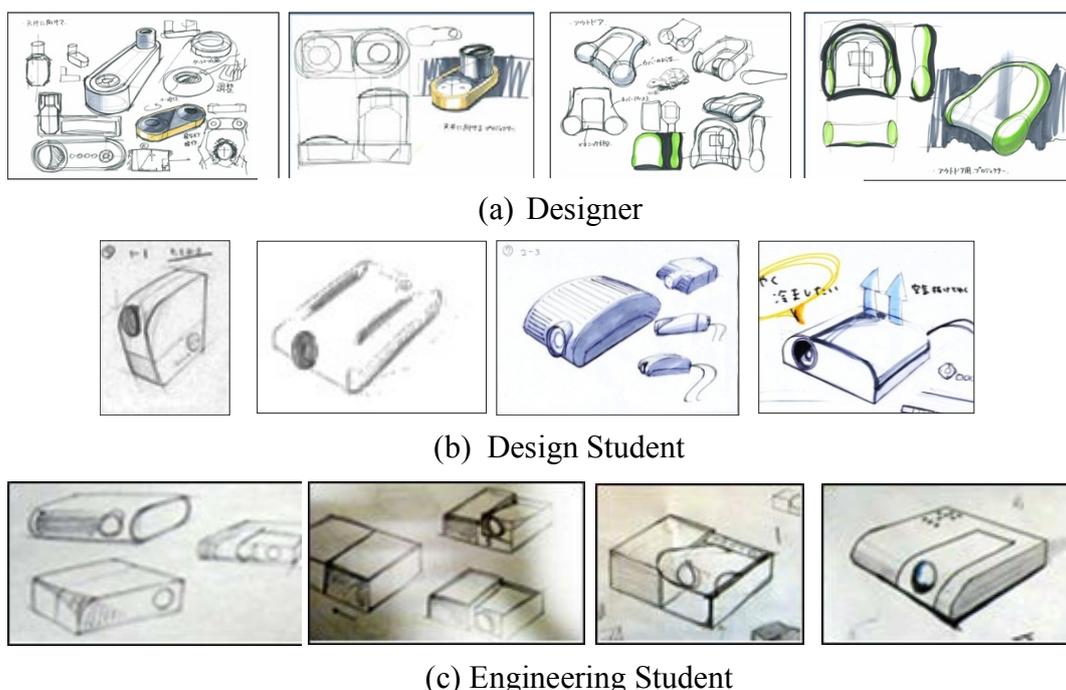


Fig.2. Example of a series of sketches by student and designer

### **3 Analysis of the Difference in Sketching Skills**

#### **Difference in Sketching Skills between Designers and Students**

Every item of the sketching skills evaluation value of designers and students were normalized, and the average differences were authorized. The average, unbiased variance and standard deviation of four items of "Expression skills" and four items of "Development skills" were calculated (Table 1, 2). In average value, it was shown that all the values of eight items of a designer's sketch skill are high compared with a student, and it was shown that experience of design business affects sketch skill. In average, it was shown that all the values of eight items of designers' sketching skills are high compared with students, and it was shown that experience as a professional designer affects sketch skill. High distribution was shown in much the student's unbiased variance and standard deviation of skill in the acquisition stage of sketching skills. However as for "Skills for development of structure" and "Skills for development of shape", high distribution was shown to the designers. It is possible that such skills are skills which acquisition of other sketch skills influences as the reason.

Table 3 and 4 shows the result of the official approval of homogeneity of variance to each data, and t-test or t-test by the method of Welch. In four items of "Expression skill", and four items of "Development skill", all single-sided P value became 0.05 or less, and it was shown that designers' sketching skills are higher than students. Among these, it was shown that single-sided P value of "Skills for expression of perspective" and "Skills for development of structure" are larger compared with other skills, and there is little skill difference relatively. These skills are fundamental skills which will be the requisite for other sketching skills acquisition in "the structural model of sketching skills" (Fig. 1). From this, it is thought that this skill was learned to some extent by design education also in the student.

#### **Difference in Sketch Skill between Students**

Next, same analysis was conducted to design students and engineering students (Table, 5-8). Compared with the engineering student, high evaluation was shown in the design student's four items of "Expression skills" and three items of "Development skills" ("Skills for development of structure" "Skills for development of shape" "Skills for development of detailed shape")." On the other hand, in "Skills for development of constituent elements," although the significant difference by t-official approval was not shown, it was shown that an engineering student's average value is high compared with a design student. It is considered as this reason that engineering students with the knowledge about a machine design have many knowledge about the components of the equipment to design students, and it is estimated that the skill is affected in the knowledge about the equipment.

Table1. The average, unbiased variance, and standard deviation of expression skills between designers and students

	Designer (n:6)			Student (n:16)		
	Average	Unbiased variance	Standard deviation	Average	Unbiased variance	Standard deviation
Curved form	0.949	0.247	0.497	-0.356	0.822	0.906
The object image	0.830	0.489	0.699	-0.312	0.859	0.927
Perspective	0.504	0.456	0.675	-0.189	1.109	1.053
3-D form	0.890	0.000	0.000	-0.312	0.972	0.986

Table2. The average, unbiased variance, and standard deviation of development skills between designers and students

	Designer (n:6)			Student (n:16)		
	Average	Unbiased variance	Standard deviation	Average	Unbiased variance	Standard deviation
Constituent elements	1.081	0.294	0.542	-0.405	0.661	0.813
Detailed shape	1.074	0.405	0.636	-0.403	0.631	0.794
Shape	0.894	0.847	0.920	-0.335	0.677	0.823
Structure	0.717	1.252	1.119	-0.268	0.701	0.837

Table3. The result of F-test and t-test for expression skills of designers and students

	F-test		T-test		
	Statistic F	P value	Statistic t	Two-tail p value	one-tail p value
Curved form	3.569	0.166	3.691	0.001	0.001 **
The object image	3.648	0.160	3.212	0.004	0.002 **
Perspective	2.074	0.436	1.903	0.078	0.039 *
3-D form	7.E+31	0.000 **	4.987	0.000	0.000 **

\*\* : Significance level 1% \* : Significance level 5%

Table4. The result of F-test and t-test for development skills of designers and students

	F-test		T-test		
	Statistic F	P value	Statistic t	Two-tail p value	one-tail p value
Constituent elements	2.250	0.379	4.117	0.001	0.000 **
Detailed shape	1.559	0.656	4.068	0.001	0.000 **
Shape	1.250	0.670	3.028	0.007	0.003 **
Structure	1.786	0.352	2.247	0.036	0.018 *

\*\* : Significance level 1% \* : Significance level 5%

Table5. The average, unbiased variance, and standard deviation of expression skills between design student and engineering students

	Design Student (n:10)			Eng. Student (n:6)		
	Average	Unbiased variance	Standard deviation	Average	Unbiased variance	Standard deviation
Curved form	0.132	0.587	0.766	-1.170	0.137	0.371
The object in age	0.211	0.623	0.789	-1.182	0.000	0.000
Perspective	0.125	0.696	0.834	-1.074	0.298	0.546
3-D form	0.294	0.330	0.575	-1.381	0.193	0.440

Table6. The average, unbiased variance, and standard deviation of development skills between design student and engineering students

	Design Student (n:10)			Eng. Student (n:6)		
	Average	Unbiased variance	Standard deviation	Average	Unbiased variance	Standard deviation
Constituent elements	-0.562	0.599	0.774	-0.143	0.771	0.878
Detailed shape	-0.179	0.848	0.921	-0.775	0.101	0.318
Shape	0.156	0.323	0.568	-1.155	0.161	0.402
Structure	0.163	0.526	0.725	-0.987	0.163	0.404

Table7. The result of F-test and t-test for expression skills of design students and engineering students

	F-test			T-test		
	Statistic F	P value		Statistic t	Two-tail p value	one-tail p value
Curved form	4.267	0.125		3.862	0.002	0.001 **
The object in age	1.E+31	0.000	**	5.582	0.000	0.000 **
Perspective	2.333	0.364		3.119	0.008	0.004 **
3-D form	1.708	0.576		6.113	0.000	0.000 **

\*\* : Significance level 1% \* : Significance level 5%

Table8. The result of F-test and t-test for development skills of design students and engineering students

	F-test			T-test		
	Statistic F	P value		Statistic t	Two-tail p value	one-tail p value
Constituent elements	1.286	0.699		1.000	0.334	0.167
Detailed shape	8.375	0.031	*	1.868	0.086	0.043 *
Shape	2.000	0.461		4.934	0.000	0.000 **
Structure	3.222	0.211		3.537	0.003	0.002 **

\*\* : Significance level 1% \* : Significance level 5%

## 4 Discussion for Sketching Skills of Designers

### Feature of Sketches which Designers Draw

Figure 3 shows examples of sketches drawn by six designers. The following features were observed by each designer's sketch from how depending on which an outline, the shade, etc. draw.

Designer 1:

The sketches of the impression which was effective by the outline lucidly drawn with the felt pen (Figure 3 (a))

Designer 2:

The sketches of the sophisticated impression by the combination of the outline delicately drawn to details with the ball-point, and the shade by a marker (Fig. 3 (b))

Designer 3:

The sketches of the sophisticated impression of the outline delicately drawn to details with the ball-point (Figure 3 (c))

Designer 4:

The sketches of sophisticated and three-dimensional impression by the combination of the shade by the outline and mesh which were drawn with the ball-point (Figure 3 (d))

Designer 5:

The sketches of the strong impression which was effective by the combination of the outline by a felt pen, the shade by a marker, or color pencil (Figure 3 (e))

Designer 6:

The sketches of the three-dimensional impression by the combination of soft field composition including an outline with a colored pencil, and the gradation expression with a colored pencil (Figure 3 (f))

In designers' sketch, it was observed that sketch expression differs from the painting tools to utilize among designers. As a result of carrying out a hearing to a designer about the reason, the reply that the mode of expression and painting tools which are made elated [ them ] were chosen and the sketch was drawn was obtained.

### Classification of Designers by Sketching Skills

Factor analysis to the sketching skills evaluation value of 22 candidates including designers were conducted, and three factors of "expression", "element", and "outside" were extracted. To the result obtained by the candidate's factor analysis, cluster analysis was conducted and it classified into four clusters. Designers are classified into three clusters among those, and the following features are shown to designers of each cluster.

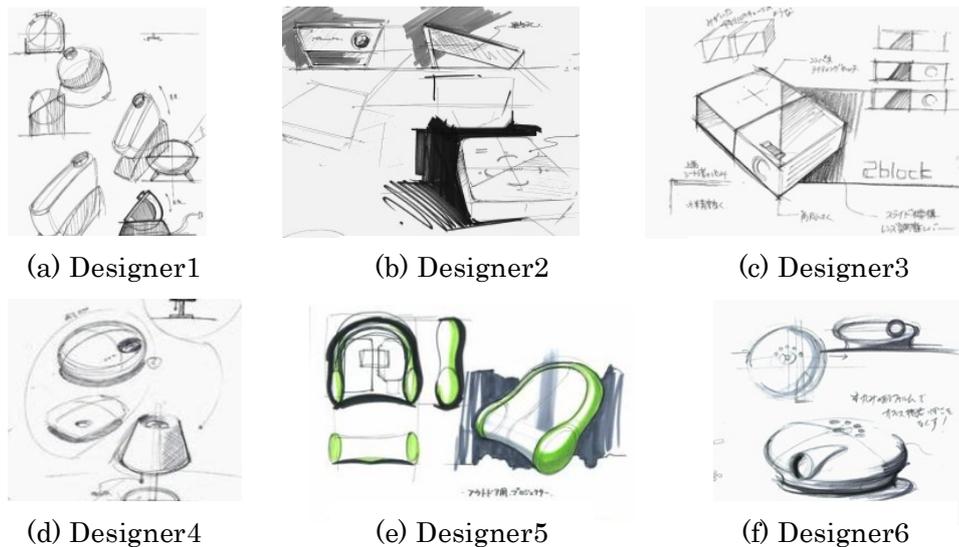


Fig.3. Examples of sketches drawn by six designers

#### Cluster 1:

It involves in an "element" and an "outside" strongly, and the designer1 who has the feature in outline expression, and the designer2 correspond. "Structure deployment skill", "Form development skill", "Detailed element deployment skill", and "Component development skill" are high, and develop many form and elements by sketch mainly expressed by line depiction.

#### Cluster 2:

It involves to "expression" strongly and the designer3 who has the feature in the field expression for taking out a cubic effect, the designer4, and the designer6 correspond. "Curved surface form expression skill" and "Component development skill" are high. A polite field expression expresses a design.

#### Cluster 3:

The designer 5 who has the feature in an advanced expression which uses a marker corresponds. While four items of "Expression skills" are high, its "Development skills" are low.

In the "Solid form expression skill", all designers have got the highest evaluation. As mentioned above, basing a designer on fundamental "Expression skills" already learned, The difference in the sketch skill between designers was shown by "the structural model of sketch skill." Moreover, it was guessed that a designer utilizes sketch skill suitable for the way of thinking of each design based on fundamental "expression skill" already learned.

## 5 Conclusion

We evaluated the sketch which designers, design students, and engineering students drew to the same theme with the application of "The structural model of sketching skills." As a result, the difference in the sketching skills between designers and students were clarified, and the generality of this model was able to be shown by indicating the difference of sketching skills between designers. Furthermore, it was shown from the analysis result of sketches by designers that sketching skills and the design idea generation have influence mutually. We would like to develop the design educational method towards the acquisition of sketch skill based on the result obtained this research.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The text is enclosed within a large, light blue circular arc that is partially open at the top. A second, larger, light red circular arc is positioned behind the blue one, also partially open at the top, creating a layered effect.

## Bibliography

1. Bill Buxton, (2008), *Sketching User Experiences: Getting the Design Right and the Right Design*, Morgan Kaufmann, San Francisco.
2. James M.Utterback, (2008), *Design-Inspired Innovation*, Firstpress corporation, Tokyo. (in Japanese)
3. Alan Pipes, (2007), *Drawing for Designers*, Laurence King Publishing Ltd, London.
4. Koos Essen, Roseline Steur, (2007), *Sketching*, BIS Publishers, Amsterdam
5. Alexander Ott, (2007), *Darstellungstechnik*, Tools INT'L Corp., Tokyo
6. Yoshiyuki Matsuoka, Yoshiki Ujiie, et al., (2010), *Design Science*, Maruzen Co., Ltd., Tokyo.
7. Yoshiyuki Matsuoka, (2010), *Multispace Design Model as Framework for Design Science towards Integration of Design*, Proceedings of International Conference on Design Engineering and Science 2010 (ICDES2010)
8. Yoshiyuki Matsuoka, (2012), *Multispace Design Model towards integration between industrial design and engineering design*, Proceedings of International Conference on Design Research Society 2012 (DRS2012)
9. Yuichi Izu, Koichiro Sato, Takeo Kato, Yoshiki Ujiie, Yoshiyuki Matsuoka, (2012), *Structural Model of Sketching Skills in Product Design*, Design Science, Japanese Society for The Science of Design, Vol.59 No.4,pp.61-70 (in Japanese)
10. Yuichi Izu, Koichiro Sato, Takeo Kato, Yoshiyuki Matsuoka, (2013), *Analysis of Designers' Sketches Using Structural Model of Sketching Skills*, Design Science, Japanese Society for The Science of Design, Vol.59 No.4,pp.61-70 (in Japanese)

*Thailand's Educational Strategic Plan in Preparation for the ASEAN Community*

Nonnadhi Dulyadaweesid

Bansomdejchaopraya Rajabhat University, Thailand

0273

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Abstract

This research aimed to study Thailand's Educational Strategic plan in preparation for the ASEAN Community in 2015 A.D. The question of this research is how Thai government determined and proceeded educational strategic plan in preparation for the ASEAN Community after the ASEAN countries have officially established the ASEAN Community. This research is a qualitative study which the data was collected from various documents such as international agreements, joint communiques, textbooks, government policy, and academic articles. The data was analysed using descriptive analysis.

The research result was found that Thai government determined and proceeded educational strategic plan in preparation for the ASEAN Community with two strategies, National Economic and Social Development plan and Cha-am Hua Hin Declaration on the Roadmap for the ASEAN Community. The research result indicated that the important reason of educational reformation for the ASEAN Community of Thailand Ministry of Education was to produce the human resources with knowledge of Southeast Asia region for the official establishment of the ASEAN Community.

**Keywords:** Thailand, Educational Strategic, ASEAN Community

## **1. The ASEAN Countries towards ASEAN Community**

Association of Southeast Asian Nations: ASEAN was established on August 8, 1967. It was first consist of five countries namely including Republic of Indonesia, Malaysia, and Republic of the Philippines, Republic of Singapore, and the Kingdom of Thailand on

Later, Negara Brunei Darussalam became the 6<sup>th</sup> member in 1984. Socialist Republic of Vietnam became the 7<sup>th</sup> member in 1995, Lao People's Democratic Republic and the Republic of the Union of Myanmar as the 8<sup>th</sup> and 9<sup>th</sup> member in 1997, and the Kingdom of Cambodia as the 10<sup>th</sup> country in 1999.

The development of the ASEAN region resulting in a change from efforts to create economic group within the ASEAN region to cope with the changing international situation and the rapid stream of economic integration in the other regions. So, in the 1992 4<sup>th</sup> ASEAN Summit in Singapore, ASEAN government leaders decided to establish the ASEAN Free Trade Area, ASEAN.

Then, the Bali Concord II was sign in the 9<sup>th</sup> ASEAN Summit in Bali, Indonesia. The Bali Concord II requires the establishment of ASEAN Community by 2020 and three pillars as ASEAN Political-Security Community: ASPC, ASEAN Economic Community: AEC, and ASEAN Socio-Cultural Community: ASCC are included.

Regarding to the 12<sup>th</sup> ASEAN Summit in Cebu, Philippines , on 13 January 2007, the meeting agreed that the establish of ASEAN Community must be quicker by the year 2015. Then, the ASEAN Charter had been approved in the 13<sup>th</sup> ASEAN Summit in Singapore on November 20, 2007 as a mechanism to improve the effective functioning of ASEAN. ASEAN Charter acts as the ASEAN constitution to set up the framework and the organizational structure to manage working system and cooperation, in particular the merger of the ASEAN Community by the year 2015 .

In the ASEAN Charter mentioned to education in Chapter 1, paras 10 as “develop human resources through closer cooperation in education and life-long learning, and in science and technology, for the empowerment of the people of ASEAN and for the

strengthening of the ASEAN Community” The meeting agreed that the cooperation in education is the key to increase the capacity of member countries.

In addition, Declaration on the ASEAN Economic Community Blueprint: AEC Blueprint was signed in the 13<sup>th</sup> ASEAN Summit and for the ASEAN Political - Security Community Blueprint: APSC Blueprint and the ASEAN Socio-Cultural Community Blueprint: ASCC Blueprint have been approved and signed at the ASEAN Summit 14th at Cha-am - Hua Hin in March, 2009 .

This important development influenced to the merger of ASEAN Community in 2558 and will have an impact on education, especially higher education. Many ASEAN countries have been preparing and developing the capacity of human resources to support the ASEAN Community such as Singapore encourages students' English development and the study of third language, Malaysia provides teaching mathematics and sciences in English, and Philippines encourages teaching English as a second language.

## **2. The Development of Thailand's Higher Education towards the ASEAN Community**

Higher Education in different Southeast Asian countries has different historical backgrounds, and through the various stages of development.

The study of SEAMEO entitled "A Situational Analysis of Higher Education Reforms in South-East Asian Countries " in 2005 found that although higher education in Southeast Asia will have the difference and diversity historical background. However, most countries in the region face the similar challenges. First, there is the increase of the chance in which young people entering higher education because the young people has increased in number and demand for higher education institutions. The university will have to consider the quality of education at the same time.. Secondly, there are a variety of courses to meet the diverse needs of learners. Open and distance education is a form of education that would have been more popular because it can

increase the chances of access to education, especially to people who are in the working age. In addition, transnational education tends to increase.

Another challenge is the development of the internationalization of higher education. During the past decade, the international exchanges of students and scholars around the world have increased and will increase further in the future. This is because the educational experience in an international environment and the skills to communicate across cultures are desirable features of graduates in the domestic and international labor market. The growth of the global multinational education and the establishment of the university campus in the foreign country have shown a trend of the higher educational relationship between developed countries and the countries as U.S., UK, Australia, etc.

Education plays a vital role in supporting the mission of ASEAN to achieve the goals and principles of ASEAN towards the ASEAN Community, both in the political and economic stability, and social and cultural aspect. The decrease of the economic and developmental gap between the previous members of ASEAN and the new members of ASEAN becomes an important issue in the ASEAN Community.

Thailand is one of the ASEAN member countries, which need to prepare for the significant changes of ASEAN. Thailand has a significant impact of free trade to Thailand education. The issue of long-term framework for higher education 15 years (2008-2022) featured the ASEAN community as a factor that directly affects higher education management. Integration into ASEAN will facilitate educational manpower and students' movement resulting in the transfer of knowledge. Thus, Thailand is required to qualify for a higher production capacity of the country to be ready for the change after the merger of the ASEAN Community.

### **3. Thailand's Higher Educational Strategy in Preparation to ASEAN Community in 2015**

According to the long-term framework for higher education 15 years (2008-2022) Thailand's educational strategies to prepare to enter the ASEAN countries can be classified into the following 3 strategies.

**Strategy 1** To increase the quality of graduates with international standards

**Strategy**

1. To develop English language usage competency in Thai students until they can use English in working.
2. To develop cross-cultural professional and working competency

**Possibility of Implementation**

1. To promote the effective English teaching and assessment from basic education to higher education.
2. To promote the production and development of English teachers including the languages of the member countries both in basic education, vocational, and higher education.
3. To promote the teaching of language and knowledge of ASEAN and ASEAN from basic education to higher education, including ASEAN research in higher education institutions and the development of learning and teaching Asian studies using information technology.
4. To promote the student exchange by supporting the credit transfer between Thailand and ASEAN higher education institutions.
5. To promote the activities to provide the opportunity to the students to the international level, particularly ASEAN, including activities to build up awareness of ASEAN citizenship.

**Strategy 2** To develop the strengthening to higher educational institution for the development of the ASEAN Community

**Strategy**

1. To develop the international competency to teachers.
2. To promote the creation of knowledge and innovation concerning ASEAN in higher education institutions.
3. To develop the curriculum development and teaching in international quality standard.
4. To develop the infrastructure development in international quality standard.
5. To develop academic and research excellence.
6. To develop higher education system of ASEAN.

### **Possibility of Implementation**

1. To encourage higher education institutions with higher Ph.D. teacher ratio including teachers' academic position promotion.
2. To create research networking between the centers of excellence in Thailand 's higher education institutions / agencies / organizations, both public and private sectors in the country and in the ASEAN region
- 3 To support the scholarship of PhD study, staff development , research and research publication such as the conference, regional and international academic journals, etc.
4. To encourage the dissemination of academic research in Thailand and ASEAN.
5. To promote the development of international programs in Thailand's expertise fields
6. To encourage higher education institutions to provide bilingual teaching such as English and Thailand.
7. To promote / support / allocate budget for foreign teachers with the knowledge and expertise to transfer knowledge to Thailand's Higher Education institutes or research in higher education institutions to improve the quality of Thailand's Higher Education.
8. To promote academic cooperation between institutions in Thailand and ASEAN to enhance the quality and academic standards of the institution.
9. To encourage higher education institutions to develop information and communication technology systems, including various kinds of facilities.
10. To promote the development of infrastructure in higher educational institutes.
11. To promote harmonization of the higher Education in Asia, especially in terms of quality and educational qualification through the existing cooperation such as SEAMEO RIHED, AUN etc.

**Strategy 3:** To promote the role of Thailand's higher education in ASEAN Community

#### **Strategy**

1. To promote the leadership role of higher education institutions in Thailand related to the three pillars of the ASEAN Community building , especially in the ASEAN Socio- Cultural Community pillar .
2. To raise the awareness of Thai and ASEAN identity and the role of higher education to promote the friendship activity.
3. To promote Thailand as a center of education in the region .
4. To promote Thailand as an informational centers for higher education institutions in the region .

### **Possibility of Implementation**

1. To public the general information about the ASEAN Community and the movement in negotiations to liberalize trade in ASEAN education services continuously.
2. To promote the awareness of the uniqueness of Thailand and ASEAN countries including promoting friendship activity, community education, and ASEAN youth.
3. To promote cooperation between educational institutions and agencies involved in the preparations for the protection of the effect of the human across the states.
4. To develop mapping a core institution in the field of expertise and the needs of the various economic areas relating to the economic development in the region .
5. To promote Thai teachers in higher education institutions to teach, do research, give academic services and cultural activity in ASEAN.

### **4. Conclusions and Recommendations**

The Thailand higher education should operate the following policy and the implementation for the preparation to ASEAN Community.

1. **The development of ASEAN knowledge** Thailand needs to align curriculum to teach students concerning knowledge about ASEAN as language, culture, politics, economy, and consumer behavior. The other topics are as the consumers' behaviors, characteristics or market conditions , transportation, distribution, the advantages and disadvantages of the integration of ASEAN. This allows the Thailand's entrepreneurs having qualified personnel and can accommodate the potential future.

2. **The development of vocational education** Thailand has developed increasingly sophisticated industry . So, people with knowledge and skills are needed rather than relying on low-wage workers. Nonetheless , in the past graduates in higher education are many. It is to be noted that vocational graduates are also less . Resulted in skilled labor careers . Inadequate to the needs of the market, while entry to the AEC . To induce labor . Are moving. To higher compensation markets such as Singapore, Malaysia , which will be added to shortages of skilled workers are more so Study Thailand have planned to increase the number of workers in the more vocational . Whether it is a craftsman. Industrial . Including computer expert . Expert systems, logistics and transportation , etc.

3. **The development of languages.** The global investment has increased. by the growth of population and the expansion of the free trade area. Therefore, learning foreign language is necessary for interactive communication. English is the universal

language of communication between the people in the region. Thus, any country with the population with the proficiency in English will enhance the competitiveness of the country. The reports of EF English Proficiency Index (2011) by Institute of Language Education First (EF) indexes the data of the population of working age in 44 countries where English is not the official language, found that the English of Thai people was ranked at the 42 of 44 countries and compared to the specific countries in Asia, the study of 13 countries showed that countries that have high capabilities of English were Malaysia, Hong Kong, South Korea, Japan, Taiwan, Saudi Arabia, China, India, Russia, Indonesia, Thailand, Vietnam, Kazakhstan, respectively, it is to be noted that ASEAN countries that are not listed in the survey as Burma, Cambodia and Laos, the English ability is likely to remain high, especially in Myanmar, so the study of Thailand should accelerate English teaching curriculum and also include teaching languages of neighboring countries.

**4. The development of technology** In the world of competition, modern technology has a greater role such as cell phones, computer, Internet, etc. These technologies facilitate working and communicational convenience. Thus, accessing to technology will support manufacturing manufacturing process and reduces labor shortage. Therefore, Thailand's education requires the development of curriculum teaching Thai students to learn and understand the rapid change of technology.

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## Bibliography

- ASEAN Secretariat. 2006. *Joint Statement from the 1<sup>st</sup> ASEAN Education Ministers Meeting and 41<sup>st</sup> SEAMEO Council Conference*. Singapore, 23 March 2006, <[www.aseansec.org/18327.htm](http://www.aseansec.org/18327.htm)>
- ASEAN Secretariat. 2007. *Joint Statement of the 42<sup>nd</sup> SEAMEO Council Conference and the 2<sup>nd</sup> ASEAN Education Ministers Meeting*. Indonesia, 13-16 March 2007, <[www.aseansec.org/20928.htm](http://www.aseansec.org/20928.htm)>
- ASEAN Secretariat. 2008. *Joint Statement of the 3<sup>rd</sup> ASEAN Education Ministers Meeting*. Malaysia, 15 March 2008, <[www.aseansec.org/21428.htm](http://www.aseansec.org/21428.htm)>
- ASEAN Secretariat. 2009. *Joint Statement of the 4<sup>th</sup> ASEAN Education Ministers Meeting*. Thailand, 5-8 April 2009, [www.aseansec.org/22485.htm](http://www.aseansec.org/22485.htm)
- ASEAN Secretariat. *Protocol to Amend the Framework Agreements on Enhancing ASEAN Economic Cooperation*. <[www.aseansec.org/12369.htm](http://www.aseansec.org/12369.htm)>
- ASEAN Secretariat. 2002. *Joint Press Statement of Thirty-Fourth Economic Ministers Meeting*, 12 September 2002. [www.aseansec.org/12549.htm](http://www.aseansec.org/12549.htm)
- ASEAN Secretariat. 2007. *ASEAN Integration in Services*. [www.aseansec.org/20663.htm](http://www.aseansec.org/20663.htm)
- ASEAN Secretariat. 2009. *Fourteenth ASEAN Summit, Thailand, 26 February – 1 March 2009*. <[www.aseansec.org/22210.htm](http://www.aseansec.org/22210.htm)>
- AUN Secretariat. 2007. *Workshop of the AUN Member Universities “Strategic Directions towards ASEAN Community 2015”* 2-3 November 2007. Thailand
- AUN Secretariat. *ABOUT AUN and AUN ACTIVITIES*. <[www.aun-sec.org](http://www.aun-sec.org)>
- Commission on Higher Education. 2005. *Statement of the Retreat Meeting of Ministers for Education in ASEAN Countries, 19 August 2005*. Thailand.
- John Ravenhill, 1995. *Economic Cooperation in Southeast Asia, Asian Survey, Vol. 35 No. 9, P.853*.
- SEAMEO RIHED, 2007. *SEAMEO RIHED Annual Report 2006-2007*. Thailand.

*The Development of Communicative English Learning Process for Local Cultural Communication*

Panornuang Sudasna Na Ayudhya

Bansomdejchaopraya Rajabhat University, Thailand

0274

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*Abstract*

The present research was aimed to investigate and to develop the communicative English learning process based on the necessary English communicative skills and contents for local cultural communication. The research methodology consisted of 3 phrases as: 1) to survey the necessary skills and contents of communicative English learning process for local cultural communication in which the samples consisted of 20 local administrators and teachers in the sampling schools in Samutsakorn Province, Thailand. The data was collected using questionnaires, 2) to develop the model of communicative English learning process for local cultural communication based on the results obtained from Phrase 1, and 3) to evaluate the communicative English learning process for local cultural communication with the sampling teachers' focus group. The results concluded that the developed process was appropriate because it facilitates the participation of related local people in determining process and content, the learning content was developed from local cultural knowledge resources, the learners were active to do the assigned tasks, and the development of learning and teaching process according to the local community need in using English for cultural communication.

**Keywords:** Learning Process/ Communicative English / Local Cultural Communication

## 1. Introduction

In terms of globalization, English language is generally known as a global language because of its various functions and preference rather than the other languages. English language is used as a necessary language tool for learning, business and social interaction purposes.

Thus, the concept of English language teaching should pay attention to what the learners learn or want to learn rather than what should be taught. Since a person is shaped by one's culture and local setting, we can assume that the cultural context will be an important aspect in language teaching and lead to higher awareness of the role of culture in the classroom

(Sowden C, 2007). In language teaching, it is necessary to teach language and its use, it is also important to develop the language skills in the context of the relation between language and culture because local context cannot separate from the use of language. Every language learners have their own cultural experiences and purposes of using a language. Thus, the language learners' cultural context should be considered during the language learning process in order to make the learning meaningful and relevant.

According to the above notion, the present research was interested in finding a way to make the language practical to its learners. The importance is that cultural setting is a significant aspect to facilitate the learner of English to learn it as the foreign language. This research focused on integrating learning English language and the experience of the learners.

The present research was aimed to investigate and to develop the communicative English learning process based on the necessary skills and contents for local cultural communication. The research methodology consisted of 3 phrases as to survey the necessary skills and contents of communicative English learning process for local cultural communication in which the samples consisted of 20 teachers in the sampling schools and local community administrators in Samutsakorn Province, Thailand which was research area and the data was collected using the questionnaires, to develop the model of communicative English learning process for local cultural community based on the study of local need and necessary, and to examine the communicative English learning process for local cultural communication with the sampling teachers' focus group.

## 2. Research Methodology

The research methodology consisted of 3 phrases.

**Phrase I:** The Study of Local Need and Necessary to Use English in Communication

Subjects 20 local administrators and English teachers from 5 primary schools in the research area, Samutsakorn Province. The clustering sampling method was used to select the samples.

Research Methods The data was collected using the questionnaires concerning the local need and necessary to use English in communication. The questionnaires asked the subjects to rank the English necessary skills and contents from the highest to the lowest order.

**Phrase II:** The Development of the communicative English learning process model for local cultural community.

Subjects 100 primary school students in the 5 sampling schools, Samutsakorn Province were selected using clustering sampling method. The 5 sampling primary schools in the research area were selected using random sampling method and then, 100 primary school students in the sampling schools were selected using random sampling method.

Research Methods The instruments were (1) the developed learning process, and (2) the teaching plans based on the learning process. The data was analyzed using content analysis. The procedure was presented following:

Development This step is to detail the elements of Communicative English Learning Process for Local Cultural Communication. The developed learning process and teaching plans were presented to 3 experts in the field of teaching English as foreign language. The process of developing the Communicative English Learning Process for Local Cultural Communication was illustrated in Figure 1.

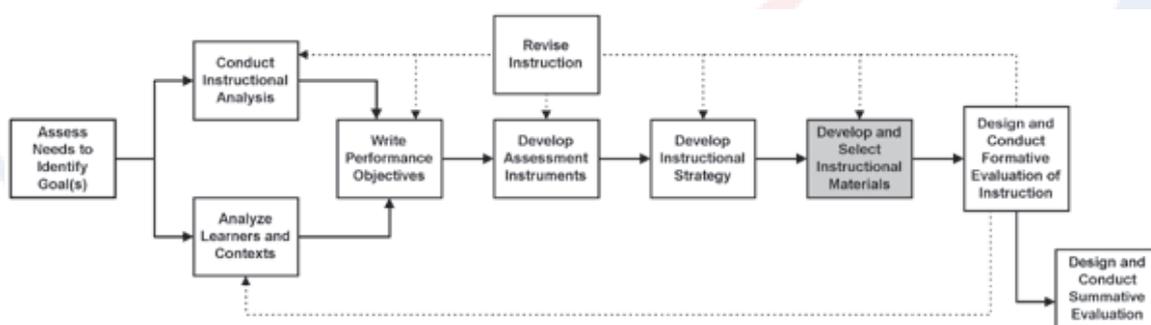


Figure 1 The Process of Developing Communicative English Learning Process for Local Cultural Communication

Improvement The developed learning process and teaching plans were improved based on the 3 experts' suggestions and then the improved learning process and teaching plans were presented to the 3 experts for reevaluation.

In addition, the English learning activity included in the teaching plans based on the developed communicative English learning process has 3 important characteristics as:

- 1) The activity was developed based on the theory and the notion related to Communicative English learning.
- 2) The content and activity related to the local cultural information and context.
- 3) The content and activity related to communicative English necessary skills and contents obtained from the study of phrase I.

### **Phrase III** The Evaluation of Developed Communicative English Learning Process for Local Cultural Communication

*Implementation* The developed communicative English learning process for local cultural communication was implemented to the 100 primary school student subjects.

*Evaluation* The developed communicative English learning process for local cultural communication was evaluated with the 20 sampling teachers' focus group. In the focus group, the 20 sampling teachers were asked to give the opinion towards the appropriateness of developed learning process.

*Data Analysis.* In doing data analysis, mean and standard deviation were adopted as tool to analyze data as the evaluation of specialists, and the opinion towards the appropriateness of the developed communicative English learning process for local cultural communication obtained from the sampling teachers' focus group was analyzed using content analysis method.

## **3. Research Results**

### The Study of Local Need and Necessary to Use English in Communication

The study of 20 local administrators and English teachers from 5 primary schools in the research area, Samutsakorn Province with the questionnaire concerning the need and necessary to use English in communication. The results revealed the rank of the English necessary skills and contents from the highest to the lowest need and necessary in terms of the numbers and percentages of subjects. The results were presented in Table 1 and 2.

*Table 1* English necessary skills from the highest to the lowest need and necessary

Necessary Skills	1 <sup>st</sup> Order		2 <sup>nd</sup> Order		3 <sup>rd</sup> Order		4 <sup>th</sup> Order	
	No	Percentage	No	Percentage	No	Percentage	No	Percentage
Listening	7	35	9	45	5	25	3	15
Speaking	8	40	7	35	2	10	2	10
Reading	3	15	2	10	7	35	6	30
Writing	2	10	2	10	6	30	9	45
TOTAL	20	100	20	100	20	100	20	100

From Table 1, 40 percentages of subjects agreed that speaking was ordered as the 1<sup>st</sup> necessary skill, 45 percentages of subjects agreed that listening was ordered as the 2<sup>nd</sup> necessary skill, 35 percentages of subjects agreed that reading was ordered as the 3<sup>rd</sup> necessary skill, and 45 percentages of subjects agreed that writing was ordered as the 4<sup>th</sup> necessary skill.

*Table 2* English necessary contents from the highest to the lowest need and necessary

Necessary Contents	1 <sup>st</sup> Order		2 <sup>nd</sup> Order		3 <sup>rd</sup> Order		4 <sup>th</sup> Order		5 <sup>th</sup> Order	
	No	Percentage								
Vocabulary	8	40	5	25	5	25	4	20	0	0
Grammar	4	20	6	30	4	20	4	20	0	0
Social Context Usage	5	25	4	20	8	40	2	10	5	25
Discourse	1	5	3	15	1	5	4	20	8	40
Communicative Strategy	2	10	2	10	2	10	6	30	7	35
TOTAL	20	100	20	100	20	100	20	100	20	100

From Table 2, 40 percentages of subjects agreed that vocabulary was ordered as the 1<sup>st</sup> necessary content, 30 percentages of subjects agreed that grammar was ordered as the 2<sup>nd</sup> necessary skill, 40 percentages of subjects agreed that social context was

ordered as the 3<sup>rd</sup> necessary skill, 30 percentages of subjects agreed that communicative strategy was ordered as the 4<sup>th</sup> necessary skill, and 40 percentages of subjects agreed that discourse was ordered as the 5<sup>th</sup> necessary skill.

#### 4. The Development and Evaluation the communicative English learning process model for local cultural community

The learning process was developed based on the results of local need study. This learning process consisted of the teaching plan, activity, exercises, pretest and posttest. The content related to the local culture of Samutsakorn province. The developed learning process was taught to 100 primary school students in the 5 sampling schools, Samutsakorn Province. They were selected using clustering sampling method. The sampling primary schools in the research area were selected using random sampling method and then, the students in the sampling schools were selected using random sampling method. The appropriateness of the developed learning process was evaluated with the sampling teachers' focus group. The data was analyzed using content analysis. Data analysis was presented in terms of the analysis of pretest and posttest achievement scores obtained from the sampling students, and the appropriateness of the developed learning process obtained from the teachers' focus group.

Table 3 Comparison of achievement scores between pretest and posttest  
n = 100

Test	Mean	S.D.	T	Df
Pretest	6	1.26	20.78*	8
Posttest	8	0.26		8

According to Table 3, the achievement in the posttest was significantly higher than in the pretest ( $t = 20.78$ ) at .05 significant level. The opinion of sampling teachers towards the appropriateness of the developed learning process revealed the subjects agreed in the appropriateness of the developed learning process in the following aspects.

1. The participation of local to determine the process and content of learning.
2. The learners learn English through the local knowledge and resources.
3. The learning process is suitable to the learners' English learning purposes
4. The learning process is suitable to the local English learning purposes

## 5. Conclusions and Discussions

The study of 20 sampling local administrators and English teachers from 5 primary schools in Samutsakorn Province concerning the need and necessary to use English in communication revealed that most of subjects agreed that speaking was ordered as the 1<sup>st</sup> necessary skill, listening as the 2<sup>nd</sup> necessary skill, reading as the 3<sup>rd</sup> necessary skill, writing as the 4<sup>th</sup> necessary skill. In addition, most of subjects agreed that vocabulary was ordered as the 1<sup>st</sup> necessary content, grammar as the 2<sup>nd</sup> necessary skill, social context as the 3<sup>rd</sup> necessary skill, communicative strategy as the 4<sup>th</sup> necessary skill, and discourse as the 5<sup>th</sup> necessary skill.

The comparison between the scores obtained from 100 primary school students in the 5 sampling schools, Samutsakorn Province which was taught by the developed learning process revealed that the achievement in the posttest was significantly higher than in the pretest ( $t = 20.78$ ) at .05 significant level. According to the opinion of sampling teachers towards the effectiveness of the developed learning process, the subjects agreed in the effectiveness of the developed learning process because of the local participation in determining the process and content of learning, using the local knowledge and resources in learning process, and the effectiveness to the learners' English learning purposes and the local English learning purposes.

The results indicated that the teacher of English should realize the importance of local content and context and the use of language materials and resources reflecting local culture in teaching or learning a language and the objectives on inclusion of local culture and context should be involved in English language teaching. This leads to the meaningful and applicable language-learning process.

This research has assumed that the developments in English language learning process based on the local context and resources encourage the effective and meaningful English communicative learning.

## Bibliography

- Brown, D. H. (1994). *Principle of language learning and teacher*. New Jersey: Prentice Hall.
- Brookfield, s. (1990). *The skillful teacher*. San Francisco: Jasey-Bass.
- Curry, L. (1983). Pattern of learning style across selected medical specialties. *Educational Psychology* 11 (May 1989): 247-278
- Coccosis, H & Nijkamp, P. (1995). *Sustainable tourism development*. Brookfield: Avebury.
- Dewey, J. (1959). *Experience and education*. Albuquerque: Kappa Delta Phi.
- Dunn, R., K. Dunn and G.E. Price. (1978). *Teaching students through their individual learning styles*. Reston, VA: Reston Publishing.
- Dunn, R (1979). Learning-A matter of style. *Educational Leadership* 6(July 1979): 430-432.
- Ellis, R. (1985). *Understanding second language acquisition*. UK: Oxford University Press.
- Kolb, D.A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Littlewood. (1981). *Communicative language teaching: An introduction*. Cambridge: Cambridge University Press.

*Modern vs. post-modern teacher education: Revealing contrasts in beliefs and practices*

Marius Boboc

Cleveland State University, USA, National University, USA

0282

The Asian Conference on Education 2013

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**Keywords:** Higher education; Teacher preparation; Modernism; Post-Modernism

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Upon analysis of teacher preparation programs, those using a modernist approach to curriculum and instruction focus on training teacher candidates to utilize instructor-centered pedagogical strategies, standardized curricula published by sources outside the school, and assessment systems that provide easily quantifiable data to be used to satisfy administrators who may use “data-driven” instead of “data-informed” management (Hargreaves and Fullan, 2012). By contrast, a post-modernist approach educates teachers to foster student-centered instruction/facilitation of learning, teacher-developed curriculum based on research and knowledge of student needs, and a variety of assessment strategies, including formative assessment designed to support assessment for learning (Chappuis, 2009). The use of the verbs “train” and “educate” is important when contrasting these two approaches. The former connotes a relatively simplistic transfer of knowledge and skills from an expert to novices, while the latter infers a gradual acquisition of a knowledge base leading to the development of associated skills and professional dispositions.

The accountability movement, at least since the publication of *A Nation at Risk* in 1983, has underscored an emphasis on increased knowledge acquisition that has to align with a marketable transfer of skills to various workplaces. Production has become “post-modernized” by eliminating the familiar path to economic progress demonstrated by leading developed countries (Peters and Besley, 2006). However, education policies still attempt to use modernist approaches in managing educational settings when students and the world in which they live are post-modern. There is no more dominant metanarrative (Lyotard, 1984) to structure curriculum development. Moreover, in a knowledge economy (Trani and Holsworth, 2010), higher education institutions have undergone a transformation by developing curricula that emphasize skills sets sought after by employers, while promoting alternative content delivery methods, such as e-learning.

- Description of the approach to the given problem:

Cunningham and his colleagues (as cited in Peters and Besley, 2006, p. 25) outline several traits of what they label as “borderless education”:

- a) globalization;
- b) new instructional technologies (more of which capitalize on virtual communities that use and produce knowledge);
- c) transferable best practices;
- d) adaptability to new learning paradigms and content delivery modes;
- e) increasing cost of education (both for the public at large and individual students);
- f) stricter certification or licensure requirements derived from redefining professionalism in various fields of activity; and
- g) Generation Xers.

Current curriculum work is still derived from content and skills that are connected in a prescriptive manner (Alba, Gonzalez-Gaudio, Lankshear, and Peters, 2000). As far as teacher education is concerned, policy affects it in terms of curriculum as well as credentials offered upon graduation from such programs.

From this review of the literature and based on Sahlber’s (2011) work on schools in Finland, we have developed the following table that contrasts a modern and post-

modern teacher education program in terms of for what the program prepares its graduates to do in their practice:

### Modern/Post-Modern Teacher Education Contrasts

Modern advocates in theory and/or practice	Post-Modern advocates in theory and/or practice
<p><b>1. Standardizing teaching and learning</b></p> <p>a. Setting clear, high, and centrally prescribed performance expectations for all schools, teachers, and students to improve the quality and equity of outcomes.</p> <p>b. Standardizing teaching and curriculum in order to have coherence and common criteria for measurement and data.</p>	<p><b>1. Customizing teaching and learning</b></p> <p>a. Setting a clear but flexible national framework for school-based curriculum planning.</p> <p>b. Encouraging local and individual solutions to national goals in order to find best ways to create optimal learning and teaching opportunities for all.</p> <p>c. Offering personal learning plans for those who have special educational needs</p>
<p><b>2. Focus on literacy and numeracy</b></p> <p>a. Basic knowledge and skills in reading, writing, mathematics, and the natural sciences serve as prime targets of education reform. Normally instruction time of these subjects is increased.</p>	<p><b>2. Focus on creative learning</b></p> <p>a. Teaching and learning focus on deep, broad learning, giving equal value to all aspects of the growth of an individual's personality, moral character, creativity, knowledge, and skills.</p>
<p><b>3. Teaching prescribed curriculum</b></p> <p>a. Reaching higher standards as a criterion for success and good performances.</p> <p>b. Outcomes of teaching are predictable and prescribed in a common way.</p> <p>c. Results are often judged by standardized tests and externally administered tests.</p>	<p><b>3. Encouraging risk-taking</b></p> <p>a. School-based and teacher-owned curricula facilitate finding novel approaches to teaching and learning, and encourage risk-taking and uncertainty in leadership, teaching, and learning.</p>
<p><b>4. Borrowing market-oriented reform ideas</b></p> <p>a. Sources of educational change are management administration models brought to schools from the corporate world through legislation or national programs.</p> <p>b. Such borrowing leads to aligning schools and local education systems to operational logic of private corporations.</p>	<p><b>4. Learning from the past and owning innovations</b></p> <p>a. Teaching honors traditional pedagogical values, such as teacher's professional role and relationship with students.</p> <p>b. Main sources of school improvement are proven good educational practices from the past.</p>
<p><b>5. Test-based accountability and control</b></p> <p>a. School performance and raising student achievement are closely tied to processes of promotion, inspection, and ultimately rewarding schools and teachers.</p> <p>b. Winners normally gain fiscal rewards, whereas struggling schools and individuals are punished. Punishment often includes loose employment terms and merit-based pay for teachers.</p>	<p><b>5. Shared responsibility and trust</b></p> <p>a. Gradually building a culture of responsibility and trust within the education system that values teacher and principal professionalism in judging what is best for students.</p> <p>b. Targeting resources and support to schools and student who are at risk to fail or to be left behind.</p> <p>c. Sample-based student assessments.</p>

Adapted from Sahlberg, P. (2011, p. 103). *Finnish lessons: What can the world learn from educational change in Finland?* New York: Teachers College Press.

- Results, including how findings relate to previous work:

Based on the feedback collected from more than 140 instructors in an educational leadership program at a private university in Southwest U.S., there is an apparent “tension” stemming from the disconnect between what seems to be the belief sets and practices of the respondents. There are encouraging signs that these individuals favor flexible curricula that allow for teacher autonomy in identifying appropriate pedagogies to meet the needs of specific groups of students. At the same time, there seems to be validation of a systematic (or “centralized”) approach to student learning assessment based on which academic progress could be made and demonstrated. By grouping the survey items that relate to either one of the poles of our theoretical model included in the preceding table, 12 out of the 26 items relate to the post-modern tenets listed above, while the remaining 14 support the modern stance in terms of teacher education. A majority of the respondents either agreed or strongly agreed (ranging from 52% to 99%) on all of the 12 post-modern items. On 7 of the 14 modern-leaning items a majority of respondents (ranging from 60% to 91%) either agreed or strongly agreed with the survey statements. Of particular interest are 6 items from the modern category where most of the respondents (ranging from 55% to 90%) disagreed or strongly disagreed with the statements, which would place them outside the modernist approach to teacher education when it comes to prescriptive school curricula, market-driven reform initiatives, and assessment/accountability.

These findings correlate with earlier work related to the student-centered ways in which school curricula (and, by extension, teacher preparation programs) structure learning opportunities for all students as a flexible, contextualized manner to support the development of 21<sup>st</sup>-century skills (Hayes Jacobs, 2010). The researchers’ intent is to use the findings from this survey to further investigate specific examples of successful teacher preparation programs that integrate the various meanings and applications of teacher candidates’ knowledge bases, skill sets, and dispositions to transition effectively to the first years of classroom practice.

- Implications or relevance of work for others (including how generalizable the findings are):

These findings are intended to support further contributions to the literature related to the impact of economy, technology, and curricula on the strategic planning processes in teacher education programs across the United States. A particular focus will be placed on critical issues that are an integral part of the fabric of effective programs in the field of teacher preparation, such as student population diversity, self-expression, creative and critical thinking, metacognition, as well as professional dispositions.

- Final paragraph in which to indicate what has been concluded:

The analysis of our data indicates that the participating American teacher educators align their professional beliefs with post-modernist tenets related to teacher preparation in terms of customizing teaching and learning, focusing on creative learning, encouraging risk-taking, and promoting innovations in education. However, when it comes to shared responsibility and trust (closely associated with student

assessment and teacher accountability), there is a stronger presence of a modernist stance in the participants' responses.

- Reference of proposal:

The proposal centers on a comparative analysis of teacher educators' responses to a survey dealing with two theoretical stances to teacher preparation. A modernist approach emphasizes instructor-centered pedagogical strategies, commercial standardized curricula, and highly quantitative assessment systems that meet "data-driven" management requirements. By contrast, a post-modernist approach promotes student-centered instruction, teacher-developed curricula based on research and knowledge of student needs, and a variety of assessment strategies, including formative assessment designed to support assessment for learning. The application of findings is intended to inform professional conversations aimed at restructuring teacher education programs in the U.S. as a way to connect teacher candidates' knowledge, skills, and dispositions with the increasingly diverse reality of the classrooms where they are going to be teaching in the 21<sup>st</sup> century.

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## References

- Alba de, A. Gonzalez-Gaudio, E., Lankshear, C., & Peters, M. (2000). *Curriculum in the postmodern condition*. New York: Peter Lang.
- Cary, L. J. (2006). *Curriculum spaces: Discourse, postmodern theory and educational research*. New York: Peter Lang.
- Chappuis, J. (2009). *Seven strategies of assessment for learning*. Boston: Pearson.
- Cunningham, S. D. et al. (2000). The business of borderless education. In M. A. Peters & A. C. Besley, *Building knowledge cultures: Education and development in the age of knowledge capitalism* (p. 25). Lanham, MD: Rowman& Littlefield Publishers, Inc.
- Darling-Hammond, L. (2010). *The flat world and education: How America's commitment to the equity will determine our future*. New York: Teachers College Press.
- Hargreaves, A., Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. New York: Teachers College Press.
- Hayes Jacobs, H. (2010). *Curriculum 21: Essential education for a changing world*. Alexandria, VA: Association of Supervision and Curriculum Development.
- Liotard, J. F. (1984). *The postmodern condition: A report on knowledge*. Minneapolis: University of Minnesota Press.
- Peters, M. A. & Besley, T. (2006). *Building knowledge cultures: Education and development in the age of knowledge capitalism*. Lanham, MD: Rowman& Littlefield Publishers, Inc.
- Sahlberg, P. (2011). *Finnish lessons: What can the world learn from educational change in Finland?* New York: Teachers College Press.
- Trani, E. P. & Holsworth, R. D. (2010). *The indispensable university: Higher education, economic development, and the knowledge economy*. Lanham, MD: Rowman & Littlefield Publishers, Inc.
- U.S. Department of Education, National Commission on Excellence in Education. (1983, April). *A nation at risk: The imperative for educational reform*. Retrieved from [http://datacenter.spps.org/uploads/sotw\\_a\\_nation\\_at\\_risk\\_1983.pdf](http://datacenter.spps.org/uploads/sotw_a_nation_at_risk_1983.pdf)
- Wolk, R. A. (2011). *Wasting minds: Why our education system is failing and what we can do about it*. Alexandria, VA: Association of Supervision and Curriculum Development.

*Democracy, Trust, Responsibility, and Global Workforce Competence: A Case Study Revisited*

R.D. Nordgren

National University, USA

0283

The Asian Conference on Education 2013

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**Keywords:** Democracy, national policy, trust, responsibility

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**Description of the approach to the given problem:**

The attention of U.S. education policy makers has finally gone overseas, based in part, to the publication of *Finnish Lessons* (Sahlberg, 2011) and *Surpassing Shanghai* (Tucker, 2012). These books examine why Finland, Japan, Singapore, and other countries' education systems are often deemed superior to the P-12 system in the U.S. Media (e.g., CBS News Sunday Edition, *The New York Times*; *The Atlantic*; *Seattle Times*) have chronicled the warnings found in these books, and U.S. education officials are also taking notice (Partanen, 2011). Swedish schools, which were deemed by the researcher to be an excellent example of progressive education in practice (Nordgren, 2003) were the model for the Finnish system (Sahlberg, 2011), but have undergone some key changes ostensibly due to poor results in the Program for International Assessment (PISA) test (see <http://www.oecd.org/pisa/>). These changes coincided with a national political shift in Sweden with a moderate-right coalition gaining power after the 2006, and again in 2010, national elections and instituting some market-driven strategies such as school-choice and frequent testing (Wiborg, 2010).

**Research Questions**

The questions guiding the re-examination were as follow:

1. What are students', teachers', and administrators' perceptions of the fostering of democracy, trust, student responsibility, and Global Workforce Competence at their schools?
2. To what extent are these perceptions supported by classroom observations and interviews?
3. What differences exist between these data collected and those from the original study conducted in 2001?

**Methods**

Context. The three schools in this study form a "feeder" system consisting of an elementary, a middle, and a high school; one school "feeds" students into the next. The community (kommun, similar to a U.S. township) has approximately 30,000 inhabitants; the population has been steady for the past 20 years (<http://www.citypopulation.de/php/sweden-sodermanland.php?adm2id=0483>) although immigration has been on the increase. Immigrants generally come from Somalia, the Middle East, and Southeast Asia. There are four high schools (gymnasietskola), six elementary schools (grundskola), two middle schools, and three "free schools".

Instruments. Surveys of teachers, principals, and 18 and 19-year old upper secondary students examined the variables of democratic learning environments, trust, student responsibility, and "Global Workforce Competence" (teamwork, pragmatic technical skills, critical thinking, and entrepreneurship). One survey was used for teachers (Appendix B) and a different one for students (Appendix C). In addition, structured individual and focus group interviews of the same population of participants took place at the school sites, conducted solely by the researcher (Appendices D and E). Classroom observations focused on instructional methods, interactions between teachers and students, and the physical environments which may impact the four variables listed above.

**Results, including how findings relate to previous work:**

Several themes emerged when the 2013 data were analyzed in relation to the 2001 findings. As previously mentioned, the observations and interviews were conducted prior to the administration of the surveys.

#### Teacher Interviews.

- *Immigration*
  - o How to meet the needs of first-and-second generation immigrant students including a need for professional development in this area
- *Technological enhancements*
  - o Laptop computers for all students in the middle and high schools, use of the schools' websites, increases use of email students as a form of communication with students and parents
- *Skolverket mandates*
  - o Increased frequency of national tests
  - o Grading of tests by teachers

#### Student Interviews (two separate groups).

- Students' awareness of Skolverket's impact on their schooling
- School funding concerns (e.g., no substitutes leading to canceled classes, canceled field trips)
- Teacher burn-out and rigidity

Informal discussions. The highlight of these discussions was a meeting after the first day of observations at the school board offices. In attendance were the superintendent, the assistant superintendent, another district-level administrator, two school board members, a newspaper reporter and photographer, and a former principal who participated in the 2001 study. This meeting was dictated by the questions from the reporter but still gave the researcher some insight into the themes driving this study: democratic learning environments, trust, responsibility, and Global Workforce Competence. The conversation centered on the differences in the community since the researcher was last there, 12 years prior. Immigration had a great impact on the schools as they struggled to ensure they could meet the needs of first-generation immigrants from Africa, the Middle East, and Southeast Asia.

In other discussions, the topic of free schools came up frequently. The new political climate in Stockholm favors market approaches to improve schools; therefore, the proliferation of what are, essentially, publicly-funded private schools many of which are run by for-profit companies (Wiborg, 2011);. Many pointed out to the researcher that public schools lose per-pupil funding when a student leaves to attend a free school, regardless of how long that student stayed at the free school. For instance, if a student were to attend a free school only the first week of school in September, her funds for the entire school year would stay with the free school but a public school would be obligated to educate her—with no funds from any government source allocated for that student. The consensus of those engaged in discussions with the researcher about free schools was that they had an unfair advantage over public schools. Free schools also came up in the teacher interviews as will be discussed later.

Another topic of discussion was the triennial inspection of schools conducted by the Swedish Schools Inspectorate (see [http://www.skolverket.se/om-skolverket/om-oss/in\\_english](http://www.skolverket.se/om-skolverket/om-oss/in_english)). These are focused on one particular aspect of the school such as curriculum alignment or budget. A stated focus is communicated to the school months in advance of a site visit. This visit in the form of an inspection lasts only a

few days and often interviews administrators, teachers, and students. These inspections may be more serious endeavors than in the past as no mention of these was made in the 2001 study (Nordgren, 2001).

These informal discussions, as well as the teacher interviews, revealed a concern over the grading of the national tests. The 1994 reforms required students to be tested the last year of compulsory education when they were generally 15 when they are in their ninth year. Communities could decide on their own whether or not their fifth-year students would take another national test. The reforms, subsequent to the 2006 national elections, required each student to be tested every year (Swedish, English, mathematics—same subjects as before). Teachers were tasked with grading tests from their own schools based on a grading rubric provided by the Skolverket (see Appendix F). Both the teachers and those in the informal discussions had some concerns about the validity and reliability of these assessments (see Teacher Interviews for more on this topic). Apparently so did the Skolverket; some had heard they were considering taking the assessment duties away from local teachers and centralizing them in Stockholm.

The topic of school reform was brought up by the researcher on several of these informal discussions with school and community people. Sweden's recent PISA results were attributed for the apparent embracing of market-driven policies with politicians purportedly believing the schools had become too lax and needed competition to get better.

### **Observations**

Superficially, very little had changed since the 2001 study. Attire was casual through the schools as teachers still usually wore jeans with sweaters. Not once in the 2001 study or in this study did the researcher see a man wearing a tie. Students in the middle and high schools got up to go to the bathroom, apparently, without teacher permission (a student in one of the interviews had spent a year as an exchange student in Indiana and was horrified by the fact high school students there had to have hall passes as if “we were in prison or something.”) Student supervision was all but missing but, apparently, not needed in these schools. Teachers dismissed students without bells and did not appear too concerned about the actual end time of the class. Students would leave and congregate in hallways or go to recreation spots in the school such as “the cave” at the middle school. This was located in the cellar of the cafeteria, a renovated indoor tennis court, where several pool tables, couches, and chairs were filled with teenagers during the middle of the school day. A snack bar loosely supervised by a school board employee provided semi-nutritious snacks and drinks (no carbonated sugary beverages, only fruit juices). There seemed to be a high demand for bread and butter and fruit. As in 2001, no adult supervision was found in the middle or high school cafeteria although some adults did eat lunch in these places. Student behavior was remarkably good.

At the elementary school, teachers took turns watching children at recess and at lunch. The cafeteria was well run here as at the other schools where students needed no instructions to scrape their plates and place them, their glasses and silverware into the proper places. And no paper or plastic cups over utensils were used, only plastic plates as, it was explained, these were not as heavy a load for the cafeteria workers.

Classes were quite small, the same as in 2001, with an average of between 15 to 20 students at all three schools. However, unlike the previous study where no teacher was seen standing in front of a class and lecturing, on several occasions teachers were leading whole-class lessons from the front of the room. At the elementary school, a teacher stood in front and read non-stop to her students for about 30 minutes. Still, the classes were mostly operated using constructivist practices which are student-centered; this relative to what one would likely see in the U.S.

A major difference from the 2001 observations was that all middle and high school students had a community-purchased laptop computer. The community had decided to do this for pedagogical reasons, but more than one teacher and several students thought it was a way to convince students not to attend free schools. In fact, one student in an interview said with a laugh, “they are bribing us.”

### **Surveys**

#### **Data Analysis**

An analysis of variance was used to compare and contrast the key variables of this study for across the study’s three sites. The use of an “ANOVA” to examine the variables and sites gave the researcher clues as to what may be factors in any differences (Gall, Gall, and Borg, 2009). These analyses can be found in Tables 2 and 3.

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**Table 2: ANOVA Significances for 2001 and 2013 Teacher Survey Results**

2001 Larare		2013 Larare				
Ques	Mean	Ques	Mean	df	ANOVA	Significance Level
1	3.78	1	3.55	1/63	1.338	N/S
2	3.64	2	2.36	1/62	28.872	P<.001 (11.97)
3	2.79	3	2.24	1/47	3.486	N/S
4	3.48	4	1.23	1/62	277.066	P<.001 (11.97)
5	3.25	5	1.64	1/60	98.157	P<.001 (11.97)
6	3.73	6	1.14	1/65	483.724	P<.001 (11.97)
7	3.17	7	1.68	1/60	51.953	P<.001 (11.97)
8	3.79	8	1.05	1/67	855.074	P<.001 (11.97)
9	3.84	9	1.19	1/64	705.466	P<.001 (11.97)
10	3.09	10	1.91	1/54	32.823	P<.001 (12.61)
11	2.97	11	1.50	1/53	81.817	P<.001 (12.61)
12	3.47	12	1.09	1/63	356.052	P<.001 (11.97)
13	3.53	13	1.33	1/66	282.892	P<.001 (11.97)
14	3.03	14	2.23	1/53	9.633	P<.005 (8.83)
15	3.53	15	1.73	1/65	88.091	P<.001 (11.97)
16	2.59	16	1.55	1/47	14.884	P<.001 (12.61)
17	3.60	17	1.14	1/62	425.807	P<.001 (11.97)
18						
19	3.69	18	2.23	1/68	72.486	P<.001 (11.97)
20	3.32	19	1.45	1/45	168.204	P<.001 (12.61)
21						
22						
23	3.17	20	1.62	1/55	97.323	P<.001 (12.61)
24	3.10	21	1.48	1/49	72.751	P<.001 (12.61)
25	3.22	22	1.36	1/65	223.134	P<.001 (11.97)
26	3.06	23	1.55	1/55	79.562	P<.001 (12.61)

**Table 3: ANOVA Significances for 2001 and 2013 Student Survey Results**

2001 Elever		2013 Elever				
Ques	Mean	Ques	Mean	df	ANOVA	Significance Level
1	2.94	1	2.53	1/119	3.982	N/S
2	3.15	2	1.84	1/140	97.763	P<.001 (11.38)
3	2.25	3	2.79	1/102	6.386	P<.05 (4.00)
4	3.35	4	2.21	1/143	54.868	P<.001 (11.38)
5	2.58	5	2.89	1/126	1.998	N/S
6	3.28	6	1.84	1/141	83.579	P<.001 (11.38)
7	2.85	7	2.50	1/114	2.339	N/S
8	2.98	8	1.83	1/101	9.743	P<.005 (8.49)
9	3.50	9	1.83	1/151	131.989	P<.001 (11.38)
10	2.88	10	2.11	1/114	19.123	P<.001 (11.38)
11	3.32	11	2.00	1/132	79.842	P<.001 (11.38)
12	2.82	12	2.32	1/96	5.940	P<.05 (4.00)
13	2.84	13	2.29	1/92	4.991	P<.05 (4.00)
14	3.37	14	1.78	1/142	122.187	P<.001 (11.38)
15	3.25	15	1.47	1/139	151.542	P<.001 (11.38)
16	2.37	16	1.63	1/120	10.036	P<.005 (8.18)
17	3.68	17	1.79	1/152	195.057	P<.001 (11.38)
18	2.98	18	1.63	1/98	67.455	P<.001 (12.61)
19						
20	3.14	19	2.05	1/127	33.610	P<.001 (11.38)
21	2.82	20	2.16	1/118	6.970	P<.05 (4.00)
22	3.16	21	1.95	1/133	51.132	P<.001 (11.38)
23	2.91	22	2.32	1/107	7.891	P<.05 (7.08)

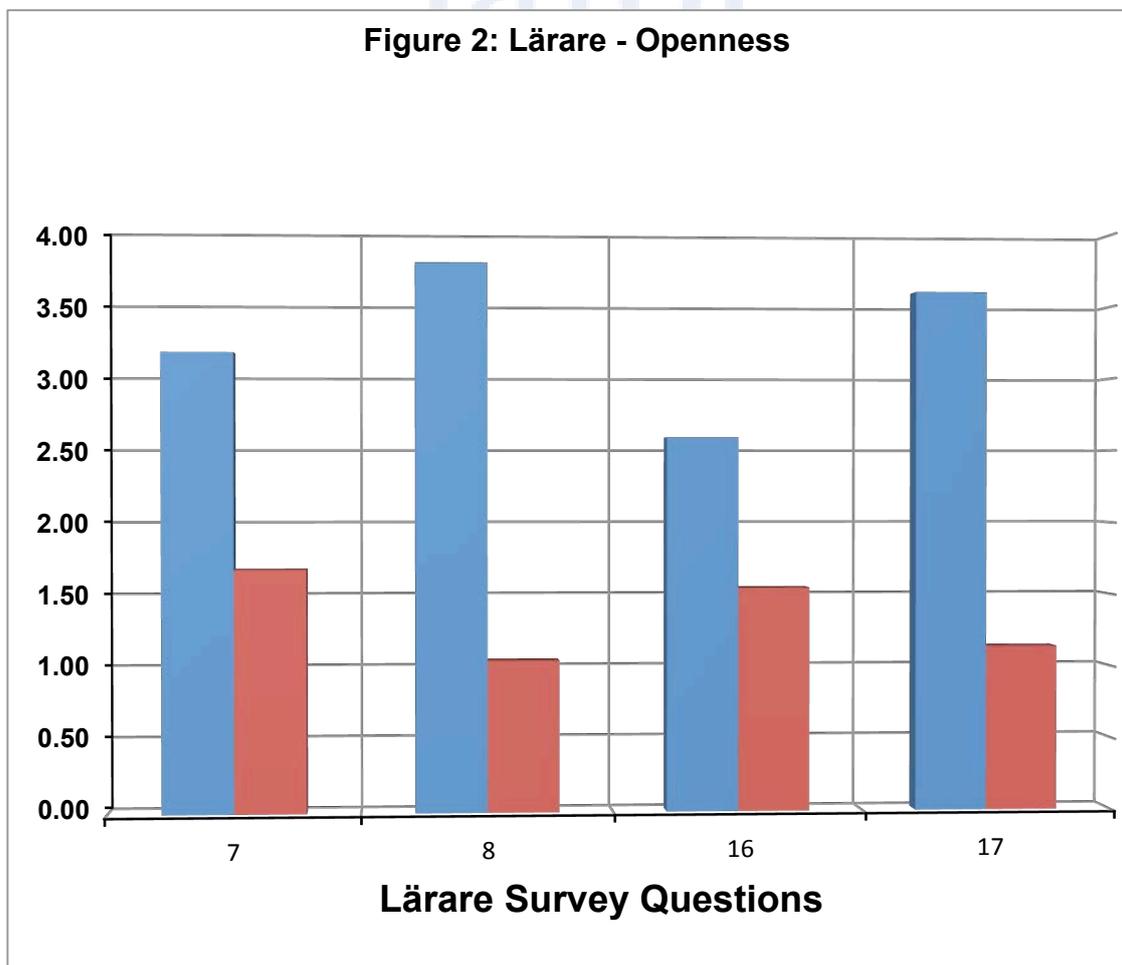
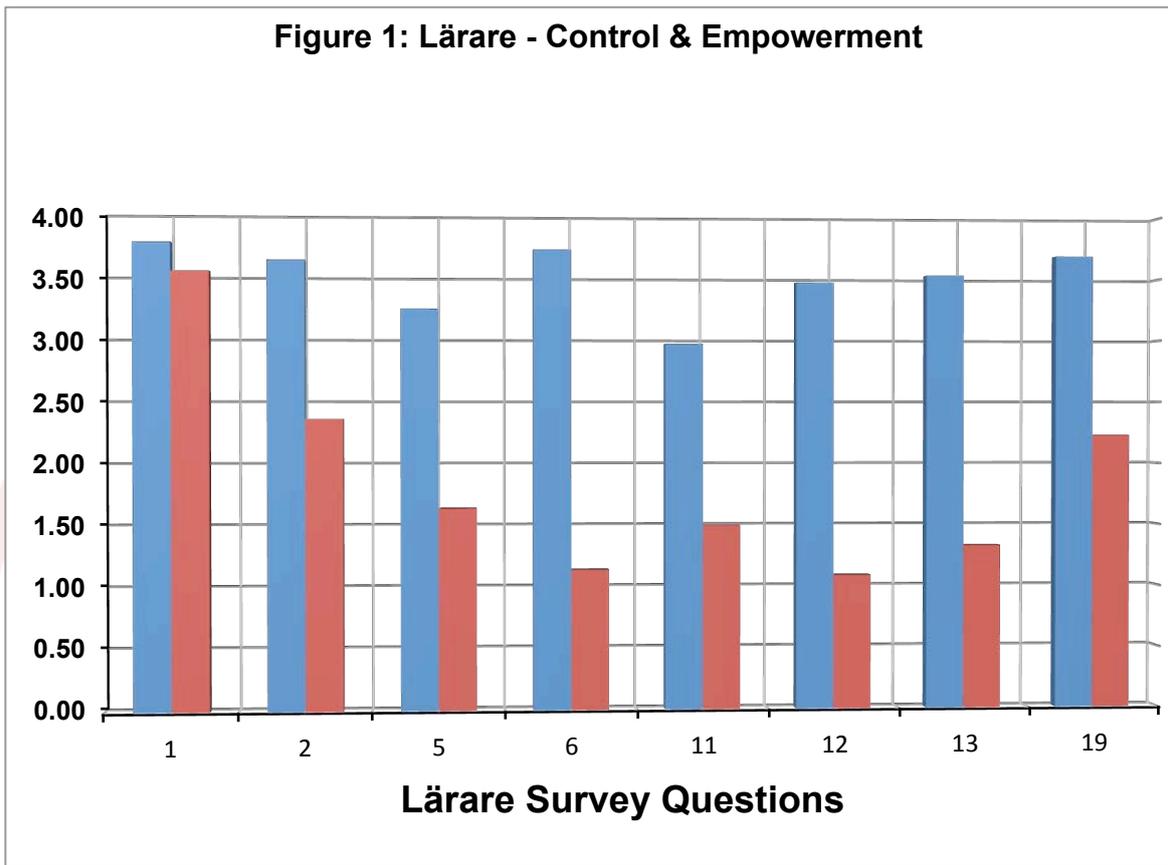
*Grounded theory* was employed in the gathering of qualitative data while *coding* was used to examine these data derived from the interview notes and the classroom observations (Gall, Gall, and Borg, 2009). Themes were culled from this analysis and presented in the next section. These themes were analyzed against the results of the survey data (see Findings and Conclusions).

#### Theme Clusters

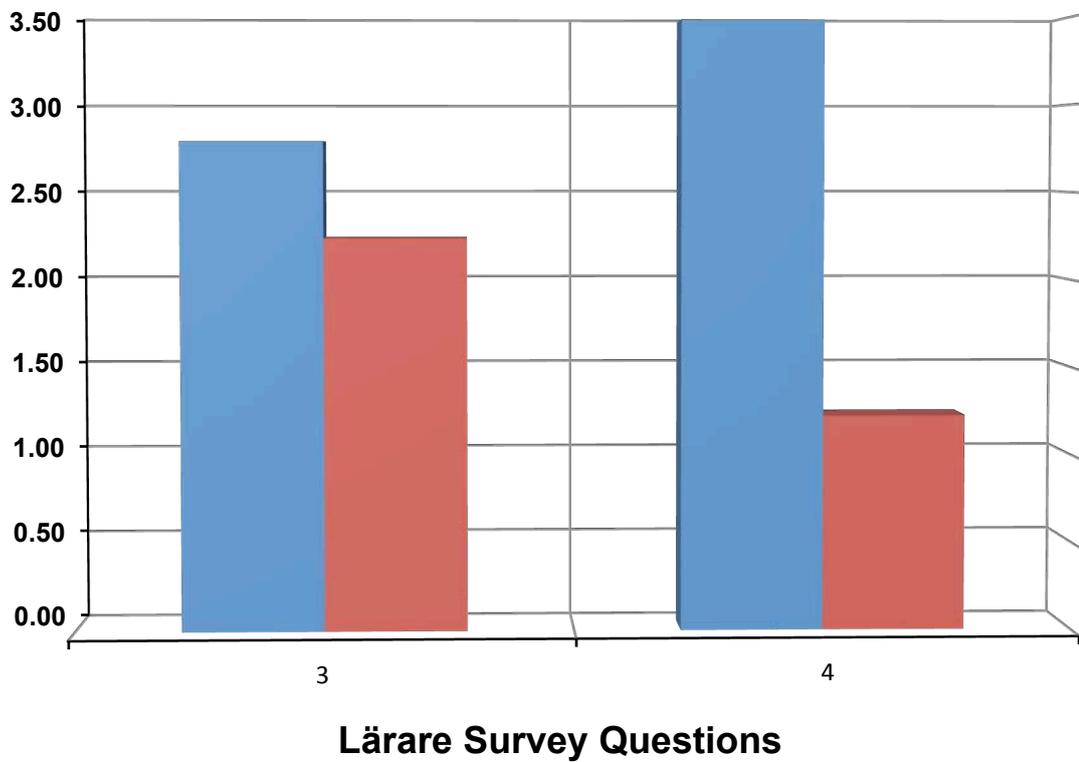
Survey items were grouped into the following “theme clusters” of control, openness, responsibility, and Global Workforce Competence (GWC). These were formulated based on an analysis of the 2001 data. Table 4 shows these clusters and the corresponding items from the 2001 and 2013 surveys. Figures 1 – 8 are graphic illustrations of the results of analyzing the survey data into these clusters.

**Table 4: Theme Clusters**

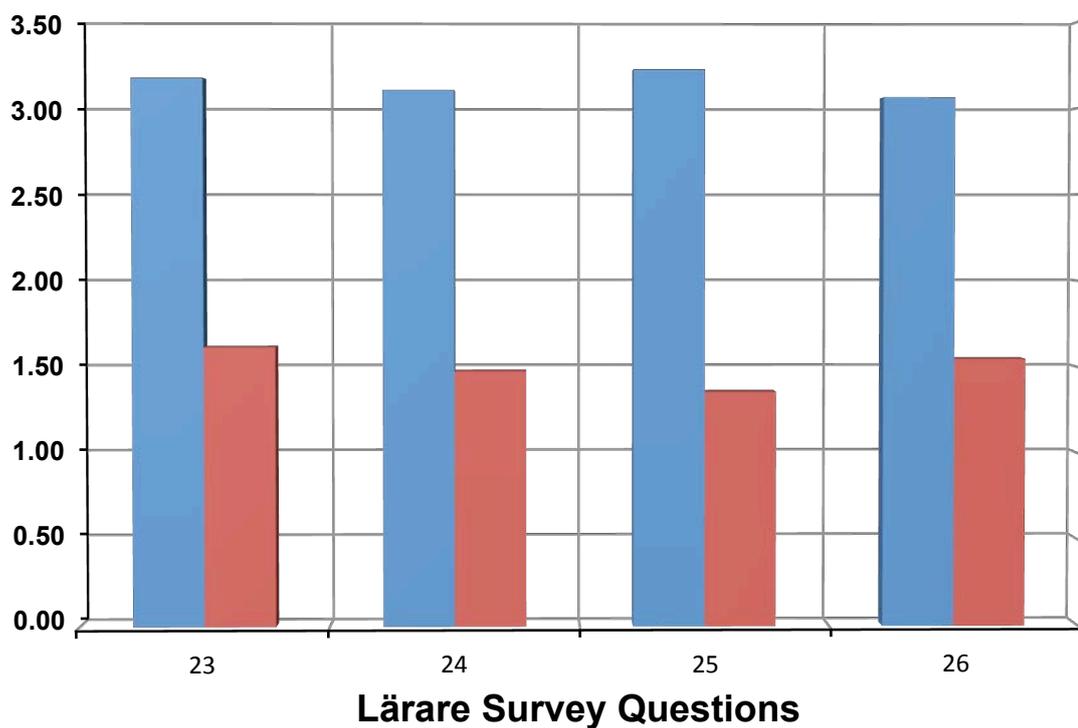
	Teachers/Lärare Survey	Students/Elever Survey
Control & Empowerment	2001: 1,2,5,6,11,12,13,15,19,20 2013: 1,2,5,6,9,10,11,12,13,18,19	2001: 2,3,4,5,8,9,10,11,12,13,14,15 2013: 2,3,4,5,9,10,11,12,14
Openness	2001: 7,8,16,17,18 2013: 7,8,16,17	2001: 16,17 2013: 16,17
Responsibility	2001: 3,4,9,10,21,22 2013: 3,4,14,15	2001: 1,6,7,18,19 2013: 1,6,7,8,13,15,18
Global Workforce Competence	2001: 23,24,25,26 2013: 20,21,22,23	2001: 20,21,22,23 2013: 19,20,21,22



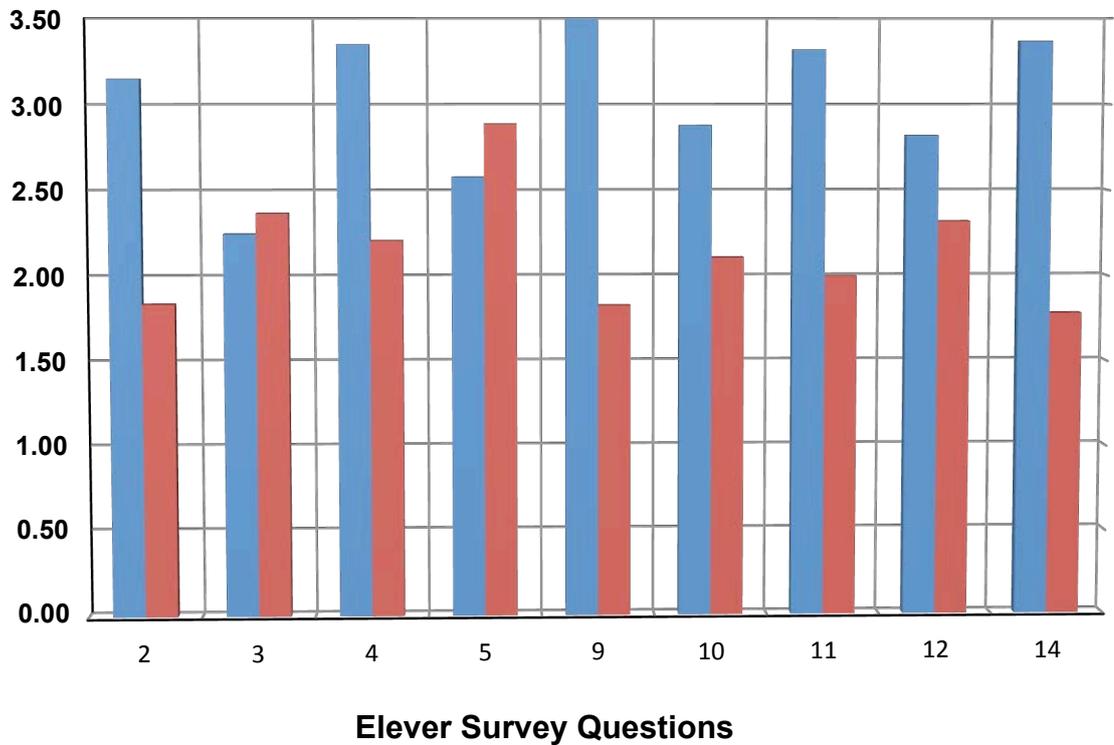
**Figure 3: Lärare - Responsibility**



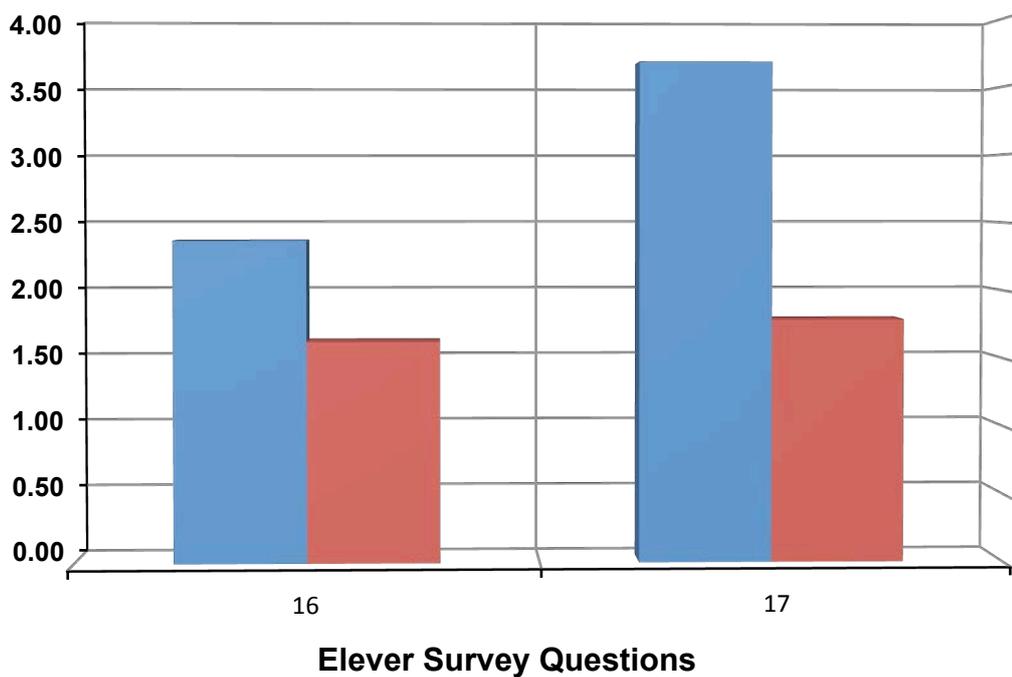
**Figure 4: Lärare - Global Workforce Competence**



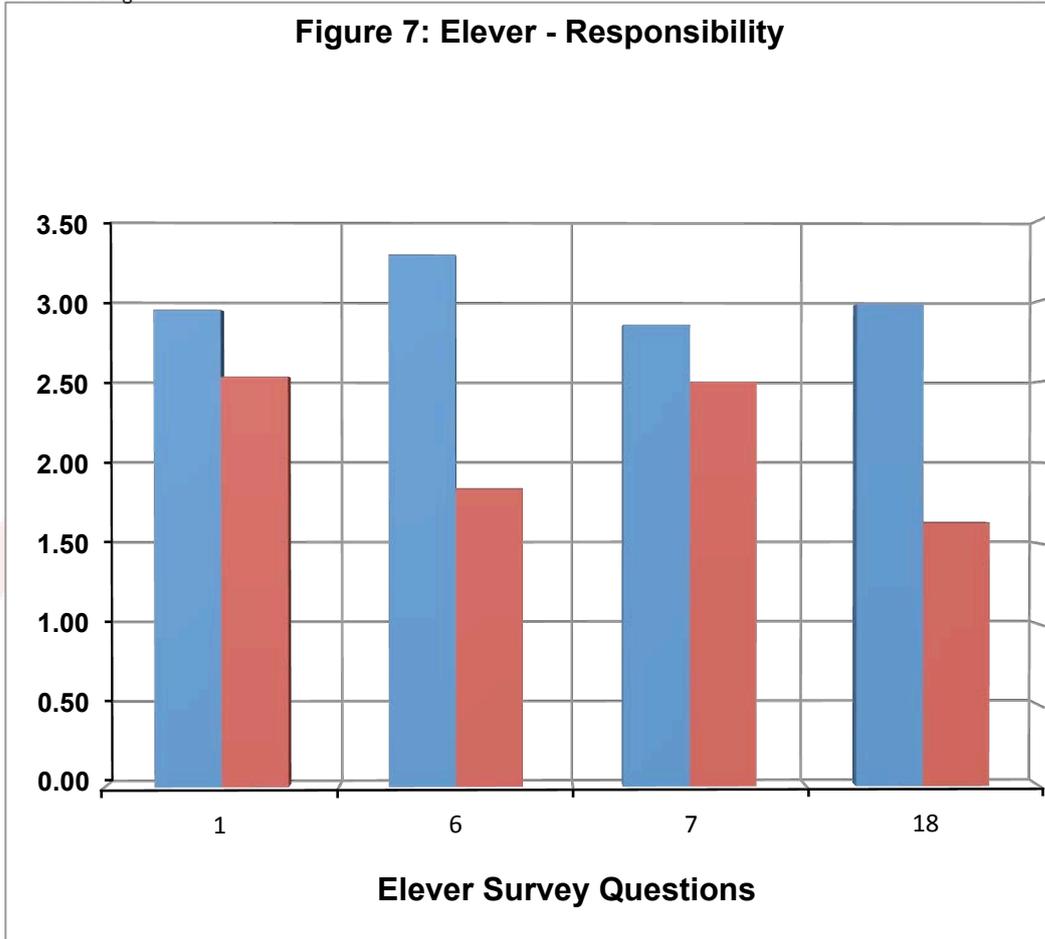
**Figure 5: Elever - Control & Empowerment**



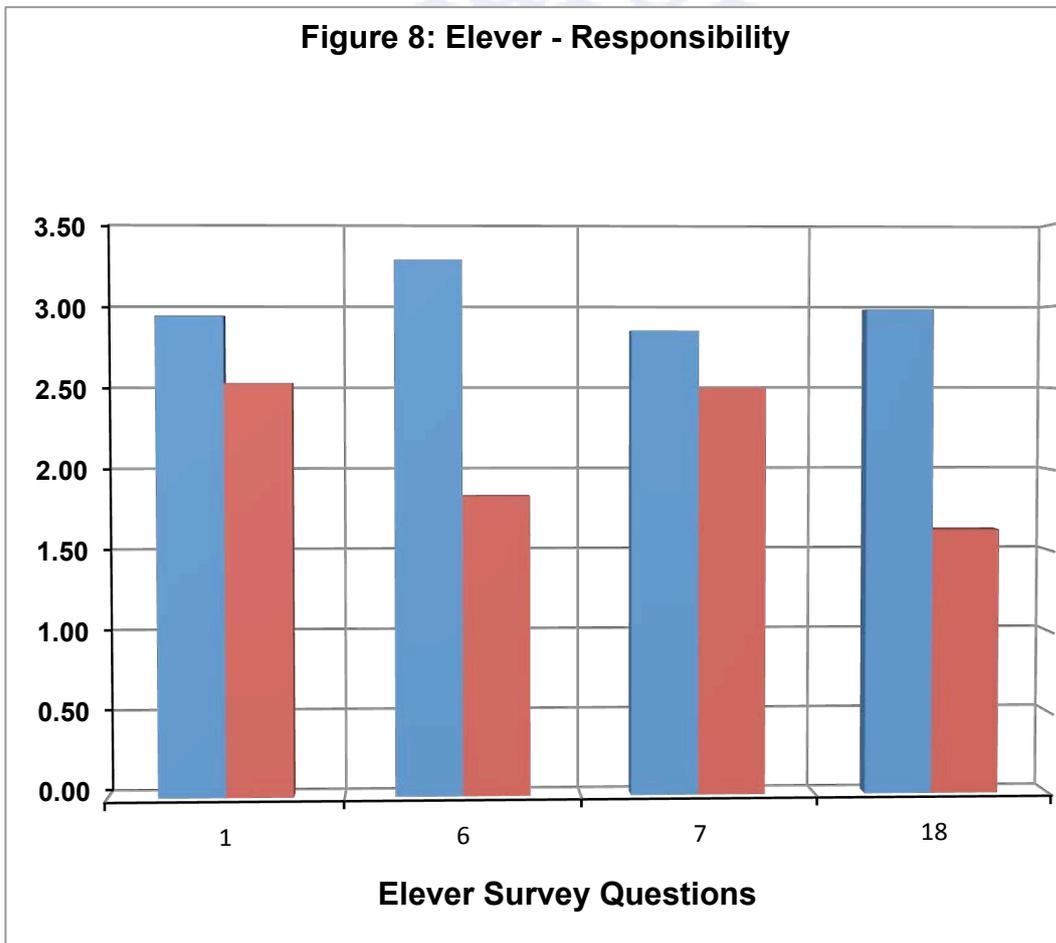
**Figure 6: Elever - Openness**



**Figure 7: Elever - Responsibility**



**Figure 8: Elever - Responsibility**



**Implications or relevance of work for others (including how generalizable the findings are):**

The researcher came away from the 2001 study greatly impressed by the progressive educational environments of the three schools where students and teachers were empowered, and high levels of learning of relevant curricula was pervasive. The Skolverket was not of great importance as the processes of education were managed within the confines of the community, schools, and classroom (Nordgren, 2001). Although still progressive in comparison with the researcher's experiences in a multitude of schools across the U.S., the schools in this study had become somewhat more controlled and controlling; more teacher-centered and more concern about outside-of-the-community influences—namely, the Skolverket. They appear to be slowly embracing the GERM model as has the U.S. (Sahlberg, 2011).

The Swedish Ministry of Education, as is the U.S. Department of Education, a bureaucracy that enforces policy and is greatly influenced by those who control it: national-level politicians. Whereas the U.S. Secretary of Education is a presidential appointee who works at the pleasure of the executive branch, the Swedish Minister for Education is a politician who is appointed by the coalition of parties who control the federal government. The “non-students” in this study were very negative toward the Minister of Education feeling he was over-stepping his authority and was trying to push a politically and ideologically-driven agenda. The impact of free schools was a common discussion topic among adults throughout the research and these schools were alluded to in the student interviews when it was suggested the free laptops given to each middle and high school student were a “bribe” to keep them from going elsewhere. If Sahlberg's (2011) contention is correct that the Finns' schooling success is based on their refutation of the GERM model (see Appendix G), then the Swedes may have taken the wrong path in their quest to meet the needs of all their students in an ever-changing world (see <http://www.sweden.se/eng/Home/Education/Basic-education/Facts/Education-in-Sweden/>). Their adherence to the GERM model will, according to Sahlberg's (2011) analysis, not allow them to provide a challenging and meaningful educational experience that will enable their students to gain the knowledge, skills, and dispositions necessary for success in the global economy and sustain a just society. Nor would it seemingly allow them to sustain the “Swedish Way”: which promotes an egalitarian democracy where no one is left behind (Wiborg, 2010).

Immigration is a theme which came up time and again in this study. Although the community and Sweden, as a nation, had a high rate of immigration back in 2001, the topic was not at the forefront as it was in 2013. The researcher took note that seemingly more students were from other cultures in his many classroom observations. Although a count was not made in 2001, it did appear that there were more students of color in 2013, and teachers readily discussed these students; they were quite cognizant of the plight of their first and second-generation immigrant students and were took great concern in ensuring they received the best educational services possible. Still, much consternation existed about this level of service (e.g., their questioning the policy of having students receive only six months of intensive integration prior to entering the schools, despite some services provided to them in the schools such as teacher aides).

### **Limitations**

As with all case studies, the limitation of a small sampling is paramount. Such studies cannot be generalized across a population, but are used to examine issues that confront that limited environment (Gall, Gall, & Borg, 2009). This “case,” was the three-school feeder system in the small community in Sweden. In addition to the case study design, another limitation common across both the 2001 and 2013 studies is the possible biases of the researcher when observing classrooms. Of course, care was taken to observe objectively and certain protocols were used in the observations, there is still the possibility of observation error.

A glaring limitation is the small return rate of the surveys: 4% for the students and 15% for the teachers. Another limitation may be that the surveys were translated from English to Swedish for the 2013 administration which may have altered the data somewhat. The surveys were changed to a 4-point scale so as to remove the option of “not sure,” forcing participants to agree or disagree with each item. Another possible limitation resulting from differences in the two studies was the researcher opting to take notes on a computer during interviews rather than use a tape recorder. In 2001, the interviewees displayed some discomfort with the use of the tape recorder. Some error in interpretation of the notes may have occurred, although great care was taken to ensure that the intent of the interviewee was accurately captured.

### **Conclusion:**

Given the poor return rate of the surveys, it would be logical to re-administer these so that a greater number could be collected. The researcher has asked the school district superintendent to do just this, adding four items based on immigration’s impact on the educational process. Of course “scaling up” this research would greatly enhance the validity of the findings. Although it is nearly inconceivable that all 278 “kommuns” in Sweden could be studied in this manner, the surveys could be widely disseminated throughout the nation negating the limitations of the small return rate and non-generalizability due to the case study design.

It is hoped that the results of this and follow-up research will garner the attention of educators and policy makers in both the U.S. and Sweden as the findings from this research, combined with those from 2001, may force policy makers in these and other countries to rethink school reform. Sahlberg’s (2011) “Global Education Reform Movement” or “GERM” is guided by standardization and not the principles of organizational development and learning. The Swedes may find that they are falling in with the “GERMs” and could slide down the world’s list of exemplary schooling systems—they are, ostensibly, a model for the highly-touted Finnish system.

## Reference of proposal:

### Works Cited

Apple, M.W. (2001). *Educating the "right" way: Market, standards, God, and inequality*. New York: Routledge.

Gall, J.P., Gall, M.D., and Borg, W.R. (2009). *Applying educational research*. New York: Pearson.

Goodlad, J.I. (2004). *What schools are for (3<sup>rd</sup> ed.)*. Bloomington, IN: Phi Delta Kappan.

National Center for Education Statistic (n.d.-a). Trends in International Mathematics and Science Study. <http://nces.ed.gov/Timss/results11.asp>.

National Center for Education Statistic (n.d.-b). Program for International Student Assessment. <http://nces.ed.gov/surveys/pisa/>

Nordgren, R.D. (2001). Democracy, trust, student responsibility, and Global Workforce Competence. Unpublished doctoral dissertation. Tampa: University of South Florida.

Nordgren, R.D. (2003). *Making schooling relevant for the Global Age: Fulfilling our moral obligation*. Lanham, MD: Rowman Littlefield.

Ohlsson, J. Personal communication on February 15, 2012. Ohlsson is a professor of education at the University of Stockholm.

Persson, H-E. Personal communication on January 14, 2013. Persson is a former school superintendent and active in national education organizations in Sweden.

Robinowitz, C. J. & Carr, L.W. (2001). *Modern day Vikings: A practical guide to interacting with the Swedes*. Boston: Nicholas Brealey.

Partanen, A. (2012). What Americans keep ignoring about Finland's school success. *The Atlantic*. December 29, 2011.

Sahlberg, P. (2012). *Finnish lessons: What can the world learn from educational change in Finland?* New York: Teachers College Press.

Tucker, M.S. (ed.) (2012). *Surpassing Shanghai: An agenda for American education built on the world's leading systems*. Cambridge, MA: Harvard Education Press.

Wiborg, S. (2010). Swedish free schools: Do they work? LLakes Research Paper. Center for Learning and Life Chances in Knowledge Economies and Society. Available at <http://www.llakes.org/wp-content/uploads/2010/09/Wiborg-online.pdf>.

## Appendices

### Appendix A Sahlberg's GERM-Finnish Way Comparison Chart

Global Education Reform Movement (GERM) [	The Finnish Way
<p>Standardizing teaching and learning                      Setting clear, high, and centrally prescribed performance expectations for all schools, teachers, and students to improve the quality and equity of outcomes.                      Standardizing teaching and curriculum in order to have coherence and common criteria for measurement and data.</p>	<p><b>Customizing teaching and learning</b>                      Setting a clear but flexible national framework for school-based curriculum planning.                      Encouraging local and individual solutions to national goals in order to find best ways to create optimal learning and teaching opportunities for all.                      Offering personal learning plans for those who have special educational needs [In Sweden: IEPs for all students]</p>
<p>Focus on literacy and numeracy                      Basic knowledge and skills in reading, writing, mathematics, and the natural sciences serve as prime targets of education reform. Normally instruction time of these subjects is increase.</p>	<p><b>Focus on creative learning</b>                      Teaching and learning focus on deep, broad learning, giving equal value to all aspects of the growth of an individual's personality, moral character, creativity, knowledge, and skills.</p>
<p>Teaching prescribed curriculum                      Reaching higher standards as a criterion for success and good performances.                      Outcomes of teaching are predictable and prescribed in a common way.                      Results are often judged by standardized tests and externally administered tests.</p>	<p><b>Encouraging risk-taking</b>                      School-based and teacher-owned curricula facilitate finding novel approaches to teaching and learning, and encourage risk-taking and uncertainty in leadership, teaching, and learning.</p>
<p>Borrowing market-oriented reform ideas                      Sources of educational change are management administration models brought to schools from the corporate world through legislation or national programs.                      Such borrowing leads to aligning schools and local education systems to operational logic of private corporations.</p>	<p><b>Learning from the past and owning innovations</b>                      Teaching honors traditional pedagogical values, such as teacher's professional role and relationship with students.                      Main sources of school improvement are proven good educational practices from the past.</p>
<p>Test-based accountability and control                      School performance and raising student achievement are closely tied to processes of promotion, inspection, and ultimately rewarding schools and teachers.                      Winners normally gain fiscal rewards, whereas struggling schools and individuals are punished.                      Punishment often includes loose employment terms and merit-based pay for teachers.</p>	<p><b>Shared responsibility and trust</b>                      Gradually building a culture of responsibility and trust within the education system that values teacher and principal professionalism in judging what is best for students.                      Targeting resources and support to schools and student who are at risk to fail or to be left behind.                      Sample-based student assessments.</p>

Source: Sahlberg, P. (2012, p. 103). Finnish lessons: What can the world learn from educational change in Finland? New York: Teachers College Press.

## Appendix B

### Enkät Lärare/Teacher Survey

1	2	3	4	5
<b>Strongly Disagree</b> Instämmer inte alls (I completely disagree)	<b>Disagree</b> Instämmer något (agree somewhat)	<b>Neutral</b>	<b>Agree</b> Instämmer delvis (partially agree)	<b>Strongly Agree</b> Instämmer helt (completely agree)

	Item
1	My principal controls my lesson plan development and teaching. Min rektor håller sig underrättad om hur jag planerar och genomför mina lektioner.
2	I want my principal to control my lesson plan development and teaching. Jag önskar att min rektor håller sig underrättad om hur jag planerar och genomför mina lektioner.
3	My principal demonstrates responsibility for her/his teachers' professional needs. Min rektor tar sitt ansvar för hans/hennes lärares professionella behov av stöd.
4	It is important that principals are responsible for their teachers' professional needs. Det är viktigt att rektor ta ansvar för sina lärares professionella behov av stöd.
5	Teachers help set goals, procedures, and policies at my school. Lärare medverkar till att sätta mål, forma arbets- och förhållningssätt vid min skola.
6	It is important that teachers are allowed to influence school goals, procedures, and policies. Det är viktigt att lärare tillåts medverka vid målformulering och utformning av arbets- och förhållningssätt.
7	My principal keeps teachers informed of important matters pertaining to the school. Min rektor håller lärarna informerade om angelägna frågor som berör vår skola.
8	It is important that a principal keeps teachers informed of important matters pertaining to the school. Det är viktigt att rektor håller lärarna informerade om angelägna frågor som berör vår skola.

<b>9</b>	It is important that teachers are allowed to make decisions about their professional practice. Det är viktigt att lärare tillåts fatta egna beslut om frågor som är av betydelse för det egna professionella arbetet.
<b>10</b>	My principal encourages teachers to participate in making important school-wide decisions. Min rektor understödjer lärarna att delta i övergripande frågor om vår skola.
<b>11</b>	I feel empowered to make decisions about my own professional practice. Jag känner mig stärkt i att besluta om frågor som rör min professionella utövning som lärare.
<b>12</b>	It is important that I can make decisions about my own professional practice. Det är angeläget att jag kan fatta egna beslut om min professionella lärarroll.
<b>13</b>	It is important that teachers help principals make important decisions about their schools. Det är viktigt att lärarna hjälper rektor att före angelägna diskussioner om egna skolan.
<b>14</b>	My principal encourages me to set my own goals and performance objectives to which I will be assessed. Min rektor uppmuntrar mig att jag sätter egna mål och utforma önskvärda resultat som kan ligga till grund för uppföljning av mitt arbete.
<b>15</b>	It is important that teachers are able to set their own goals and performance objectives to which they will be assessed. Det är av vikt att lärare kan sätta sina egna mål och forma sina önskvärda resultat så att de kan bli utvärderade utifrån.
<b>16</b>	Sharing of school-wide information is open and this information is easy to access. Övergripande information om skolan finns lättillgänglig och öppen.
<b>17</b>	It is important that school-wide information is open and that this information is easy to access. Det är viktigt att övergripande information om skolan är lättillgänglig och öppen.
<b>18</b>	Important decisions about my school are made by people outside my community. Viktiga diskussioner om min skola förs bland personer utanför skolan och i kollegiet.
<b>19</b>	It is important that decisions about my school be made by those who are in my community. Det är viktigt att beslut om min skola tas av oss pedagoger (i

	förekommande fall även övrig personal). <i>It is important that decisions on my school taken by us educators (including, where appropriate, other staff).</i>
<b>20</b>	Students at my school learn to work effectively in groups and teams. Eleverna på min skola lär sig att arbeta effektivt i grupp och arbetslag.
<b>21</b>	Students at my school learn technical skills that they will be able to use in their future jobs. Eleverna på min skola lär sig färdigheter som de har nytta av i arbetslivet.
<b>22</b>	Students at my school learn to solve problems independently and/or in groups or teams. Eleverna på min skola lär sig att lösa problem såväl på egen hand som i grupp/lag.
<b>23</b>	Students at my school learn to be creative and/or take risks in their learning. Eleverna på min skola lär sig att vara kreativ och/eller att ta risker i sitt lärande.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is partially overlaid by a large, faint, light blue circular graphic that spans across the middle of the page. There are also some faint, curved lines in shades of red and blue in the background.

## Appendix C

### Enkät Elever /Student Survey

1	2	3	4	5
<b>Strongly Disagree</b> Instämmer inte alls (I completely disagree)	<b>Disagree</b> Instämmer något (agree somewhat)	<b>Neutral</b>	<b>Agree</b> Instämmer delvis (partially agree)	<b>Strongly Agree</b> Instämmer helt (completely agree)

	Item
1	I plan my own learning at my school. På min skola planerar jag mitt eget lärande.
2	I want to control my own learning at my school. Jag vill bestämma över mitt eget lärande.
3	I help to set classroom goals, procedures, and policies at my school. På min skola hjälper jag till med att sätta mål, forma arbets- och förhållningssätt.
4	Teachers should allow students to set classroom goals, procedures, and policies. Lärarna bör tillåta eleverna att sätta mål och forma arbets- och förhållningssätt.
5	All students help to influence the way we work in our classrooms at my school. På min skola hjälper alla elever till med att påverka vårt sätt att arbeta i klassrummet.
6	Each student is held responsible for her or his own learning at my school. På min skola hålls varje elev ansvarig för sitt lärande.
7	Teachers should hold students accountable for their own learning. Lärarna bör hålla eleverna ansvariga för sitt eget lärande.
8	Teachers at my school encourage students to make their own decisions. På min skola uppmuntrar lärarna eleverna i att fatta egna beslut.
9	It is important that students are allowed to make their own decisions about their learning. Det är viktigt att eleverna tillåts fatta beslut om sitt eget lärande.
10	Teachers at my school encourage students to participate in planning for classroom activities. På min skola uppmuntrar lärarna elevernas delaktighet i att planera arbetet i klassrummet.
11	It is important that students participate in planning for classroom activities. Det är viktigt att eleverna deltar i planeringen av arbetet i klassrummet.
12	Teachers at my school encourage students to develop their own learning goals.

	På min skola stödjer lärarna elevernas arbete med att utveckla mål för lärandet.
<b>13</b>	I participate in the planning of my own learning as much as or more than my teachers plan for it. Jag deltar i planeringen av mitt lärande i lika stor, eller större, grad än mina lärare.
<b>14</b>	Being able to sometimes influence my teachers is important. Det är viktigt att ibland kunna påverka mina lärare.
<b>15</b>	It is important that students help to develop their own learning goals. Det är viktigt att eleverna hjälper till att utveckla sina mål för lärandet.
<b>16</b>	Principals and teachers at my school inform students about important matters regarding the school. På min skola informerar rektor och lärare oss elever om viktiga saker som berör skolan.
<b>17</b>	It is important for principals and teachers to inform students about important matters regarding the school. Det är viktigt att rektor och lärare informerar eleverna om angelägna frågor som berör skolan.
<b>18</b>	Teachers at my school demonstrate responsibility for their students' learning. Lärarna på min skola visar ansvar för elevernas lärande.
<b>19</b>	I am taught at my school to effectively work in groups or teams. På min skola uppmanas jag att arbeta effektivt i grupper och i arbetslag.
<b>20</b>	I am taught at my school technical skills that I will be able to use in my future jobs. På min skola får jag lära färdigheter av betydelse för mitt framtida arbete.
<b>21</b>	I am taught at my school to solve problems independently and/or in groups or teams. På min skola får jag lära mig att lösa problem, på egen hand, eller i grupp/arbetslag.
<b>22</b>	I am taught at my school to be creative and/or take risks in my learning. På min skola får jag lära mig att vara kreativ och/eller ta risker i lärandet.

## **Appendix D**

### **Teacher Interview**

1. How much influence does your principal have on your job as a teacher?
2. How much influence do local authorities have on your job of educating students?
3. In what ways does the National Curriculum affect the curriculum you use and your instructional practices in the classroom?
4. What examples can you give that demonstrate how you make your own decisions about what you teach and how you teach?
5. Would you rather help make decisions about what happens at your school and the direction it takes, or would you rather leave these decisions to your principal? Please explain.
6. How do you help students make their own decisions about their education?
7. In what ways could you and your school increase the levels of democracy, trust, and student responsibility at your school?

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is partially enclosed by a large, light blue circular arc that starts from the bottom left and curves towards the right. A smaller, light blue circular arc is positioned above the 'iafor' text. Additionally, there are two large, curved, brush-stroke-like shapes: one in a light red/pink color on the left side and one in a light blue color on the right side, both curving towards the center of the page.

## **Appendix E**

### **Student Group Interview**

1. How much influence do you think your principal has in your learning?
2. How much influence do you think local politicians have in your learning?
3. Are you aware of any influence the Skolverket or the Swedish national government has on your school or your education? If so, what are these influences?
4. What examples can you give that demonstrate how you make your own decisions about what you learn and how you learn it?
5. Would you rather make decisions about what happens in your school and the direction it takes, or would you rather leave these decisions to your teachers and principal? Please explain.
6. In what ways could you and your school increase democracy, trust, and student responsibility at your school.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is partially enclosed by a large, light blue circular arc that starts from the bottom left and curves towards the right. A smaller, light red circular arc is positioned above the 'iafor' text, partially overlapping the blue arc.

## Appendix F Example of a Grading Rubric as Mandated by the Skolverket

Eleven skall kunna	E	C	A
<p>Eleven kan redogöra för den fotografiska processen från planering och fotografering till redigering och presentation.</p> <p>Eleven kan redogöra för några olika bildformat och programvaror och dess möjligheter och begränsningar.</p> <p>Eleven kan skriva ut eller kopiera bilder med teknisk kvalitet och motivera hur man uppnått den.</p> <p>Eleven kan använda ljussättning, komposition och fotografisk teknik.</p> <p>Eleven kan diskutera på vilket sätt de egna bilderna förmedlar känslor, tankar, idéer och budskap.</p>	<p>Eleven redogör <b>översiktligt</b> för den fotografiska processen och för hur de olika delarna i processen hänger samman. Dessutom redogör eleven <b>översiktligt</b> för några olika digitala bildformat och programvaror samt för deras möjligheter och begränsningar.</p> <p>Eleven fotograferar och skriver ut eller kopierar bilder <b>i samråd med handledare</b>. Bilderna är av <b>tillfredsställande teknisk kvalitet</b>. Eleven motiverar <b>översiktligt</b> de val som har gjorts för att uppnå kvaliteten. I arbetet använder eleven <b>med viss säkerhet</b> ljussättning, komposition och fotografisk teknik för att åstadkomma visuella effekter. Eleven diskuterar <b>översiktligt</b> på vilket sätt de egna bilderna förmedlar känslor, tankar, idéer och budskap.</p>	<p>Eleven redogör <b>utförligt</b> för den fotografiska processen och för hur de olika delarna i processen hänger samman. Dessutom redogör eleven <b>utförligt</b> för några olika digitala bildformat och programvaror samt för deras möjligheter och begränsningar.</p> <p>Eleven fotograferar och skriver ut eller kopierar bilder <b>efter samråd</b> med handledare. Bilderna är av <b>god teknisk och tillfredsställande estetisk kvalitet</b>. Eleven motiverar <b>utförligt</b> de val som har gjorts för att uppnå kvaliteten. I arbetet använder eleven <b>med viss säkerhet</b> ljussättning, komposition och fotografisk teknik för att åstadkomma visuella effekter. Eleven diskuterar <b>utförligt</b> på vilket sätt de egna bilderna förmedlar känslor, tankar, idéer och budskap.</p>	<p>Eleven redogör <b>utförligt och nyanserat</b> för den fotografiska processen och för hur de olika delarna i processen hänger samman. Dessutom redogör eleven <b>utförligt och nyanserat</b> för några olika digitala bildformat och programvaror samt för deras möjligheter och begränsningar.</p> <p>Eleven fotograferar och skriver ut eller kopierar bilder <b>efter samråd</b> med handledare. Bilderna är av <b>jämn och god teknisk och estetisk kvalitet</b> samt har ett <b>personligt uttryck</b>. Eleven motiverar <b>utförligt och nyanserat</b> de val som har gjorts för att uppnå kvaliteten. I arbetet använder eleven <b>med säkerhet och med variation</b> ljussättning, komposition och fotografisk teknik för att åstadkomma visuella effekter. Eleven diskuterar <b>utförligt och nyanserat</b> på vilket sätt <u>de egna bilderna förmedlar känslor, tankar, idéer och budskap</u>.</p>

Eleven skall kunna	E	C	A
<p>Eleven kan avläsa och tolka fotografiska bilder samt resonera om vad bilderna uttrycker. I tolkningen och resonemanget kan eleven använda fotografiska begrepp. Eleven kan redogöra för skillnader mellan olika fotografiska genrer, även ur ett historiskt perspektiv.</p> <p>Eleven kan redogöra för lagar och andra bestämmelser inom området. Eleven diskuterar också etiska frågeställningar i relation till fotografiska bilder. Dessutom redogör eleven för miljömässiga och säkerhetsmässiga aspekter inom fotoområdet.</p>	<p>Eleven avläser och tolkar <b>någon</b> fotografisk bild samt resonerar <b>översiktligt</b> om vad bilden uttrycker. I tolkningen och resonemanget använder eleven <b>med viss säkerhet enkla</b> begrepp. Eleven redogör <b>översiktligt</b>, utifrån bildexempel, för skillnader mellan <b>några</b> olika genrer, även ur ett historiskt perspektiv.</p> <p>Eleven redogör <b>översiktligt</b> för lagar och andra bestämmelser inom området. Eleven diskuterar också <b>översiktligt</b> etiska frågeställningar i relation till fotografiska bilder. Dessutom redogör eleven <b>översiktligt</b> för miljömässiga och säkerhetsmässiga aspekter inom fotoområdet.</p>	<p>Eleven avläser och tolkar <b>några olika typer av</b> fotografiska bilder samt resonerar <b>utförligt</b> om vad bilderna uttrycker. I tolkningen och resonemanget använder eleven <b>med viss säkerhet avancerade</b> begrepp. Eleven redogör <b>utförligt</b>, utifrån bildexempel, för skillnader mellan <b>några</b> olika genrer, även ur ett historiskt perspektiv.</p> <p>Eleven redogör <b>översiktligt</b> för lagar och andra bestämmelser inom området. Eleven diskuterar också <b>utförligt</b> etiska frågeställningar i relation till fotografiska bilder. Dessutom redogör eleven <b>utförligt</b> för miljömässiga och säkerhetsmässiga aspekter inom fotoområdet.</p>	<p>Eleven avläser och tolkar <b>flera olika typer av</b> fotografiska bilder samt resonerar <b>utförligt och nyanserat</b> om vad bilderna uttrycker. I tolkningen och resonemanget använder eleven <b>med säkerhet avancerade</b> begrepp. Eleven redogör <b>utförligt och nyanserat</b>, utifrån bildexempel, för skillnader mellan <b>flera</b> olika genrer, även ur ett historiskt perspektiv.</p> <p>Eleven redogör <b>utförligt</b> för lagar och andra bestämmelser inom området. Eleven diskuterar också <b>utförligt och nyanserat</b> etiska frågeställningar i relation till fotografiska bilder. Dessutom redogör eleven <b>utförligt och nyanserat</b> för miljömässiga och säkerhetsmässiga aspekter inom fotoområdet.</p>

*Globalisation and Internationalisation of Education: Is on Right Direction?*

Ershad Ali\*<sup>1</sup>, Malcolm Abbott\*<sup>2</sup>

\*<sup>1</sup>Auckland Institute of Studies, New Zealand, \*<sup>2</sup>Swinburne University, Australia

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Abstract

One aspect of the process of globalisation in recent years has been the increase in the number of students travelling abroad to complete their education. Although a number of university campuses around the world have seen significant numbers of overseas students since the 1950s, in recent years the numbers have climbed to far higher levels. In 2006 it was estimated by the OECD that there were nearly three million tertiary education students studying aboard and that this number could reach five million by the year 2020. This globalisation of education has meant that increasingly those countries whose higher education institutions are most dependent on overseas students are becoming exposed to risks historically associated with engagement in international trade. Indeed in a number of countries there are universities that have become very dependent upon attracting overseas students to maintain their funding levels. The purpose of this study is to review this process of the globalisation of higher education and the associated risks faced by higher education institutions when they attempt to attract students from other countries. Finally a direction of movement of these two industries has been examined. The study found that although the rate of globalisation of education is much faster than it was expected, the risks faced by institutions are also increasing. Findings of the study may be of interest of policy makers, educationists and researchers.

## **1. Introduction**

International tourism and education have existed from ancient times but only become significant sectors of economies since the end of the second world war. The post war period has been one of substantial change in terms of transportation and communications. The development of wide bodied jet aircraft has enabled to the development of mass international tourism. Mass transport has also been instrumental in promoting international education as well. In addition in the post war period disposable incomes of people around the world have increased substantially giving people greater means to enjoy tourism and education services.

This growth in international education and tourism has not grown uniformly across the world but is of different importance to different countries. In terms of tourism some economies such as the countries of Fiji and New Zealand are very reliant on the sale of tourism services. Likewise international education is important to both countries. Even in larger economies than these, however, such as Italy and the United Kingdom the tourism industry is important to the developments of these countries.

In each case much of the growth of the education and tourism both are to some degree explained by traditional notions of comparative advantage. In looking at the development of the two industries and the linkages between them it is worth thinking about them in terms of the growing globalisation of economies and increased trade based on comparative advantages of nations.

## **2. Globalisation**

During the past twenty years there has been a steady trend towards an increased integration of countries into an interdependent global trading system. This “globalisation” has meant that there has been a merging of distinct and separate national markets into a single, larger market. This process has been encouraged by a progressive reduction of barriers to trade between nations by governments.

What is true of most countries is also true in the case of tourism and education. Although most countries have always been dependent, to some degree, on overseas markets to sell goods this process has become intensified since the 1980s. The primary evidence of the growth in importance of economic interdependence of nations is the rapid growth in the volume of cross-border trade and investment that has occurred over the last three decades. This evidence suggests that the world is moving toward a more integrated and interdependent economy. The resulting interdependence is very important (and directly related) to the economic well being of the people in most nations of the world. Of course, the degree of interdependence of different countries’ economies is strongly influenced by the extent to which governments choose to restrict such relations by imposing barriers to trade, or alternatively eliminating trade barriers between them and embracing the freedom to trade. This degree of willingness is as important in the case of education and tourism as it is in any other field.

All countries have specialised resources, whether in the form of capital equipment, natural resources and even the skills of their respective populations. This means that the companies and individuals in them produce a limited range of goods and services, part of which they then sell to people in other countries (exports) in exchange for the many items people wish to buy from overseas (imports) and ultimately consume. The prosperity of the people of each country is therefore dependent to a varied degree on international trade. International trade is vitally important to underpinning the standards of living of any country's citizens.

Generally integration with world markets can be shown by the existence of large flows of goods and services, capital and labour between a national economy and the rest of the world. One way, therefore, of illustrating the degree of this interdependence between a particular country and the rest of the world is simply to take that country's imports and exports of goods and services and compare them to the level of Gross Domestic Product.<sup>1</sup> This very simple method helps to show just how much a country is exposed to – and benefits from – international trade.

Table 1 provides the ratio of a combination of exports and imports to the Gross Domestic Product of a range of countries. Not all the countries shown in the table can be seen to have the same degree of economic interdependence with the rest of the world. Another aspect of economic interdependence is the degree to which there are flows of capital into and out of a country. In the second column of Table 1 the Gross Private Flow of Capital, as a percentage of Gross Domestic Product, is given for the same range of countries. This figure is the sum of direct, portfolio and other investment inflows and outflows to and from each country. As can be seen these vary quite considerably. Another indication of interdependence relates to the population of a country. As can be seen from the third column of the Table 1.

From Table 1 it can be seen that different countries have different levels of exposure to international markets (goods, capital and labour). It is also true, however, that there appears a range of different exposures amongst the sample countries given in Table 1. There are a variety of factors that contribute to raising or lowering a country's degree of interdependence with the rest of the world.

Broadly speaking small economies generally have a greater level of interdependence than larger ones. Small countries like New Zealand typically have relatively narrow economies so need to export large amounts of goods and services in order to pay for the imports that they need. For very large economies such as the United States the figure for exports and imports as a percentage of Gross Domestic Product is only 24 per cent. A very large economy like the United States is one with a great deal of natural and human resources. One would therefore expect that the United States would be able to produce with relative efficiency most of the products that it needs and would not be so dependent on international trade to maintain the standards of living of its citizens. In contrast to this is the position of relatively small economies

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<sup>1</sup> Gross Domestic Product can be defined as being the market value of all final goods and services produced in an economy in a given period.

like that of New Zealand, which can only specialise in the production of and export of a small range of commodities due to their limited resources.

In general then, the larger a national economy, the smaller is its economic interdependence with the rest of the international economy. What is true of imports and exports of goods and services is perhaps also true of capital and labour flows. Smaller countries have more limited sources of both and therefore perhaps need to seek outside sources for them. As well people living in a small country might find their own opportunities more limited than those in larger countries and might, therefore, seek to live and work abroad or even seek investment opportunities abroad. The relative sizes of the two countries, New Zealand and Australia, probably explain why although they are similar societies one is far more exposed to international trade than the other. New Zealand's exposure to international trade, however, is not as intense as the case with countries of a similar size such as Ireland and Finland. To explain why this is the case we need to look to other factors.

A country's location is an important factor that influences its level of economic interdependence with the rest of the world. Isolation from the major markets of the world has limited the degree to which some countries interrelate with the rest of the world. Gradually over the past fifty years, however, the world has undergone a transportation and communications revolution, which has helped to further increase many country's interdependence with the world economy. For instance since the mid 1950s average world ocean-freight and port charges per ton of cargo have fallen by about 50 percent (Yarbrough and Yarborough 2003). Falling relative costs of shipping, air transport and communications have all helped to expose greater sections of the world to international competition and to open up new opportunities. The use of containerised shipping, super freighters and commercial jet travel have all helped to lower the cost of shipping goods and travel.

Finally the interdependence of a country with the world economy is also influenced by the level of restrictions, placed by the government of a country on imports, exports, plus labour and capital flows. Table 2 gives the tariff levels on the imports of goods into a range of countries in the years 1990 and 2000. A tariff is a tax placed on the import of a good into a country, imposed either to raise tax revenue by the government imposing it or alternatively to protect a country's domestic manufacturing from import competition by raising the price of the imported good. The affect of a tariff is to reduce the level of imports into a country (and perhaps make it more expensive to export as well) and so therefore reduce the degree of interdependence of a country. Table 2 shows that there has been a reduction in most countries' levels of tariff protection over the past ten years, which would have encouraged the growth and development of international trade. The fall in trade barriers; both government imposed and the improvements in transportation, has meant that not only is the level of trade penetration tended to grow over the past twenty years.

**Table 1: Indicators of economic interdependence**

	(Exports& Imports)/ GDP	Foreign direct Investment flows/GDP	Real growth of exports	Foreign born population	Real GDP growth
	2007	2007	2000-2007	2005	2000-07
	%	%	% per annum	% of pop <sup>7</sup>	% per annum
Australia	47.1	7.8	2.0	20.1	3.2
Canada	71.6	12.5	0.9	18.9	2.7
China	77.7	4.8	24.4	0	10.3
Korea	90.2	1.8	12.3	1.1	4.7
Japan	36.8	2.3	7.7	1.6	1.7
India	46.0	3.1	15.7	0.5	7.8
New Zealand	56.2	4.1	3.2	15.5	3.4
Singapore	436.8	22.6	Na	43.2	5.8
Sweden	95.1	9.0	5.9	12.4	3.0
United Kingdom	55.6	17.0	4.1	9.0	2.6
United States	29.4	4.1	3.1	13.0	2.6
World	63.0	8.3	7.1	3.0	3.2

Source: World Bank. Gross private capital flows includes investment inflows and outflows. Exports include exports of goods and services.

**Table 2: Tariff levels: weighted mean tariff**

		All products	Primary products	Manufactured products
		%	%	%
Australia	1991	9.1	1.6	10.3
	2007	1.8	0.3	2.3
Canada	1991			
	2007	1.6	3.2	1.2
China	1992	32.2	13.9	36.5
	2007	5.1	3.0	6.3
Japan	1989	3.0	3.3	2.7
	2007	3.1	3.8	2.2
India	1990	49.6	25.4	69.9
	2005	13.4	14.3	12.3
New Zealand	1992	8.5	3.7	9.6
	2007	2.7	0.4	3.6
European Union	1989	3.8	2.7	4.4
	2007	1.8	1.8	1.8
Singapore	1990			
	2007	0	0	0
United States	1989	3.8	2.0	4.1
	2007	1.6	1.3	1.7

Source: World Bank.

### 3. The benefits of trade

Given that changes in the international trading climate can be sources of great instability to different countries it is worthwhile reminding ourselves about the reasons why people largely benefit from engaging in international trade.

International trade is important to all nations. There are many goods and services that even the people and companies of the largest and most productive economy simply do not produce at all. More importantly there are many goods and services that could be produced domestically, but only at a higher cost than abroad. By purchasing these goods and services internationally it is possible to gain a benefit from trading with the rest of the world. This gain from trade is enhanced when the people and firms of a country specialise in the production of goods and services for which their country has some special advantage. Any restriction that prevents this trade occurring - or makes it more difficult to carry out - can adversely affect a large proportion of a country's economy. Not only are exporters affected but there is also a flow-on effect that can spread through the whole economy.

Not all the countries that engage in international trade have available to them identical resources. This means that it is in the interests of companies in each country to specialise in the production of a narrow range of goods that make use of the country's abundant resources and then purchase others in international markets. This specialisation and division of labour mirrors that of the specialisation that takes place with individual people and firms within a country. We all specialise to some degree in the production of a good or service and then trade this for the other goods and services that we wish to buy. Specialising and then engaging in trade is a way through which we can increase our ability to consume a greater volume and scope of goods and services.

In order to get an idea of the types of goods and service that various countries specialise in a breakdown of export mixes of a selection of countries is presented in Table 1.3. From this sample there appears to be a wide range of various export mixes in the various countries. Some countries like New Zealand have a particularly important export component of food products (34.8 percent). Others like Australia have a large component of fuels, ores and metals (30.5 percent). These export sectors are a product of the natural resource bases of these two countries. New Zealand for instance has a large agricultural sector based on fertile land and a good climate and Australia has extensive mineral reserves.

Internationally manufactured goods provide the bulk of international trade, almost two thirds. It is no surprise then that some countries such as China, Japan and Korea export predominately manufactured goods. In recent years there has been a particularly strong growth in the trade of services. Some countries already have a particularly strong export orientated services sector. The United Kingdom for instance generates around 30 per cent of its trade from services. These services include such things as travel and tourism, education and financial, shipping and insurance services.

The production mix of a country's exports to some degree influences which countries it trades with. Location and membership of reciprocal trading arrangements are also important at influencing the direction of trade. In recent years trading blocs in various forms have become important around the world. These take a variety of forms and include amongst a wide range the European Union (EU), the North American Free Trade Association (NAFTA) and the Association of South East Asian Nations (ASEAN). Governments have attempted in the past to promote integration of neighbouring countries through the creation of these trading blocs and associations. As well economic integration has been promoted by multilateral (between many countries) negotiation of non-discriminatory trade between the member nations of the World Trade Organisation (WTO) and its predecessor the General Agreement on Tariffs and Trade (GATT). Finally in recent years a number of nations have begun to negotiate free trade agreements with each other on a bilateral basis (between two countries) in order to enhance their economic relations.

This notion that the people of countries can maximise their national wealth if they specialise in the production of goods and services that they are best at, is known as an “absolute advantage”. The notion of absolute advantage has an obvious limitation as a basis for explaining why trade occurs. What happens, for instance, if a country has no, or very few, absolute advantages? Does that then mean that there is no – or very little – scope for it to trade with the rest of the world? In this situation, the notion of absolute advantage cannot provide a full explanation of why countries trade with each other.

In 1817, David Ricardo provided an answer to this question with his theory of “comparative advantage”. According to Ricardo even if one nation is less efficient than another nation in the production of commodities, there is still scope for mutually beneficial trade. This scope is created by the presence of “comparative advantages”. Even if a country produced all commodities more expensively than any other country, trade to the benefit of all could take place provided only that the relative costs of production of the different commodities were favourable.

**Table 3: Export mix of: percentage of total exports of goods and services (2007)**

	Food	Agricultural	Fuels	Ores &	Manufactures	Transport	Travel	Other
		& raw		Metals				services
		materials						
	%	%	%	&	%	%	%	%
Australia	10.1	2.3	10.0	22.6	14.8	4.0	12.4	5.6
Canada	7.0	3.5	19.2	7.8	46.2	2.4	3.2	7.2
China	2.7	0	1.8	1.8	84.6	2.4	2.8	4.0
Japan	0.8	0.8	0.8	1.7	76.4	5.0	1.1	9.0
Korea	0.9	0.9	6.0	1.7	76.4	7.8	1.3	5.1
Indonesia	5.6	1.2	9.9	4.9	39.6	3.9	4.5	29.7
New Zealand	38.8	7.5	3.0	3.7	18.7	5.5	15.0	4.9
Singapore	1.6	0	11.4	1.6	61.6	6.3	2.4	10.2
United Kingdom	3.1	0.6	6.1	2.4	45.3	4.6	5.3	29.0
United States	5.7	1.4	2.8	2.8	54.7	4.7	7.3	16.9
World	5.6	1.6	8.1	3.2	62.1	4.6	5.2	9.6

Source: World Bank

Comparative advantage is based on the notion that different countries have different capabilities or different endowments of the factors of production (land, capital, and labour). Countries with no absolute advantages can still gain from trade by producing those goods and services that are relatively cheap to produce in their country and selling it to countries where it is relatively more expensive. There will be scope for trade between them as long as the relative costs of different goods are different in the various countries.

One way of understanding this concept is to think of a country that has many advantages. In this case it will not seek to produce everything but instead concentrate on the production of goods and services that it can do best, and then buy from abroad other goods and services which it could potentially do well, but perhaps not as well as the goods that it actually specialises in. This creates opportunities for other countries to trade with it.

Bearing these notions of comparative and absolute advantage in mind it is possible to consider how they apply in the New Zealand case. New Zealand is a country richly

endowed by nature; lightly populated, and possessing a lot of productive pastoral and agricultural land. The climate is favourable to the maintenance of livestock such as sheep and cattle. In most areas of New Zealand there is a reliable rainfall and moderate temperatures, which together help to create nearly all year round pasture growth. Livestock, therefore, does not have to be fed grain or provided with shelter in winter months, as is the case in many competing countries. Much of the land in New Zealand is naturally fertile which assists horticulture and forestry growth. As the country is lightly populated there is less competition from other users of land as is the case in more densely populated countries such as the United States or Western Europe. New Zealand, therefore possesses, a comparative advantage in the production of goods that require heavy inputs of fertile land. It is natural then that New Zealand should be a net exporter of food, natural fibres and processed primary products and a net importer of manufactures and services, especially those that require large amounts of labour (are labour intensive). In addition the natural beauty of the country makes it attractive to tourists.

This type of trade where a country exports goods for which it has a comparative advantage and imports goods for which it has a comparative disadvantage is often referred to as “inter-industry trade”. It involves the import and export of commodities that are from different industries and mainly takes place between countries with different relative factor endowments, different skill levels, different technologies, different levels of growth and perhaps different cultures. This type of trade can be explained on the basis of comparative advantage, which stems from the presence of resource differences between nations (this is known as the Heckscher-Ohlin model of trade).<sup>2</sup>

This theory predicts that countries will export those goods that make intensive use of those factors that are domestically abundant, while they will import goods that make intensive use of factors that are scarce. The Heckscher-Ohlin theory does have a common sense appeal and is clearly applicable in a number of cases. For example, countries such as New Zealand have long been substantial exporters of agricultural goods, which is consistent with its abundance of land. On the other hand countries such as Indonesia and China have recently excelled in the export of goods produced in labour-intensive manufacturing industries, such as textiles and footwear. This is consistent with China and Indonesia’s abundance of low-cost labour.

It is, however, also important to note that in recent times new evidence suggests that around a half of all international trade, and the major part of the trade in manufactured goods among industrialised developed countries, involves trade in differentiated products belonging to the same basic industry group. For example countries such as the United States, Singapore and Japan all export and import office and telecommunications equipment. This type of trade is called “intra-industry trade” as the exports and imports out of and into a country all come from the same industry.

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<sup>2</sup> This theory was developed by [Eli Hecksher](#) and [Bertil Ohlin](#) at the [Stockholm School of Economics](#). It builds on [David Ricardo's](#) theory of [comparative advantage](#) by predicting patterns of trade and production based on the [factor](#) endowments of a country.

Although the notion of comparative advantage can readily explain much of the world's trade there are some components of it that are a little more difficult to do so. In some areas countries are both exporter and importer of goods. This is certainly the case in many instances of tourism. The United Kingdom, for instance, is not only an important destination for tourists but it is also a source of tourism expenditure as well as British people travel abroad. If it has a comparative disadvantage then it should import, not export them. Only if we understand the concept of intra-industry trade can we understand why this trade occurs.

Generally intra-industry trade occurs when it is possible to practice product differentiation. Product differentiation is simply the case where consumers view the products of an industry as close but not perfect substitutes for each other. Product differentiation generally occurs where producers make similar products with minor variations so that they become imperfect substitutes for consumers. This may involve real differences in material, design, workmanship, or other aspects of quality, or differences in advertising and the reputation of producers for quality and reliability. Often products differ in both respects. Product differentiation is often associated with the use of trademarks and brand names. Many manufactured goods, in particular, are differentiated products.

#### **4. Conclusion**

The growth in the trade in education and tourism services has taken place in the broader context of general globalisation. To understand export and import trade mixes in services a good understanding of traditional and new trade theories is required. Much trade depends upon natural endowments as well as skills, experience and reputations built up over long periods.

## 5. References

Education New Zealand, *Foreign Fee Paying Student Statistics by Market* 1998 - 2006

International Monetary Fund (various issues), *International financial statistics yearbook*, Paris, IMF.

Statistics New Zealand (various issues), *Tourism satellite account*, Wellington.

Canada: A destination of choice for higher education.(n.d.) Retrieved from <http://www.gujaratchamber.org/News>

Canadian Tourism performance. (2006) Retrieved from [http://www.corporate.canada.travel/en/ca/research\\_statistics/statsFigures/tourism\\_performance/annual\\_tourism\\_performance/2006.html](http://www.corporate.canada.travel/en/ca/research_statistics/statsFigures/tourism_performance/annual_tourism_performance/2006.html)

Canada-GDP-real growth rate. (2008) Retrieved from <http://www.indexmundi.com>.

Canadian universities and international student mobility. (2007) Retrieved from [http://www.aucc.ca/\\_pdf/english/publications/student\\_mobility\\_2007](http://www.aucc.ca/_pdf/english/publications/student_mobility_2007)

How many visitors to Canada. (2003) Retrieved from

Savage, C. (2002) *The national report on international students in Canada*. Retrieved from <http://www.cbie.ca/data/media/resources/>

International students studying in Canada-\$745 million in economic contribution.(2009) Retrieved from <http://www.languagescanada.ca/>

Soderqvist, M. (2002). *Internationalization and its management at higher-education institutions: Applying conceptual, content and discourse analysis*. Helsinki, Finland: Helsinki School of Economics.

Asia 2000, New Zealand. website <http://www.asia2000.org.nz>

Australia. Department of Education Science and Technology. website <http://www.dest.gov.au/highered/statinfo.htm>.

International Monetary Fund (2005). *International financial statistics*. Paris: IMF. Website <http://www.imf.org>

Ireland Higher Education Agency. website <http://www.heai.ie>

New Zealand Department of Statistics, Ministry of Education. website. <http://www.minedu.govt.nz>.

Organisation of Economic Cooperation and Development (OECD). website <http://www.oecd.org>

United Kingdom Higher Education Statistics Agency, (2005). website <http://www.hesa.ac.uk>

United States of America National Centre for Education Statistics. website <http://nces.ed.gov>.

*Are We Ready to Engage Students with Our Own Mobile Devices?*

Gary K. W. Wong

The Hong Kong Institute of Education, Hong Kong

0292

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Abstract

Nowadays, mobile technology becomes the most penetrating innovation in this information generation. Students and teachers are exposed with fascinating and powerful mobile devices in everyday life. With the advanced technology development and high connectivity to the Internet through wireless networks in school, it becomes common that students and teachers are bringing their own mobile devices (e.g. smartphones, tablet computers, and laptop computers) to classroom for both personal, teaching, and learning purposes. However, it has been challenging for teachers to engage their students in classroom teaching when students bring their mobile devices to class as a distraction. How could we take the advantage of this mobile technology for our classroom teaching and learning, and enhance the student engagement in our classroom instructions? In this paper, we will share a personal insight on how to engage students with mobile technologies in our classroom instruction. A new pedagogical framework of “Bring Your Own Devices” (BYOD) will be introduced targeting on a general classroom teaching environment, and varieties of existing mobile collaborative learning platforms will be explored. Then, a first-hand teaching experience and pilot experiment with BYOD framework will be discussed and shared, and help teachers understand how to prepare themselves, the students, and the system infrastructure for this innovative instructional framework. Finally, our future research direction will be presented in this paper.

**Keyword:** BYOD, mobile learning, student engagement, classroom interaction, ICT in education

## 1. Introduction

Traditional classroom could be like a prison and lock up the students' mind to separate them from the real world. Students come and listen to teachers using didactic teaching approach, and the classroom could turn into a separation of the real world which has limited relevance to work-based tasks. Students are silent with limited communication and interactions with teachers and peers. When the class is dismissed, their learning is discharged. Beside the teaching approach, the class schedule also becomes a huge barrier because teachers feel the urgency to teach and share everything in their pocket, and students want to absorb everything that is taught in the room. Even teachers can follow a classical Initiate-Response-Evaluate/Feedback (IRE/F) model within the classroom and help students gain valuable feedbacks based on designed questions, the dialogue can be limited to the asked questions.

Actually, the classroom culture in Hong Kong has caused the students to become passive learners. Quite often when I visit primary schools in Hong Kong, I see students are so eager to raise their hands and answer questions. It shows a good involvement of students within the classroom. Collaborative activities are introduced, and students are very excited to engage and participate. They are also very happy to come out to the podium and stand in front of the class to present what they have found. Yet, this ideal classroom learning environment is not kept for too long. In university study here, students are not engaging in discussion especially in a large lecture hall. They seem to know the answers very well demonstrated through written tests. Also, group discussion is never possible in lecture hall due to the seating arrangement and the classroom design. Because of the size of the class, students will feel highly stressful to stand before the class and face them with high pressure.

In order to realize and enhance the classroom teaching, it is crucial to take the advantages of all resources within and outside of classroom, and immerse the students in the ecology of learning. Particularly, this paper will share the experience of using Edmodo, a free cloud computing platform to help teachers and students engage in the classroom teaching. I will also share how this system can solve all the issues above.

## 2. What is Edmodo?

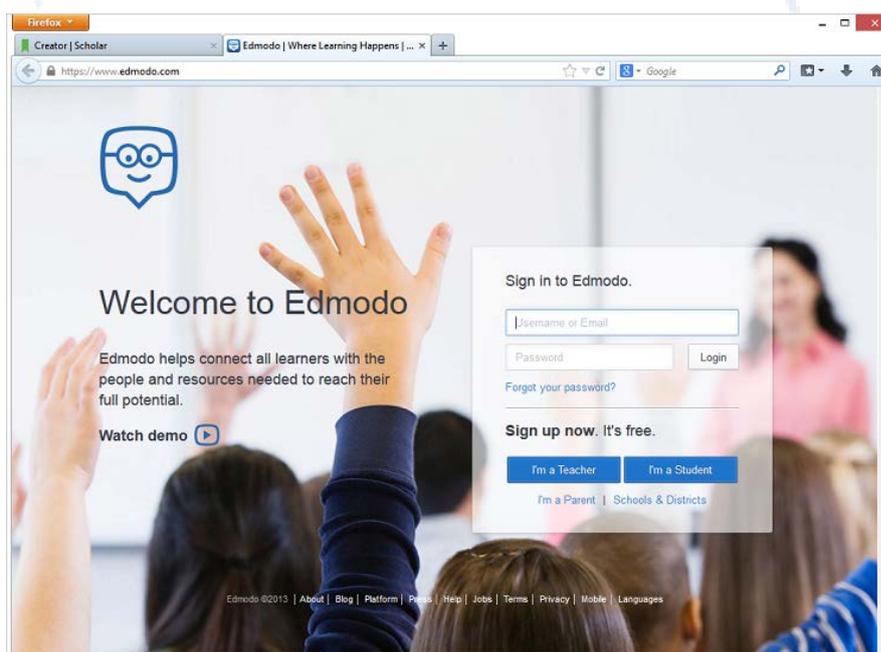
Edmodo is created with four purposes:

- a. Engage students
- b. Connect to resources
- c. Measure student progress
- d. Personalize with apps

In late 2008, Nic Borg and Jeff O'Hara found that there was a great need to create an environment where teachers and students could be connected and

share common interests in learning. This application is available online for free access so that teachers and students can access to the information any time wherever they may be. More importantly, it provides native apps on iOS and Android platforms so that students can respond to the Edmodo requests via their mobile phones and tablet devices. Students nowadays usually bring their mobile phone with them everyday to school, and this is something they will not forget to bring. The mobile devices can potentially bridge the communications and interaction between students and teachers together with the Edmodo application.

This application provides many key features. Some of the popular functions are the notification, alert, polling, assignment, quiz, grouping, and private message. As we can see from the following screen capture, it provides a user-friendly interface where students will not feel too strange in using a new application. Teachers are allowed to post group messages, and each students can reply to the post. Also, teachers can post update notes with attachment, and they can send short alert messages to students to remind them to complete certain tasks.



*Figure 1. Welcome Screen of Edmodo*

In this application, it allows teachers to break students into smaller group, and ask them to form discussion among them. This seems to have a potential to allow collaboration within the classroom. After their discussion, they can post their conclusion together in their group. The teachers can access to the information in each group (folder) and project them on the screen to allow others to see. Moreover, polling is another handful tool to let students vote for their choices when teachers ask questions to the general audience. If students are afraid to raise their hands to answer questions while the teacher only wants

to seek for opinion from the congregation rather than evaluating if they know the answers, this tool becomes very useful and practical.

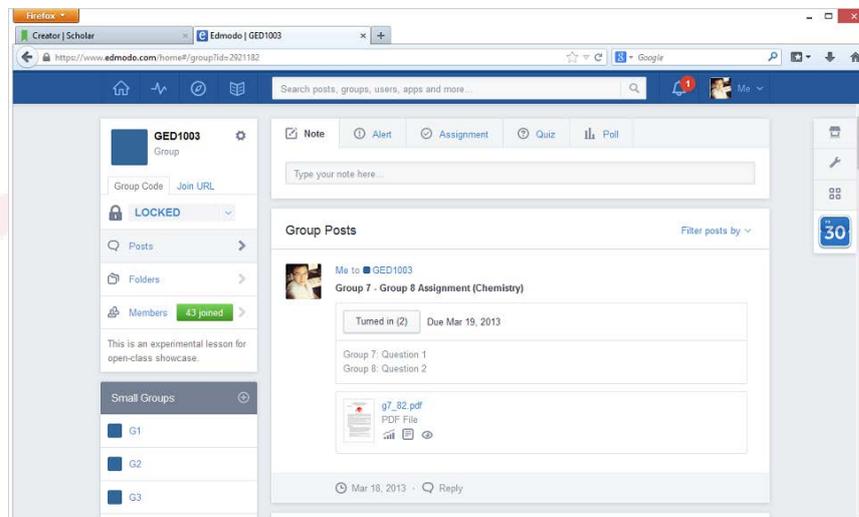


Figure 2. Sample Screen of the Course Page

There are many useful platforms out there in the community. The choice of using it is partly because there are some other teachers in my institute using it. With the peer supports, we can share our experience and learn from each other. This is important because my students may have already come across the same tool in the other class. Then it will motivate and encourage them to start using it without going through further training and preparation.

### 3. True Ecological Learning Environment

According to the ecological systems theory by Bronfenbrenner (1989),

“The ecology of human development is the scientific study of the progressive, mutual accommodation throughout the life course between an active, growing human being and the changing properties of the immediate settings in which the developing person lives” (p. 188).

The key term here is the mutuality among human beings, and this is the essential element of how the ecological system works; one depends to the other, and the system evolves to a better state. Brown (1999) introduced the notion of knowledge ecology and considered it as “an open system, dynamic and interdependent, diverse, partially self-organizing, and adaptive” (p. 3). Later on, he added more onto this idea,

“An ecology is basically an open, complex adaptive system comprising elements that are dynamic and interdependent. One of the things that makes an ecology so powerful and adaptable to new contexts is its diversity...[it is] a collection of overlapping communities of interest

(virtual), cross-pollinating with each other, constantly evolving, and largely self-organizing” (2000).

Clearly, the current state in the traditional classroom which has been just described previously does not contain the essential elements, which is the mutuality among human beings. What we could observe is the didactic discourse, and students are there to receive but not to contribute to the environment. So the diversity of learning is absent because the teacher is the only provider in the system, and the learning cannot evolve and expand further. Hence, the traditional classroom becomes a non-adaptive system comprising elements that are only static and dependent to the single preacher. Without the help of Edmodo, it is impossible to break the silence and open the discussion to general public for the formation of ecological effect.

To add to the understanding of this notion of learning ecology, Barron (2006) defined it as the “set of contexts found in physical or virtual spaces that provide opportunities for learning” (p. 195). In other words, the ways to carry it out can be formal or informal settings. Spires et. al (2011) discussed about the interactions in an one-to-one environment in terms of technology use, and Williams et. al (2011) described how the learning ecology can be effective in the Web 2.0 environment. Yet, it seems that the practice of integrating technologies in the ecology system “is still substantially shaped by traditional teaching modes, perspective learning outcomes, normative expectation, and conventional hierarchies” unless it can be improved by allowing greater flexibilities and more self-organizations (Williams et. al, 2011, p. 40).

Richardson (2002) designed a theoretical framework to capture the foundation of a holistic learning based on the elements of learning ecology. Here is the illustration:



*Figure 3. Four Quadrants of the Focus/Navigation Matrix*

As we can see, four major elements are suggested in every quadrant that serves as either the “focus” or “navigation”, where each is essential during the learning process in the ecology system. Different activities can be across

different areas suggested by Richardson (2002), and they are equally important because students can accomplish learning by “studying, receiving teaching, performing exercises, and working on projects” when creating the learning ecology (p. 49). He suggested technology can enable the support to the interactions among peers and other agents within the process (p. 51). So the question is, how can we realize the true learning ecology with technologies that can be flexible, self-organized, diverse, mutual interactive, and collective?

#### 4. Teaching Practices Analysis with Edmodo

Last semester, I was introduced by another colleague to try to investigate the impact of Edmodo for collaborative and interactive learning activities. The goal is to enhance the student engagement within the classroom teaching. The first course I introduced Edmodo to my students was a general education course called Mathematics Across Cultures and Time. It is designed to stimulate the discussion about the brief history of mathematics and how it is developed over time in our society and culture. The size of the class was around 40 students, and the classroom was full of movable chairs attached with flipping table like the following photo shown in Figure 4.

Students taking this course were to fulfill the general education requirements in their undergraduate study. But they come from different majors of study such as mathematics education, Chinese language education, English language education, or visual arts. In general, students were not comfortable in speaking up for their opinions, and they would not raise hands as a way to vote (which is usually observed in primary education under the same cultural). Intuitively, the educational system in secondary school education has trained these college students to be examination-oriented due to the low acceptance rate to university. Possibly that these students feel they could survive in the system as long as they become exam “killers”. This phenomenon has not been changed for more than a decade here, and purely relying on the traditional classroom model will not change the way these students react.



*Figure 4. Typical Classroom Settings in College*

In the first experiment, I only introduced two interactive activities to stimulate the classroom discussion. The first one was real-time polling where students could use their mobile devices to provide their feedback to instant questions. The feedback was anonymous, and I told the students I was interested in their point of view regardless who they were. Then I posted the question on Edmodo, and asked the students to make their vote instantly. By creating this anonymity, students felt very comfortable in submitting their point of view, and I was very surprised how much these students were anxiously engaged in providing their opinions. The Figure 5 was captured immediately after the polling.

As we can see, the whole class made the vote together, and the feedback was so authentic. While making their decision, I saw some students were discussing next to their friends and asking them what they thought before making their own secret choice. Once the statistic was shown on the browser, then I started to bring out “why” and “how” questions to stimulate their thoughts. More surprisingly, these students began to talk to me in front of the class and shared their opinions on the observations. Now, their own opinions were only made based on the polling result rather than reflecting their own choice.

In this activity, student-student and teacher-student interactions both happened one after another or even at the same moment. Although the Edmodo platform was available, the platform itself would not be interactive and stimulating. It depended on how the teacher initiated the question and led the discussion at the beginning. Then students provided their feedback so the teacher could evaluate and offer further guidance. In that sense, the traditional classroom model was the major framework while the online technologies facilitated as the medium of the interactions among students and the teacher within the framework. It was also clear to me that if I implemented the reflective questions in Edmodo after the polling, I neglected the opportunities to communicate and interact with the students inside the classroom. In the other words, the didactic teaching is certainly “a part of the practical world of New Learning, a world of varied approaches to teaching, diverse learning styles and cultural pluralism” and sometimes it has “a place – in certain places and for certain moments, at least” (Kalantzis & Cope, p. 41-42).



Figure 5. Screen Capture of the Real-time Polling Results

In addition to the real-time polling, I created several private groups inside Edmodo for classroom collaborative activities. Research has shown that “working cooperatively with peers promotes psychological health...and self-esteem when compared with individualistic and competitive experience” (Holland & Muilenburg, 2011, p. 3232). I posted different math problems related to different areas (e.g. biology, physics, cryptography, and philosophy). Within their own group, students sat together with their own mobile devices working together on the problem. They could use the Wi-Fi to connect to the Internet and search for answers or clues to help them complete the problem. Once they were ready with a solution, they wrote it down on electronic notes using mobile apps such as Blackboard iPad or Draw Board. They created images and uploaded it immediately to Edmodo.

After all the groups completed, I pull out each group’s uploaded images, and let the group speak for themselves in their own seats. By remaining in their original positions, they felt even more confident to present because that was the place they came up with the solution. Usually, students present with great anxiety if I ask them to come out to the podium using PowerPoint slides. Since the classroom was not too big, every classmate could hear each group’s sharing while the presenting group remained in their seat. In fact, I did not leave my students to figure it out on their own, I walked around and observed how they did. Some students had opportunities to ask me questions or obtain hints to complete their problems. Usually, my experience tells me that students feel more comfortable to ask questions when I am physically nearby to them.

Walking around the classroom seemed to be a good approach to guide the students during the activities.

In this activity, student-student, student-resource, and teacher-student interaction were observed throughout the period. Students were able to collaborate with their peers to work on the same problem inside the classroom. The role of Edmodo serves as a collaborative platform because each student can work on a part of the problem, share the results with others, and perform submission on behalf. Also, the students were provided unlimited Internet resources online through their mobile devices, and they could submit their inquiry through online search engines to obtain relevant information. Morais and Paiva (2008) commented on the Internet resources,

“The use of the Internet is something that cuts across important barriers for education, the possibilities and limitations of which are not fully understood, but which profoundly influences the work carried out in schools, promoting cooperative learning that can prepare the individual for a new type of professional activity involving team work” (p. 137).

So it is important to allow students to learn to make good use of the available resources and how to “interact” with them through team work activities. In the meantime, students were able to interact with me in the classroom although our interaction may not be through Edmodo in this case. Yet, they could submit their inquiry there if assuming this activity was conducted in a larger lecture hall with 100 students. That way if I could not walk around and reach each single seat, I would be still able to respond their interim inquiry.

Based on these two activities, formative assessment was deployed to measure the student’s understanding in the relationship between math and other disciplines, and their ability to solve simple math problems. Students usually do not find pleasant in coping with examination questions, but I could not observe any anxiety and stress among students while working together on the problems. Indeed, they were so engaging and excited about building up knowledge together, which solve completely the issues in traditional classroom when students expect didactic teaching and any form of question may be an individual evaluation. In my case, the individual performance was not focused, which encouraged students to participate and contribute through cooperation and collaboration. If Edmodo had not been available for this lesson, students would have not been able to share ideas and collaborate easily. Yet, one observation I found from my experience was that, no student was able to enjoy the lesson by keeping silent throughout the lesson and learning activities. Somehow, verbal communication is still a crucial element during the collaboration and cooperation, and it is a more direct way to talk indeed. Richardson (2002) explained one weakness of pure technology-based learning because technology could become a “failure to provide effective social transactions for learners” (p. 47). In my point of view, if we are careful in

designing and integrating the technologies to traditional classroom, the learning and teaching atmosphere could be significantly enriched.

### **5. Self-Reflection on the New Learning**

With the experience from the last semester, I was able to reflect upon the effectiveness of using Edmodo for interactive learning. What I did last semester was only implemented inside the classroom teaching. I was able to examine the opportunities to interact with my students using the single platform. Other than the onsite synchronous interactions, we should take the advantage of technologies to allow offsite synchronous and/or asynchronous interactions. In fact, Edmodo provides more than just real-time polling and group activities. It also allows to design other activities such as quiz, assignment, discussion, and grading.

In this semester, I have made use of these new functions in teaching a course about number theory to the freshmen. For instance, I still create private groups in Edmodo this time, but I intend to form these groups for serving as inquiry-based discussion outside of classroom to meet the interests of these different groups. These groups are formed by their own consents, and I let them choose their own group members whom they find similar interests. I also create a library in Edmodo with course materials and resources that could help students look for useful references and support their studies. This has increased the frequency of accessing to the Edmodo system. In addition, their accounts are associated with their email accounts, and my notification written on the class group can be sent directly to their email addresses. This can help me connect to my students outside of the classroom and prepare them to come to the classroom. However, it is true that more preparation efforts are needed to create the new learning classroom. It took longer hours than usual for me to complete the lesson plan and setting up the questions and group activities. After having experience in using the system, I am now able to create different activities more easily without many hurdles. In order to bring new learning ecology to classroom, it is essential that the teachers become acceptance to technology and make commitment to the changes. With right hardware and software, these will form major elements of new learning pedagogical change.

### **6. Looking Backward and Forward**

After experiencing these new ways of learning, I find that to be successful in the new learning model, we do not need to give up the traditional classroom model. But, we can integrate the new media and technologies to the existing classroom teaching model such as IRE/F or didactic teaching, and create a smooth learning experience where teachers, students, and information interact mutually with each other. From experience, it tells us that pure technology-based learning without social interaction or pure didactic teaching in the classroom with disconnection outside of classroom will not work very well with the student learning. By creating a true learning ecology, students are allowed to interact with every resource around them every day. I believe the core success of learning and teaching is through creating a ubiquitous learning

ecology and involving knowledge from all possible sources. When the learning ecology evolves, the diffusion of information and knowledge will be realized. By considering using technology similar to Edmodo and adding some creativities, teachers can easily engage students both inside and outside of classroom.

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## 7. References

- Barronn, B. (2006). Interest and self-sustained learning as catalysts of development: A learning ecologies perspective. *Human Development*, 49, 193-224.
- Bronfenbrenner, U. (1989). Ecological systems theory. *Annals of Child Development*, 6, 187-249.
- Brown, J. S. (1999). Learning, working, and playing in the digital age. *Serendip*. Retrieved on February 12, 2009, from [http://serendip.brynmawr.edu/sci\\_edu/seelybrown/](http://serendip.brynmawr.edu/sci_edu/seelybrown/)
- Brown, J. S. (2000). Growing up digital: How the web changes work, education, and the ways people learn. *Change Magazine*, March/April. Retrieved from [http://www.usdla.org/html/journal/FEB02\\_Issue/article01.html](http://www.usdla.org/html/journal/FEB02_Issue/article01.html)
- Holland, C. & Muilenburg, L. (2011). Supporting Student Collaboration: Edmodo in the Classroom. In M. Koehler & P. Mishra (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 3232-3236). Chesapeake, VA: AACE. Retrieved September 29, 2013 from <http://www.editlib.org/p/36816>.
- Kalantzis, M. and Cope, B. (2012). *New learning: Elements of a science of education* (2nd ed.). New York: NY: Cambridge University Press.
- Limniou, M. (2012). From present to virtual classroom: A review of the influence of ICT on education. In S. Abramovich (Ed.), *Computers in Education* (Vol. 1, pp. 93-119), New York: Nova Science Publishers.
- Morais, C., & Paiva, J. (2008). Kitchen science: Through the window of the web. In A. Mendes, I. Pereira, & R. Costa (Eds.), *Computers and Education* (pp. 135-145). London: Springer.
- Richardson, A. (2002). An ecology of learning and the role of elearning in the learning environment: A discussion paper. In *Connecting the Future: Global Summit of Online Knowledge Networks*, education.au limited, Dulwich.
- Spires, H. A., Oliver, K., & Corn J. (2011). The new learning ecology of one-to-one computing environments: Preparing teachers for shifting dynamics and relationships. *Journal of digital learning in teacher education*, 28(2), 63-72.
- Williams, R., Karousou, R., & Mackness J. (2011). Emergent learning and learning ecologies in Web 2.0. *International review of research in open and distance learning*, 12(3), 39-59.

*How to Better Integrate Summer Projects: Insights from Students' Comments*

Tomomi Naka

Tottori University, Japan

0295

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During the past two summers, I supervised student summer projects at an English-medium liberal arts university in Bangladesh. These projects are meant to encourage students, who have just finished their first year at the university, to connect their education to communities outside the university through research and service. Developing such connections early on is important because students are more likely to see the significance of their university education and to understand and hopefully tackle complex issues in society. Having overseen a few projects and taught those who returned from projects in classes, I started to wonder how the students actually think about their summer projects and how they feel their projects fit into their university education. Students' comments revealed their struggles to see these connections and made me aware of the importance of making greater efforts to provide opportunities for reflection through regular classroom activities.

Almost all first year students voluntarily participate in these projects, which are conducted in Bangladesh and students' home countries throughout Asia. Some are service-oriented projects, such as teaching English to children in China and coaching basketball and leadership to teenage girls in Nepal. Other projects are more research focused, for example, collecting oral histories about the Vietnam War and surveying attitudes toward corruption in Bangladesh and India. Both faculty members and students can propose projects, and university funding is available for high quality proposals. In the fall semester, each project presents their results in a poster or a PowerPoint oral presentation to the university community. A few projects in the past have refined their work and presented at academic conferences. While these presentations provide an opportunity to share project results, little has been done to explore how students think about their summer projects, particularly in relation to coursework at the university.

A work-study second-year student, Jyoti, helped me to do interviews with students. Jyoti participated in a summer project in 2011 and I thought that students might feel more comfortable talking with her than with me. Jyoti explained to the students that I wanted to explore how they perceived their summer experiences with the hope of finding better ways to provide support for future projects. By December 2012, we interviewed twelve students who had just participated in different projects.

We first explored to what extent students were aware of the connections between their coursework and projects before beginning their summer projects. I expected that their answers would be about how they developed their projects, such as how they found project topics to pursue. Interestingly, most students pointed out a specific course ("Social Inquiry"), saying that this course was particularly helpful because it taught them the basics of how to develop a research project. As I read many student proposals for review, I could relate to their comments. It was a challenge, as some students pointed out, to write a proposal by themselves, even with the help of supervising professors. Many proposals could not present a good and manageable research question or a realistic research plan. Not all students take this course, but others often get hints and advice from students who did and our interviewees felt that systematic instruction and practice developing research projects were helpful.

In general, students have the easiest time making connections between coursework and projects when instructors make a point of modeling this practice in the classroom. The course does not have to be about research processes and methods. For instance,

one student who did her research on female politicians in Afghanistan said that her project grew out of several courses and workshops she had taken, including religion and politics courses. These courses and workshops did not particularly focus on Afghan cases, but class discussions and activities guided her toward finding relevance with other contexts. When she developed her project, she saw clearly the importance of understanding the multiple and complex factors that are associated with female politicians. This shows that to increase summer project learning instructors must make efforts in the regular classroom to connect course content to external settings and situations where students find some relevance.

I also tried to assess how summer experiences affect students' subsequent studies at the university. Several students said that their projects helped them to choose courses or to understand better the course discussions. A student who collected life histories of Bangladeshi members of UN Peacekeeping Forces explained that she became more interested in taking politics courses because she wished to understand the international conflicts she had heard of in the project.

However, many students had difficulties answering this question because they had few opportunities to analyze their own experiences in such a way. After discussion with Jyoti, we rephrased the question and asked whether students thought of (or talked about) their projects in class activities. It was still not easy for many students to think of such occasions. This response was surprising for me as I had expected that project experiences could be easily used in class discussions. For instance, a student who conducted a survey among Bangladeshi handicraft artisans had felt that she needed to carefully translate questions so that her research participants could understand. Most of them had limited formal education and some vocabularies, especially complex academic concepts and terms, did not make sense to them. She, as well as several others, mentioned how important it was to explain their ideas sufficiently to project participants. Such experiences could easily relate to many courses, including politics, philosophy, and sociology courses, as these disciplines often discuss power dynamics and the complexity of research and academic projects. Students, however, fail to find such relevance by themselves. More encouragement on the part of the faculty for students to examine their project experiences could be helpful.

It also became clear to me that reflecting on the projects in a timely manner is important. As time passes, students are not able to summon up their summer experiences. For example, a student said that she simply forgot the specifics of what she learned during the summer. While she presented her project in early October, since then she had not had opportunities to think back on her project with her peers or professors. Even if students have rich experiences, without reflecting on their experiences in course contexts, they cannot take full advantage of the project learning.

The comments here are not a comprehensive overview of students' experiences, but they gave several insights to me. Concrete and practical instruction on how to develop and conduct research is helpful. In addition, providing students with opportunities to think about how course materials and subjects relate to other cultural and social settings can help students to develop their project ideas. Students often give thoughtful comments about their summer projects, but to integrate their summer experiences into their subsequent college education further, it is essential to provide

post-project opportunities for them to reflect on their summer experiences in relation to their coursework and other college activities. With these findings in mind, I hope to design course activities that help students to consider how their learning can be used to examine diverse social and cultural settings that they may encounter.

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## An Analysis of Errors in Passive Sentence Structures by Thai EFL University Students

Monnipha Somphong

Language Institute Thammasat University, Thailand

0315

The Asian Conference on Education 2013

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### Abstract

Student errors are considered as a device that learners use and from which they can learn (Corder, 1967); they provide evidence of the learner's level in the target language (Gass and Selinker, 1983), contain valuable information on the learning strategies of learners (AbiSamra, 2003; Lightbown and Spada, 2006; Richards, 1974; Taylor, 1975), and also supply means by which teachers can assess learning and teaching as well as determine priorities for future effort (Richards and Sampson, 1974). Conducting error analysis is therefore one of the best ways to describe and explain errors committed by L2 learners. This kind of analysis can reveal the sources of these errors and the causes of their frequent occurrence. Once the sources and causes are revealed, it is possible to determine the remedy, as well as the emphasis and sequence of future instructions.

Errors in language learning, therefore, play an important role in this study. With this in mind, this study was designed to identify important features of students' errors and categorize those errors, in passive sentences produced by first-year students at a public university in Bangkok. Ninety students were given a written test prior to the end of an English class in July 2011. The test consisted of 25 pairs of nouns and verbs adapted from the test used by Simargool (2008). In order to elicit the passive sentences, 10 pairs were transitive verbs with the nouns that can be the subjects. The students were instructed to form sentences with all of the given nouns as subjects followed by the verb. The passive sentences generated by the students were then analyzed and divided into five categories: well-formed passives, malformed passives, actives, ungrammatical sentences, and non-sentences. In addition, the number and types of errors produced by high and low proficiency groups of students were identified and compared.

The findings will not only help improve understanding of causes of errors made in passive sentence construction but also contribute to the preparation of teaching materials and methodology appropriate to the students, which will ultimately enhance the students' ability to write passive sentences in English.

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## **1. INTRODUCTION**

### **1.1 Statement of the problem**

Passive sentences or sentences in the passive voice are considered an important part of every English language teaching grammar syllabus (Cowan, 2008). Passive voice has been one of the topics discussed by various researchers in Thai context. For example, it is one of the errors frequently made by Thai students at Khon Kaen University as identified by Rujikiatkumjorn and Chiewkul (1989), by third-year sociology students at Srinakharinwirot University (Likitratnaporn, 2002), and also one of the errors found in opinion paragraphs written by most Thai students (Sattayatham and Somchoen, 2007). Passive is the second most frequent writing error (after the subject-verb agreement) made by a doctoral student in Animal Science Program at a Thai university (Arunsamran, Authok, and Poonpon, 2011). Moreover, according to Thep-Ackrapong (2005), passive voice is identified as one of the major conceptual discrepancies between Thai and English contributing to a great number of errors produced by the Thai students as well as problems involved in the teaching of English to Thais. In a more recent study, Simargool's (2008), on interlanguage passive construction, the passive sentences generated by Thai EFL students were divided into five groups: well-formed passives, malformed passives, actives, possible pseudo-passives, and other constructions.

For the reasons mentioned above, the researcher would like to study passive sentence structures written by first-year EFL university students in Thailand as well as to analyse and compare errors made in those passive sentences. This will not only help improve understanding of causes of errors made in passive sentence construction but also contribute to the preparation of teaching materials and methodology appropriate to the students, which will ultimately enhance the students' ability to write passive sentences in English.

### **1.2 Research questions**

1. What are the types of errors in passive sentences written by first-year EFL students at Thammasat University?
2. What are the differences in number of errors in passive sentences written by high and low proficiency students?
3. What are the differences in types of errors in passive sentences written by high and low proficiency students?

## **2. THEORETICAL BACKGROUNDS: ERROR ANALYSIS**

### **2.1. Definition of errors**

According to Corder (1981, p. 152), errors are "the result of some failure of performance" and differentiated errors from mistakes in the way that errors are systematic in nature being "errors of competence" which occur in the continuum of the learning process. They are a noticeable deviation from the adult grammar of a native speaker and the result of learners' transitional competence. On the other hand, mistakes are "errors of performance" or performance errors that are either a random guess or a "slip," in that they are a failure to utilise a known system correctly.

Mistakes are neither systematic and nor significant to the process of language learning.

Like Corder, Norrish (1983, p. 7), defined “an error” as a systematic deviation that happens when a learner has not learnt something and consistently “get(s) it wrong.” Edge (1989) defined errors as forms that language users cannot correct by themselves even though they have been taught. James (1998, p.1) also identified a language error as an unsuccessful bit of language. He adds that language learners cannot correct their errors until they have additional knowledge on the topic. These errors occur in the course of the learner’s study because they haven’t acquired enough knowledge. Once they acquire additional knowledge, they will be able to correct their errors and the more errors the learners correct, the more conscious of language they will become. Moreover, it was pointed out that error is unique to humans, and error analysis is the process of determining the incidence, nature, causes and consequences of unsuccessful language.

## **2.2 Significance of errors in language teaching and learning**

Errors have long been the obsession of language instructors and researchers. Before Corder (1967), errors were looked at as a problem that should be eradicated. However, errors are now considered as a device that learners use and from which they can learn (Corder, 1967); they provide evidence of the learner's level in the target language (Gass and Selinker, 1983); they contain valuable information on the learning strategies of learners (AbiSamra, 2003; Lightbown and Spada, 2006; Richards, 1974; Taylor, 1975); and they also supply means by which teachers can assess learning and teaching and determine priorities for future effort (Richards and Sampson, 1974). Conducting error analysis is therefore one of the best ways to describe and explain errors committed by L2 learners. This kind of analysis can reveal the sources of these errors and the causes of their frequent occurrence. Once the sources and causes are revealed, it is possible to determine the remedy, as well as the emphasis and sequence of future instructions.

According to Ellis (1995, pp. 51-54), the most significant contribution of error analysis lies in its success in elevating the status of errors from undesirability to that of a guide. Thus, errors are no longer seen as “unwanted forms,” but as evidence of learners’ active contribution to second language acquisition.

## **3. METHODOLOGY**

### **3.1 Participants**

All of the first-year EFL students (90 students) in the South-East Asian Studies Program at Thammasat University participated in the study. They were studying English Course II as a compulsory subject during the first semester of 2011 academic year (June 2011 – October 2011) at Thammasat University, Bangkok. All participants speak Thai as their first language and, at the time of the test, have studied English for about 12 years since primary school.

### **3.2 Research instrument**

The research instrument in this study consists of two main parts. The first part is a questionnaire concerning participants’ personal information such as gender, age, and

educational background. The second part is a written test consisting of 25 pairs of nouns and verbs adapted from the test used by Simargool (2008). In order to elicit the passive sentences, ten pairs are transitive verbs with the nouns that can be the subjects. To divert the students' attention from the targeted construction, the verbs provided, ordered randomly, include not only transitives, but also unaccusatives and unergatives as shown in Table 1. To avoid students' difficulties with the vocabulary, the selected words are those taught in high school. This is verified by a high school English specialist from the Ministry of Education of Thailand.

Table 1  
*Verbs and nouns used in the written test*

<b>Transitives</b>	<b>Unaccusatives</b>	<b>Unergatives</b>
2. read (book, read)	1. happen (accident, happen)	3. walk (boy, walk)
4. drive (car, drive)	7. die (dog, die)	6. sleep (cat, sleep)
5. push (cart, push)	9. fall (leaves, fall)	15. fly (plane, fly)
8. hit (gate, hit)	11. expire (milk, expire)	21. stand (student, stand)
10. write (letter, write)	12. occur (mistakes, occur)	23. run (thief, run)
14. paint (picture, paint)	13. arrive (passengers, arrive)	
16. win (prize, win)	17. arise (problem, arise)	
19. sing (song, sing)	18. appear (shadow, appear)	
24. find (wallet, find)	20. disappear (stranger, disappear)	
25. steal (watch, steal)	22. rise (sun, rise)	

### 3.3 Data collection

The written test was given to all participants in July 2011. Prior to the end of an English class, they were provided 40 minutes to make 25 sentences from each pair of nouns and verbs given. To ensure the occurrence of the passive constructions, the students were instructed to form sentences with all of the given nouns as subjects followed by the verb. The expected constructions are 10 passives, 10 unaccusatives, and 5 unergatives. No terms referring to the targeted constructions were mentioned in the test.

## 4. RESULTS

### 4.1 Participants

The first part of the instrument concerning participants' personal information such as gender, age, and educational background was analyzed.

Table 2  
*Number of students and their gender*

<b>Male</b>	<b>Female</b>	<b>Total</b>
36	54	90

The subjects participating in the study were all the first-year students in the South East Asian Studies program who studied English Course I (EL 171) in the first semester of the academic year 2011 at Thammasat University, Bangkok. Ninety students were present on the day of the test. The majority of the students (60%) were female while the rest (40%) were male students.

Table 3  
*Number of students in each group and their grades in English*

High proficiency students			Low proficiency students				Total
A (80% and more of the total score)	B+ (75%-80% of the total score)	B (70%-75% of the total score)	C+ (65%-70% of the total score)	C (60%-65% of the total score)	D+ (55%-60% of the total score)	D (50%-55% of the total score)	
10	14	17	16	13	8	12	90

For the purpose of comparison in this study, all of the ninety students were divided into two main groups according to their assigned grades in EL 171: grade A, B+ and B students (41 students or 45.56%) were classified as high proficiency students, whereas C+, C, D+ and D students (49 students or 54.44%) were classified as low proficiency students.

#### 4.2 Findings

All the sentences produced by the students were checked by the researcher and verified by an English native speaker, analyzed, and then classified into different categories to answer each of the research questions as follows:

1. What are the types of errors in passive sentences written by first-year EFL students in the South-East Asian Studies Program at Thammasat University?
2. What are the differences in number of errors in passive sentences written by high and low proficiency students in the South East Asian Studies Program?
3. What are the differences in types of errors in passive sentences written by high and low proficiency students in the South-East Asian Studies Program?

The ten sentences produced by each student were checked and grouped into five categories: well-formed passives, malformed passives, actives, ungrammatical sentences, and non-sentences as shown in Table 4.

Table 4  
*Results from the ten given transitive verbs*

Constructions	Instances	Percentages
Well-formed passive	450	52.27
Malformed passive	240	27.87
Ungrammatical sentences	87	10.10
Non-sentences	58	6.74
Active	26	3.02
Total	861	100

From the ten transitive verbs given to the 90 students, 900 passive sentences were expected. However, only 861 instances (95.67%) were actually produced and thus used in the analysis since some items (4.33%) were left blank. Of the 861 instances, more than half (450 sentences or 52.27%) were well-formed passive sentences, followed by malformed passives (240 instances or 27.87%), ungrammatical sentences

(87 instances or 10.10%), non-sentences (58 instances or 6.74%), and correct active sentences (26 sentences or 3.02%).

Table 5

*Number of students producing each construction*

Construction (Number of sentences)	0-4 instances		5-7 instances		8-10 instances	
	High	Low	High	Low	High	Low
Well-formed passive (450)	3	35	14	10	24	4
Malformed passive (240)	47	89	0	5	0	0
Ungrammatical sentences (87)	19	29	0	2	0	0
Non-sentences (58)	6	28	0	1	0	0
Active (26)	3	11	1	0	0	0

#### 4.2.1 Well-formed passive sentences

Well-formed passives refer to the sentences with the nouns given as subjects followed by the correct form of verb to be and past participle form of the main verbs. The sentences can be in any tense since it is not specified in the instruction and not the main concern of the study.

Table 6

*Number of students producing well-formed passive sentences*

No. of sentences	0	1	2	3	4	5	6	7	8	9	10
High	1	-	1	1	-	3	4	7	7	9	8
Low	13	8	7	3	4	5	1	4	2	2	-
Total	14	8	8	4	4	8	5	11	9	11	8

Of all 450 correct passive sentences, more than two-thirds (68.89% or 310 sentences) were produced by the high proficiency students, while 31.11% (140 sentences) were produced by the low proficiency group.

Table 6 shows that eight high proficiency students could produce all 10 well-formed passive sentences, whereas none of the students in the low proficiency group could do so. On the other hand, only one student (1.11%) in the high proficiency group could not produce any well-formed passive sentences, while 13 low proficiency students (14.44%) could not produce any well-formed passive sentences.

#### 4.2.2 Malformed passive sentences

Malformed passive sentences are the sentences consisting of the subject (the noun given) followed by a correct form of verb to be but a wrong form of the main verb given. That is, the main verb can be in one of the following forms:

- : a past simple form (instead of a past participle) of an irregular verb (such as “drove” instead of “driven”, “wrote” instead of “written”, “sang” instead of “sung”, and “stole” instead of “stolen”)

- : a wrong –ed ending of an irregular verb (such as “readed” instead of “read”, “drived” instead of “driven”, “hited” or “hitted” instead of “hit”, “writed” instead of “written”, “wined” instead of “won”, “singed” instead of “sung”, “finded” instead of “found”, and “stealed” instead of “stolen”)

- : other wrong past participle forms (such as “rode” instead of “read”, “droven” instead of “driven”, “pushen” instead of “pushed”, “hiten” or “hitten” instead of “hit”, “wroten” or “writen” instead of “written”, “painten” instead of “painted”, and “stroen” or “stolen” or “stealen” instead of “stolen”)

- : a base form of a verb (such as drive, push, write, paint, win, sing, find, steal)

- : a present participle (or –ing) form of a verb (such as reading, driving, hitting, writing, painting, singing, finding, and stealing)

More than one fourth (27.87% or 240 instances) of the sentences produced by the students was grouped as malformed passive sentences. Of all the 240 malformed instances, 77.5% (186 instances) were produced by low proficiency students, whereas only 22.5% (54 instances) were written by high proficiency ones.

As shown in Table 7, the highest number of malformed passive sentences was in the form of a verb to be and the base form of the main verb given (87 instances), followed by a verb to be and the present participle form of the verb (48 instances), verb to be and other wrong past participle forms (43 instances), verb to be and an –ed form of irregular verbs (39 instances), and verb to be and past simple forms of irregular verbs (23 instances).

Table 7

*Types and number of errors in malformed passive sentences*

Types of errors	High proficiency students	Low proficiency students	Total
<b>v. to be + base form</b>	13	74	87
<b>v. to be + verb -ing</b>	3	45	48
<b>v. to be + wrong v.3</b>	19	24	43
<b>v. to be + wrong –ed endings</b>	10	29	39
<b>v. to be + past simple form of irregular verbs</b>	9	14	23

Of the 861 sentences, the highest number of malformed passive sentences (10.10%) was written in the form of verb to be followed by the base form of the verb. Of all 87 sentences, only 13 of them (14.94%) were produced by high proficiency students, while the rest (74 sentences or 85.06%) were written by low proficiency group. The verb “paint” was used most frequently in the base form in 17 sentences, followed by “push” (16 sentences) , “find” (14 sentences), “steal” (13 sentences), “win” (9

sentences), “sing” (7 sentences), “write” (6 sentences), and “drive” (5 sentences). For example, “The picture was paint by the artist.”, “The cart was push by him.”, “My wallet was find last week.”, “The watch was steal by thief.”, “The prize is win today.”, “Elvis song was sing in last party.”, “The letter is write by me.”, and “My car is drive on the road.”

As shown in Table 7, 48 malformed passives with the verb to be and the main verb in present participle form were produced. It is quite interesting to note that none of the A students produced this error and only one B+ and two B students did so. The remaining 45 instances were produced by the low proficiency group.

Table 8

*Frequencies of the present participles*

<b>Verbs</b>	<b>painting</b>	<b>driving</b>	<b>singing</b>	<b>reading</b>	<b>hitting</b>
<b>Instances</b>	9	8	8	5	4
<b>Verbs</b>	<b>writing</b>	<b>pushing</b>	<b>winning</b>	<b>finding</b>	<b>stealing</b>
<b>Instances</b>	3	3	2	2	2

For the second group of malformed passives—a verb to be plus the main verb in the present participle form as shown in Table 8, the verbs which were written in this pattern most often were “paint” (9 occurrences) followed by “drive” and “sing” (8 occurrences each). The verbs written in this pattern least often (twice each) were “win,” “find,” and “steal.” Examples of this kind of error were “This picture is painting by my sister.”, “The car is driving on the road.”, “The song is singing by superstar.”, “The wallet is finding by my son.”, “The prize was winning by Chai.”, “The watching is stealing by mom.”, “The letter was writing by that boy.”, “The book is reading by that boy.”, and “The gate is hitting by Susan.”

Table 9

*Number of problematic instances per type of past participle*

<b>Types of past participle</b>	<b>Verbs given in the test</b>	<b>Problematic past participles</b>
<b>1. –en ending</b>	drive, write, steal	89 (45.88%)
<b>2. irregular verbs</b>	read, hit, sing, find, win	68 (35.05%)
<b>3. –ed ending</b>	push, paint	37 (19.07%)

Apart from the present participles of the verbs, the highest problematic instances (45.88%) concern the –en past participles, followed by the irregular verbs and those with –ed endings. The frequencies of each problematic past participle are illustrated in Table 9.

Table 10

*Frequencies of the problematic past participles*

<b>Verbs</b>	<b>written</b>	<b>stolen</b>	<b>sung</b>	<b>painted</b>	<b>driven</b>
<b>Instances</b>	43	28	24	19	18
<b>Verbs</b>	<b>pushed</b>	<b>found</b>	<b>hit</b>	<b>won</b>	<b>read</b>
<b>Instances</b>	18	16	15	10	3

Among the malformed passives in the data, “write” is the most difficult, and “read” the least difficult for the participants.

From Table 7, forty-three instances (4.99% of the 861 sentences produced) of malformed passives with the verb to be followed by a wrong past participle form were produced. Of the 43 instances, the low proficiency group produced 24 instances of this error (55.81%), while the high proficiency group produced 19 instances (44.19%). The verbs and example sentences which appeared in the wrong past participle forms were as follows:

: “written” and “wroten” (for “write”) in “The letter was written by my friend.” and “The letter was wroten by my son.”

: “hitten” and “hiten” (for “hit”) in “The gate was hitten by my dad.” and “The gate was hiten.”

: “droven” (for “drive”) in “That luxury car is droven by the rich.”

: “stollen”, “stealen”, and “stroen” (for “steal”) in “The watch was stollen by the thief.”, “The watch was stealen.”, and “The watch was stroen.”

: “pushen” (for “push”) in “The cart was pushen.”

: “rode” (for “read”) in “The book was rode.”

: “painten” (for “paint”) in “The picture was painten.”

The next group of malformed passives was a verb to be followed by the main verbs ending with -ed (instead of their irregular forms). The verbs incorrectly used in this pattern ordered in the number of frequency were “stealed” and “drived” (7 times each), “writed” (6 times), “hitted” (5 times), “hited” and “singed” (4 times each), “readed” and “finded” (2 times each), and “wroted” and “wined” (1 time each). Some examples of sentences were “My watch was stealed by thief.”, “The car was drived by myself.”, “My letter was writed by me.”, “My gate was hitted by stranger last night.”, and “The song was singed by singer.”

For the malformed sentences consisting a verb to be and a past simple form of irregular verbs, only four irregular verbs were wrongly used in this pattern with “sang” as the most frequently found, followed by “wrote”, while “drove”, and “stole” having the same frequency. Some examples of sentences were “The song was sang by Celine Dion.”, “A car was drove by father.”, “My watch has been stole by him.”, and “A love letter was wrote by Susan.”

#### 4.2.3 Ungrammatical sentences

Ungrammatical sentences refer to those consisting of a subject and a main verb given in the test instructions but are considered ungrammatically correct in English. Eighty-seven ungrammatical instances (10.10%) were produced by the participants. They can fall into one of the following patterns:

: the sentences with a subject and a main verb in an active voice but no object was included; for instance, “The cart pushes.”, “The watch steals.”, and “The prize won.”

: the passive sentence structures with an object, such as “The gate was hit my hand.”

: the passive sentences with a subject-verb agreement error as in “The letter were written.”

: other forms of ungrammatical sentences

Table 11  
*Types and number of errors in ungrammatical sentences*

Types of errors	High proficiency students	Low proficiency students	Total
Active sentences without an object	20	50	70
Passive sentences with an object	2	4	6
Passive sentences with agreement errors	2	1	3
Others	-	8	8

The ungrammatical sentences with a subject and a main verb in an active voice but no object constituted 8.13% (70 instances) of all the 861 sentences produced. Of the 70 errors of this type, the high proficiency group produced only 20 instances (28.57%), while the low proficiency group produced 50 instances (71.43%). In active sentences without an object, the verbs which were used most often were “win” followed by “push”, “drive”, “sing”, “find”, “hit”, “read”, “write”, “paint”, and “steal”, respectively. For example, “The prize wins in game.”, “The cart pushes.”, “The car can’t drive if you forget a key.”, “The song sings by Michael.”, and “The wallet finds.”

In the second group of ungrammatical sentences—passive constructions with an object, only six instances of this pattern were produced. Interestingly, only one verb “hit” was used in all of the six instances. Examples of this error were “The gate was hit a student.”, “The gate was hit me.”, “The gate is hit me.”, “The gate was hit me at noon.”, “The gate is hit my hands.”, and “The gate was hit my hand.”

Passive sentences with an error in subject-verb agreement were also classified as a subcategory of ungrammatical patterns. They followed passive sentence patterns with a verb to be followed by a past participle form of the main verb, but the verb to be did not agree in number with the subject; thus, they were judged ungrammatical. Only three passive sentences (0.35%) with the subject-verb agreement error were produced. The three sentences were “The letter were written.”, “The book are read by the old man.”, and “Bus gates is hit by a crazy man.”

Other forms of ungrammatical sentences which were found in the writing of only two students in the low proficiency group consisted of two kinds of error. The first one was a correct form of verb “to have” followed by an infinitive form of the verb such as “The cart has push.”, “The picture has paint by me.”, “The prize has win.”, and “The song has sing for me.” The other subgroup contained a correct form of verb “to be” and a present form of the main verb such as “The wallet is finds.” and “The car is drives.”

#### 4.2.4 Non-sentences

Non-sentences consisted of strings of words which did not follow any pattern of grammatically correct English sentences. In other words, neither a subject nor a finite

verb was found. All the fifty-eight instances (6.74%) produced by the students can be classified into three different subgroups:

- : a noun followed by a verb in an –ing form
- : a noun followed by a past participle form of the verb
- : others.

Table 12

*Types and number of errors in non-sentences*

Types of errors	High proficiency students	Low proficiency students	Total
Noun + verb -ing	-	6	6
Noun + v. 3	2	3	5
Other forms	7	40	47

Table 12 shows that 58 instances (or 6.74% of the total number of sentences) were produced by the students. Of all the 58 instances, six instances (0.7%) of a noun and a verb in an –ing form (with neither a verb to be nor an object) were produced only by low proficiency students. Only four verbs were written with this kind of error: “drive” and “paint” (twice each), followed by “read” and “write” (once each). For example, “The car driving by father”, “The picture painting by artist.”, “The book reading by student.”, and “The letter writing by my friend.”

Five non-sentence constructions (0.58%) with a noun followed by a past participle form of the verb were produced by the students. The verb “paint” was used in this pattern twice followed by “write”, “sing”, and “find” (once each). Examples of this kind of error were “The picture painted by me.”, “The letter written by Marco.”, “This song sung by famous singer.”, and “My wallet found by my mom.”

The majority of non-sentences (47 instances or 81.03% of this kind of error) were written in various forms. They all consisted of the noun and the verb given in each item but without any consistent or systematic pattern of errors. A lot larger number of these errors were produced by the low proficiency students than the high proficiency group. That is, forty non-sentences (85.11% of the total of 47 errors) were written by the low proficiency group. Some examples of non-sentences without main verbs are “Prize upon you win.”, “I prized was won.”, “This prize is a win of prizes.”, “This prize my friend is win.”, “The book read is my father.”, and “The wallet is finds.”

#### 4.2.5 Active sentences

Table 13

*Types and number of errors in active sentences*

Types of errors	High proficiency students	Low proficiency students	Total
Active sentences	8	18	26

Although the test instructions clearly asked (both in Thai and English) the students to write complete sentences from the subjects and the verbs given, using the given nouns as subjects, 26 complete active sentences (or 3.02% of the total number of sentences) were produced by the participants. Among the 26 active sentences, only 8 sentences (30.77%) were produced by high proficiency students, while more than two-thirds (18

sentences or 69.23%) by low proficiency ones. Some examples of active sentences are “That gate hit me!”, “The gate is hitting me.”, “He’s read a book.”, “She buy the letter because she will write letter to her dad.”, and “I’m writing a letter to my mother who lives in Canada now.”

## 5. CONCLUSION

The present study aims at investigating passive sentence structures produced by Thai EFL learners, classifying error types as well as analyzing their causes. The data from Thai students in the study are elicited from a written test, in which the subjects were instructed to write sentences from 25 pairs of nouns followed by transitive, unaccusative, and unergative verbs given.

The findings show that the influence or interference of the students’ mother tongue can be detected in several aspects. Thai students may have some difficulty with and may be not very familiar with the English passive sentence structure and morphological changes since Thai is an isolating language, in which various grammatical categories, including number, case, tense, aspect, and mood are not marked by morphological inflections, but are implicit and can be identified by their syntactic environments. In terms of word order, Thai is an S-V-O and Head-Modifier language. Instead, “thook” has become a grammatical passive marker in Thai, which occurs with all types of passive verbs (Prasithratsint, 2006).

It is hoped that this study will not only offer useful insights on the influence of L1 on the English passive construction, but will also lead to further studies that will improve the study of the passive constructions. Moreover, the study can benefit the teachers, lesson planners, as well as materials developers in the lesson or material preparation and instruction. They should be aware of the errors the students are likely to make and thus put an emphasis on the areas that can be problematic for the students.

## References

- AbiSamra, N. (2003). An Analysis of Errors in Arabic Speakers' English Writings. American University of Beirut. Retrieved January 13, 2011, from <http://abisamra03.tripod.com/nada/languageacq-erroranalysis.html>
- Arunsamran, P., Authok, R., & Poonpon, K. (2011). English academic writing problems of a Thai graduate student. In West, A.J., Getkham, K. & Singhakowinta, J. (Eds.). Proceedings from *The 3rd International Conference on Language and Communication 2011: Interdisciplinary Discourses in Language and Communication* (pp. 21-28). Bangkok: National Institute of Development Administration.
- Corder, S.P. (1967). The significance of learners' errors. *International review of Applied Linguistics*, 5, 161-170 and reprinted in J.C. Richards (Ed.) (1974). *Error Analysis: Perspectives on Second Language Acquisition*. London: Longman.
- Corder, S. P. (1981). *Error analysis and interlanguage*. Oxford: Oxford University Press.
- Cowan, R. (2008). *The teacher's grammar of English*. Cambridge: Cambridge University Press.
- Edge, J. (1989). *Mistakes and correction*. London: Longman.
- Ellis, R. (1995). *Understanding second language acquisition*. Oxford: Oxford University Press.
- Ellis, R. & Barkhuizen, G. (2005). *Analysing learner language*. Oxford: Oxford University Press.
- Gass, S.M. and Selinker, L. (Eds.) (1983). *Language transfer in language learning*. Rowley, Massachusetts: Newbury House.
- James, C. (1998). *Errors in language learning and use: Exploring error analysis*. London: Longman.
- Lightbown, P.M. & Spada, N. (2006). *How languages are learned* (3<sup>rd</sup> ed.). Oxford, England: Oxford University Press.
- Likitratnaporn, W. (2002). An analysis of grammatical errors towards approaches to solutions of instructional problems. *Journal of Humanities Parithat, Srinakharinwirot University*, 24(1), 80-90.
- Prasithratsint, A. (2006). Development of the thùuk passive marker in Thai. In W. Abraham and L. Leisiö (Eds.), *Passivization and typology: Form and function* (pp. 115-131). Amsterdam, The Netherlands: John Benjamins Publishing.

- Richards, J.C (ed.) (1974). *Error analysis: Perspectives on second language acquisition*. London: Longman.
- Richards, J., & Sampson, G. (1974). The Study of Learner English. In J.C. Richards (Ed.), *Error Analysis: Perspective on Second Language Acquisition* (pp. 3-18), London: Longman.
- Rujikiatkumjorn, S. and Chiewkul, S. (1989). Error analysis of English language performance of KKU freshmen students. *PASAA*, 19(1), 93-94.
- Sattayatham, A., & Honsa Jr., S. (2007) Medical students' most frequent errors. *Asian EFL Journal*, 9(2), 170-193.
- Sattayatham, A. & Somchoen, H. Jr. (2007). Medical students' most frequent errors at Mahidol University, Thailand. *Asian EFL Journal*, 9(2), 170-194.
- Simargool, N. (2008). Interlanguage passive construction. *Journal of Pan-Pacific Association of Applied Linguistics*, 12(1), 97-119.
- Taylor, B. (1975). The use of overgeneralization and transfer learning strategies by elementary and intermediate students of ESL. *Language Learning*, 25, 73 - 107.
- Thep-Ackrapong, T. (2005). Teaching English in Thailand: An uphill battle, *Journal of Humanities Parithat, Srinakharinwirot University*, 27(1), 51-62.

*Teaching Model for Competency Improvement of Deaf People on the Industrial Job*

Nataya Kaewsai, Worapoj Sriwongkol, Acharn Piya Korakotjintanakarn

King Monkut's University of Technology North Bangkok, Thailand

0317

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Abstract

Job market of Thailand highly requires more than 110,000 welders each year while only the number of 13,200 graduates in this field could be provided each year. Welder shortage then happens because most teenagers dislike studying in such field.

There is then an urgent need to provide human resource in this field. The number of disabled people in Thailand is about 700 thousands. If they are trained they can be a valuable human resource. Some of deaf people want to take part in this job to feel proud of themselves without worrying about possible danger from such job. They never need any sympathy from others'. They can do such job well for they are always carefully act. However, according to the research, the deaf one must take 3 times longer than normal people for the same content of the study. This study then was conducted as a research and development study. The objective of this study is to create the teaching model to improve the competency of the deaf ready for industrial job .

The results of this study could show that the components of the teaching model are composed of 1) training course of " MAG Fillet Steel welding for the deaf": topic of "welding gun assembling", 2) Instruction media kit with 105 terms of Thai deaf language, and 3) the defined teaching model: "DEAFS Model" could be applied on the trainees and all the trainees would pass the assignment, it could show the result at 100 percent. And 4) the satisfaction evaluation results to the training at high level and it could meet the defined hypothesis.

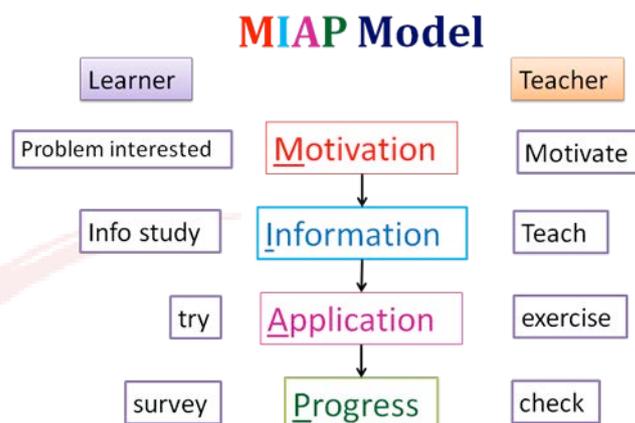
## 1. Background

Job market of Thailand highly requires more than 110,000 welders each year, (Labour Market Research Division, 2009) while only 13,200 graduates could be provided. (R Teen, 2010) Welder shortage then happens because most Thai teenagers dislike studying in such field(Thairath, 2011). Actually, it could be found that Thai Government increasingly acknowledges the importance of disables and had issued the new proper law 2 years ago on a better job opportunity for disables. It is to command any industrial organization having workforces over 100 labour to hire disable people at the ratio of 100:1 with provision of actual right of benefits such as tax and others. (The Government Gazette, 2011)

We surveyed and visited the factory having deaf workers and could find that many deaf who never had knowledge of technical job showed their interest to work in industries as the job area of maintenance. They applied the technic of “on the job training method” trained by the technician leader, however, communication with Thai sign language and teaching method became problem during the training. An information survey on the technical courses for the deaf provided by some organization or some school showed that it was only informal learning with easy basic work skill. Moreover, the trainers lacked skill on sign language, they could communicate with mind, However, while some trainers could communicate with sign language, some hard technical terms became problems and they had to specially defined them on their own to make clear understand in their groups. Any practical teaching method, any proper media for the deaf could not be efficiently defined, additionally, it was found that the deaf could easily forget the trained knowledge just only in a short time.(Mongkol and others, 2011)

Presently, there are about 700 thousands of the deaf in Thailand (National Statistical Office, 2007) who need opportunity to have their own jobs with their actual human rights, they never require any apathy to them.(Youngyuth and others, 2010) The deaf have only few experiences, they majorly communicate with Thai sign language. They have harder problems to learn. Furthermore, they had to spend 3 times harder than normal learners for the identical class.

Faculty of Technical Education, King Mongkut’s University of Technology, North Bangkok, Thailand, is the faculty having major duty of technical & vocational teacher development. The faculty has been established for about 40 years under the name of Thai-German Technical Teacher College” (TGTTC), there were German teachers practiced research providing with practical industrial practice of MIAP model (M=Motivation, I=information, A=application and P=progress) (Suchart. 2011) suitable for Thai learners. Such model has also long widely applied as a model for vocational education .



**Figure 1** Diagram of MIAP Model

Before teaching, the learners must be motivated and then, Information, will be produced. The Information means the practical contents and knowledge the learners should gain for their problem solving on the process of A or Application, or the defined practice of the learners. The trainers or the teachers then could process the P or Progress to inspect and correct the workpieces of the learners to have the approval for them and to provide some helpful advice on the works, the process of the I may be re-provided for any incomplete job. If any problem disappeared, further practice could be assigned to complete the model of MIAP

Moreover, we have studied other 9 favorite vocational skillful teaching models used in Thailand. (Administrator, 2012) Conclusively, they could be composed of 3 major steps. Firstly, it was preparation step that would be job analysis, and teaching preparation. Secondly, teaching step, it would be started by explanation, advising, finding abilities of learners, and demonstrate to learners before the learners started to practice by selves. Finally, it would be the process of learner evaluation.

We then have the idea to use MIAP teaching model and the other to be the conceptual pattern for creating specific teaching model for the deaf. The research of “Teaching Model for Competency Improvement of Deaf People on the Industrial Job” then should be helpful for the deaf to effectively learn and able to work on industrial work, it also should be the solution to the shortage of industrial technical workers as well.

## **2. Objective of the Research**

To create teaching model for the deaf (to be ready prepared) for industrial jobs

## **3. Scope of the Research**

3.1 The research topic of “welding gun assembling” would be provided according to the course of MAG fillet steel welding for the deaf.

3.2 The sampled people are the deaf finishing grade 9 and could communicate with Thai sign language.

#### 4. Significance of the study

4.1 The organization related to job training for the deaf could apply the designed teaching model on teaching to the deaf to be prepared for the industrial job on Magfillet Steel Welding and to solve the deficiency of welding technicians

4.2 The organization related to job training for the deaf could apply the designed teaching model on teaching to the deaf to be prepared for other industrial job markets

#### 5. Research Methodology

The 4 steps of model development, material design, pilot study and implementation, and the focus group then would be processed.

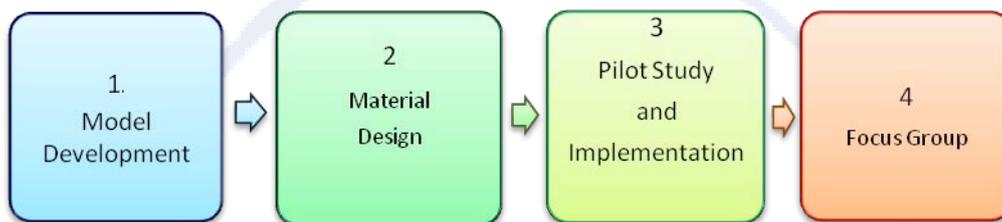


Figure 2 Procedures of research operation

##### 5.1 Model Development

We created the model, the teaching process started with major theory using MIAP model, demonstration of work skill, then the learners would be assigned to start practical work, the process of workpiece inspection would be done, any incomplete workpiece would be repaired, additional teaching would be provided to any deaf of such incomplete work. The teaching model could be shown below.

#### Deaf Teaching Model

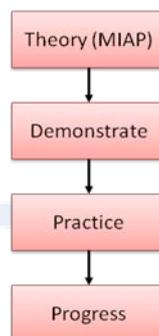


Figure 3 The teaching model for deaf

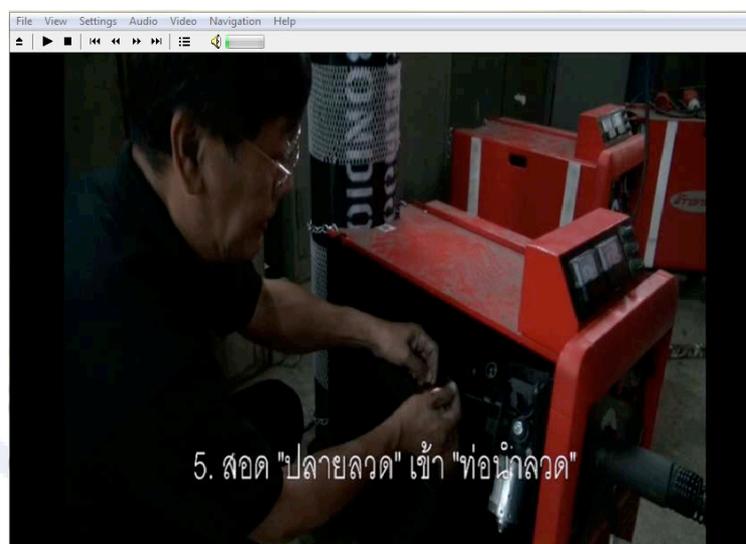
## 5.2 Material Design

We had the brainstorm with the experts who are teachers on welding works and on teaching media. Proper teaching topics and contents including with proper theory and practices would be designed. The proper teaching topic of “the welding gun assembling” then was designed according to the designed course of technical class of the welder of MAG fillet steel for the deaf. Finally, the complementary practical contents for the teaching would be cooperatively done.

Then the designed contents would be cooperatively analysed to create the teaching media according to the defined model. The teaching media; document, PowerPoint and video, would be the one different from that of the actual media for normal learners. The created teaching media would be suitable for the deaf.

Complementary documents for the deaf teaching would be composed of the proper contents similar to that of normal teaching but the description would be brief and defined fonts would be Angsana UPC of 18 points: **Angsana 18**, **Angsana16** (normally the font size of 16 should be used), moreover, necessary proper pictures would be presented and their dimensions would be larger than that of normal one, 1.5 times bigger than normal one with completely colorful pages.

The produced video would be composed of the steps of “welding gun assembling” including with Thai subtitle. The subtitle would clearly show with white – yellow fonts of double size bigger than actual one.



**Figure 4** VDO. with Thai subtitle

## 5.3 Pilot study and Implementation

For the teaching operation, sampled group of 5 learners would meet the defined properties of being deaf, grade 9 certified, able to communicate in Thai sign language,

and require to work as industrial technician, the created model would be applied on the defined group, started from teaching theory by MIAP. The teachers would be normal one having no sign language understand. Proper sign language interpreter without technician knowledge would be additionally applied.



**Figure 5** Atmosphere of theory teaching

The second step, the teacher demonstrated the process of “welding gun assembling” to the deaf learners.

The third step, the deaf learners would start practicing by selves.

The last step, the teachers inspected and corrected the practiced workpieces. It was found that some deaf learners could not show the complete some steps. The teachers would additionally explain such problems before let the learners go on the defined works. After all jobs were completed, the next step would be continued.



**Figure 6** Testing of welding gun assembling

Then, the teachers would evaluate the deaf learners by assigning all deaf learners to assemble the welding gun onto the welding machine and the learners could absolutely complete such assigned job. (the defined gain of 100 percent) After that, the deaf learners would respond the training satisfaction evaluation questionnaire according to the defined model. The trainees complete the training satisfaction form. The details of satisfaction results could be shown in Table 1

**Table 1:** Satisfaction of deaf learners to the training

Item	$\bar{X}$	S.D.	Meaning
1. Content suitable for the objectives	4.29	0.49	high
2. Trainer has practical knowledge	4.43	0.79	high
3. Trainer has ability to train	3.86	0.69	high
4. VDO. being helpful for learning	4.29	0.49	high
5. Document pattern, suitable	4.14	0.69	high
6. Content, suitable	4.71	0.49	The highest
7. Theory teaching period, suitable	4.29	0.49	high
8. Practice period, suitable	4.29	0.49	high
9. Location for training, suitable	4.43	0.53	high
10. Tools are considered to be suitable for	4.57	0.53	The highest
<b>Overall satisfaction</b>	<b>4.33</b>	<b>0.57</b>	<b>high</b>

From Table 1, it could show that the deaf learners showed satisfaction to the training at high level ( $\bar{X} = 4.33$ ), and when having consideration on individual item it could show the satisfaction on 2 topics; contents of being easy understand, and training tools of satisfaction. ( $\bar{X} = 4.71, 4.57$ ) The other 8 topics would have the satisfaction at high level.

#### 5.4 Focus Group

We provided the Focus Group of 9 related people who are welding teacher experts, normal one teaching the deaf and the deaf one teaching the deaf. All the 9 cooperatively discussed the practical comments and ideas about the teaching model and the promising teaching results. The cooperative work on teaching method improvement then would be done. The attendants on the meeting had common agreement the designed pattern could make the deaf learners learn better; however, it still had some weak points to be improved, such weak points should be recommended later.



**Figure 7** Focus group

## 6. Result

The results of this study showed that the components of the teaching model could be composed of 1) training course of "MAG Fillet Steel welding for the deaf": topic of "welding gun assembling", 2) Instruction media kit with 105 terms of Thai deaf language, and 3) the defined teaching model: "DEAFS Model" could be applied on the trainees and all the trainees would pass the assignment, it could show the result at 100 percent. And 4) the satisfaction evaluation results to the training at high level and it could meet the defined hypothesis.

## 7. Discussion

The teaching with the MIAP model on the Motivation process using comparative PowerPoint presentation could make the deaf learners interested in the chapters well, the description of the contents by interpreter could make the deaf learners clearly understand, though the process would use 2 times harder than the actual.

Moreover, because there were no proper technical terms for technician in sign language, new additional creative ones then would be created.

The required theory learning using such the designed pattern could reduce time consuming on the chapters from 3 times to 2 times shorter than that of normal one. It could say that the actual learners could actually spend 15 minutes to make clear understand on such chapter while the deaf one would spend 30 minutes instead. It could remark that for some events the help from the trained deaf teachers could make the deaf learners gain clear understanding quicker.



**Figure 8** Deaf teacher explained to the practice

Providing of Information using only video with Thai subtitle could not make better understand for the deaf learners because the deaf learners hardly had fluent Thai language understanding, moreover, new vocabularies also had defined for. The necessary ways to make them easily clearly understand should be additional explanation by the trained deaf teacher; the trained deaf teachers could more clearly understand such Thai subtitle.

Teaching by demonstration method; the deaf learners could have actual real practice well with more clear understand and confidence, they could well remember the ever saw and can remember better than that of other media technic.

On the period of practice; the deaf learners could practice well on the designed period close to that of the normal learners; on the device preparation and on the defined assembling.

### 8. Conclusion

The deaf learners could gain ability to practice skillful job well in the assigned period close to that of the normal learners. However, for the identical theory course, reduction of time spending from 3 to 2 times could be more reduced by using the new adjusted teaching model.

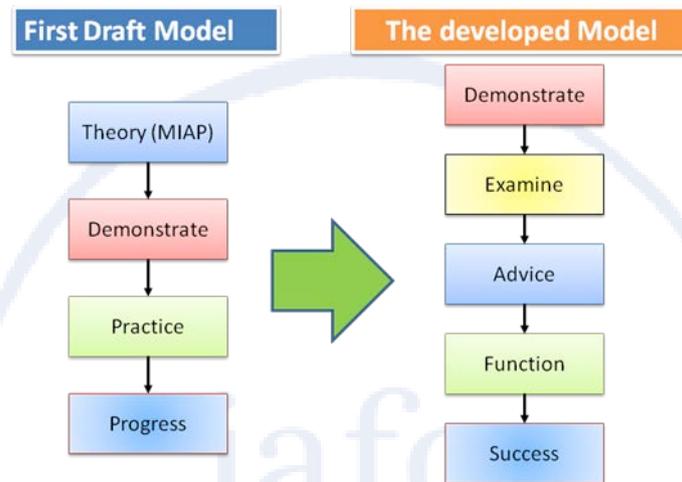


Figure 10 DEAFS Model

The deaf could well study whenever they practice on actual job by them selves, if they have no experience they will hesitate and have less confidence and they have to spend longer time than that of normal people. The practical teaching model should be initially applied on the actual real work and let the learners start practicing by selves before teaching the practical theory to them. Additional practice would be assigned after the theory teaching. Workpiece defect inspection and additional explanation must be done. Such model was called DEAFS Model; D-Demonstrate, E-Examine (try), A-Advice (theory:MIAP), F-Function (practice), and S-Success (progress).



Figure 11 technical vocabularies for the sign language

For the media of learning, 105 additional created technical vocabularies for the sign language were cooperatively defined to be tested and further applied on the teaching media of” the MAG fillet steel welding course for the deaf learners”.



**Figure 12** the deaf trainees and the trainer

For the communication problem, additional research on “Development of Industrial Technical Teachers for Deaf Workers” should be done. It should be the solution to such problem and could reduce time consuming on the defined course as well.

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## 9. References:

2009. Labour Market Research Division. Study report on the trend of labour need in 2010- 2014. Bangkok: Ministry of Labour.

Administrator. 2012. Model of teaching practical skills for vocational education teacher. Department Of Skill Development, Ministry of Labour.  
<http://home.dsd.go.th/techno/>

AIS. 1998. AIS hired deaf as call center operator. Oct.  
<http://www.adsithailand.com>

Chaleaw Yuseemarak. 1999. 68 years of Thai Vocation.....promissing chance.  
Siamrath Online, Aug.  
<http://www.siamrath.co.th/>

Mongkol Kokegaew and others. 2011. Interviewing Teachers of deaf students.

National Statistical Office, 2007.  
<http://www.nso.go.th>

Pimpthai Online, 2010. Labour market requires vocational students, mention that they could have higher chance than bachelor one on the job. Pimpthai  
<http://www.moc.moe.go.th/node/263>

R Teen. 2010. Journal of R Generation. Bangkok: vol. 1 page 20 Nov..

Suchart Sirisukpaiboon. 2011. Techniques and methods of vocational teaching.  
Bangkok: KMUTNB Textbook Publishing Center.

Thairath online. 2011. Skillful labour undercombination of good and bad behaviors of students. Thairath, Jan.

The Government Gazette. 2011. Book 128, section 30 a. 29 Apr, p. 7-9.

Yongyuth Borisut and others. 2010. Interviewing. The president of Deaf Association of Thailand.

*Primary School Teachers' Perceptions of the Use of Calculators  
in the Mathematics Classroom*

Ng Wee Leng

Nanyang Technological University, Singapore

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## Introduction

The use of calculators in the mathematics classroom has been a topic of intense debate among educators and policy-makers alike around the world. In Singapore, from 2009, the use of calculators were allowed in the mathematics examination in the Primary School Leaving Examination, a national examination taken by all students near the end of their sixth year in primary schools. Accordingly, since 2008, calculators were introduced to primary 5 pupils in Singapore.

As Hermans, Tondeur, van Braak, and Valcke (2008) have noted, one of the factors affecting the implementation of educational change is teachers' perceptions of the efficacy of that change. Indeed, in every new initiative introduced, one of the factors determining success is the teachers' mindset and attitudes toward it. In implementing this major change in the Singapore Primary mathematics curriculum in which the use of calculators in examinations is expected, the teacher is thus the key to exploiting the potential of calculators in teaching and learning of mathematics. An awareness of teachers' attitudes toward the use of calculators may provide some insights into their perceptions of and concerns about calculator use in schools, thus helping the change manager to adopt appropriate strategies and approaches to improve teachers' receptivity to change and to implement the change successfully.

The purpose of this study was thus to examine primary school teachers' perceptions of the use of calculators in the mathematics classroom. This study is a strand of a larger study which aims to achieve a preliminary understanding of teachers' acceptance of this initiative and their perception of the usefulness of calculators in achieving desirable educational outcomes. Conducting such a study is also timely and relevant, as the effects of using calculators remain an area of great interest to researchers and policy-makers around the world.

### A Review on Uses and Roles of Calculators

From 1985 to 1986 the Mathematics Education Centre at Monash University in Australia carried out a survey on using calculators in mathematics teaching. The survey covered years K–12 and sought the opinions of teachers, parents and students. Based on the results of the survey of the primary school years, Blane (1986) found that "students were rated as being strongly in favour of the use of calculators, whereas parents were perceived to be strongly against". Teachers' opinions were spread throughout the scale, but with a slightly larger proportion (44%) being strongly in favour of using calculators (p. 237). The findings indicate that teachers were ambivalent about the role of calculators in the primary mathematics class.

On the other hand, the report on the Calculator-Aware Number (CAN) curriculum in the United Kingdom indicated that after teachers were asked not to teach traditional pencil-and-paper vertical algorithms for addition, subtraction, multiplication, and division, a large amount of time previously taken up with the practice of algorithms was released to work on developing children's understanding of numbers and to give them the opportunity to explore and investigate mathematics and for teachers to develop their own teaching styles (Shuard, 1992). The teachers became more responsive to children's ideas and took the role as participants in the children's work, rather than instructors teaching them how to do mathematics.

The teachers were able to use their previous experience with children of this age to report that the “CAN children show greater competence in mathematics at an earlier age than would normally be assumed. This is particularly true for large and small numbers, negative numbers, the ability to recognize patterns and awareness of their significance, and the understanding of place value. The growth in the children’s development of concepts such as fractions, decimals square roots, has also become more evident during the second year of CAN development” (PrIME, 1989, p. 12).

Calculators are powerful learning tools that allow students to experience the richness and value of mathematics by greatly reducing the need for them to execute pencil-and-paper computations and algebraic manipulations. Lambert (1985), writing especially on the primary school mathematics class, identified four roles for calculators. They can be a learning aid to understanding mathematical concepts, a maths-motivator, a means of solving problems in a faster and more efficient way and a device that provides the opportunity for trying to solve more intricate problems. A study by Ellington (2003) demonstrated that students’ operational and problem-solving skills improved when calculators were an integral part of testing and instruction. The result of this study was that the use of calculators did not hinder the development of mathematical skills and students using calculators had better attitudes towards mathematics.

As suggested by Del Campro (1986), “it no longer seems a question of whether calculators should be used along with basic skills instruction, but how” (p. 240). According to Howson and Wilson (1986), “calculators enable many children to use arithmetic for real situations, to generate number patterns, to explore number properties and to make and test hypothesis.... Calculators aid in the acquisition of the important skills of estimating and approximating. Nevertheless, there is still no consensus on exactly how the calculators’ capabilities can be best exploited in early mathematics teaching” (p. 67). Yvon (1987) supported these remarks by suggesting that students need to be shown when it is not appropriate to use calculators, and how to use mental or paper-and pencil calculations when calculators are not available. McIntosh (1990) also agreed that children need to be able to select the appropriate calculation method and commented that calculators have a role in complementing mental calculations.

Conclusively, there has been a gradual international move towards recommending the student use of calculators from primary school upwards, and clear directions have been given on the place of calculators in mathematics classes (Hembree & Dessart, 1986; NTCM, 1987; Graham & Smith, 2004; Meissner, 2007). Presently, there is an increasing curriculum policy direction for the student use of calculators, while at the same time there continues to be a controversy about it in the community and an apparent divergence of opinion amongst teachers over the calculator’s use. Thus, it is important to gauge teachers’ current perceptions toward the use of calculators in primary mathematics classes.

## Methods

The target group for this study comprised 32 primary mathematics teachers in a primary school in Singapore, of whom six teach Primary 3, ten teach Primary 4, nine teach Primary 5 and seven teach Primary 6 mathematics. The nine Primary 5 teachers

and seven Primary 6 teachers have used calculators in their classrooms since the introduction of calculators into the Singapore Primary 5 and 6 curriculums in 2008.

A questionnaire which comprised 17 items was administered to the above-mentioned 32 primary mathematics teachers to gather data on their perceptions toward their students' use of calculators in primary (Primary 5 and 6) mathematics classrooms.

Questions 1 to 4 elicited the following demographic information from the respondents:

Question 1: Gender

Question 2: Years of teaching experience

Question 3: Present teaching level

Question 4: Level(s) taught

Questions 5 to 17 made up the rest of the questionnaire and were directed at issues involving the student use of calculators in primary mathematics classes.

- Current use
  - Question 5: Do you presently have students using calculators in your mathematics classes?
  - Question 6: If Yes to Question 5, how do the children use their calculators?
- Teachers' support for calculators in terms of their benefits and limitations
  - Question 7: Do you think using calculators in primary (P5 and P6) mathematics classes will benefit all students?
  - Question 8: If Yes to Question 7, why? What are the benefits of calculators?
  - Question 9: If No to Question 7, why? What are the limitations of calculators?
- Year of introduction of calculator s
  - Question 10: From which level do you believe students should use calculators?
- Uses of calculators
  - Question 11: How do you think calculators can be used by students in primary (P5 and P6) mathematics classes?
- Influences on teachers' perception on the use of calculators
  - Question 12: What factors have influenced your perceptions on students' use of calculators in primary (P5 and P6) mathematics classes?
- Professional development and resources
  - Question 13: Have you attended any school-based professional development courses on the use of calculators in primary (P5 and P6) mathematics classes?
  - Question 14: If Yes to Question 13, when did you attend the courses?
  - Question 15: If No to Question 13, would you attend such courses?
  - Question 16: In your opinion, in which areas do teachers need more support for enhancing their teaching and use of calculators in primary (P5 and P6) mathematics classes?
- Open comment
  - Question 17: I would appreciate any other comments that you would like to make about the students' use of calculators in primary (P5 and P6) mathematics classes.

At the end of the questionnaire the teachers were given the opportunity to make any comments that they wished about students' use of calculators in their primary mathematics classes. The purpose of this comment was to give the teachers the opportunity to express themselves more fully on any issue related to students' use of calculators. Before it was administered, a soft copy of the questionnaire was emailed to the principal and vice-principal of the school involved to seek their permission to

administer it. Once approval had been granted, the questionnaires were given to the school level representatives to be distributed to their mathematics teachers. The questionnaire was administered in February 2012.

Interviews were then held to gather additional information or data to gain a deeper insight into three different aspects, namely the year when calculators were introduced, the factors that influence the teachers' perceptions of the calculator use as well as the need for professional development and resources. The interviews comprised three questions with sub-parts to each question. Twelve of the 32 teachers, three from each level, who attempted the questionnaire were randomly chosen for follow-up interviews. Each interview took an average of 20 minutes and all interviews were administered within one week in March 2012.

Permission to conduct the interviews was not easily obtained due to the sensitivity of the research issue, but permission was granted after two weeks of consideration by the principal and vice principals. Some teachers had difficulty in fully understanding the questionnaire, and thus some of the mathematical terms such as "individual differences" and "algorithms" were explained to these teachers. In addition, two randomly selected teachers turned down the follow-up interviews for fear their comments would be made public.

## **Results and Discussion**

This study attempts to answer the following research questions:

1. What are teachers' perceptions of calculator use in the primary curriculum?
2. What do teachers need to enhance their teaching and using of calculators in mathematics to achieve the desired outcome?

The questionnaire was administered to 32 primary mathematics teachers. All of the completed questionnaires were collected and then analyzed using descriptive statistics in the following ways:

1. A frequency count of responses for each item was analysed to suggest possible findings of significance.
2. All open comments and interview responses were collated and classified according to the major focus of the comment.

### **Analysis of Each Question by Frequency Counts**

The analysis begins with a report on the characteristics of respondents collected from questionnaire items Q1 to Q4. The frequencies of response rates are presented in percentage tables where relevant. The absolute number, which accompanied the percentage, was given for questionnaire items in two broad categories. The first category comprises questions 4, 11, and 12, where the respondents were allowed to tick more than one response. The second category consists of questions 6, 8, 9, 14, and 15, where not all respondents answered each of these questions. Responses to these items were based on the respondents' answer to questions 5, 7, and 13. It would be inappropriate to give just the percentages as they could lead to confusion to the reader.

**Demographic Information: Questions 1 to 4**

Table 4.1

Question	Percentage (%)	Absolute number	Total (N)
1. Gender:			32
a) male	37.5	12	
b) female	62.5	20	
2. Teaching experience:			32
a) 0–3 years	34.375	11	
b) 4–6 years	25	8	
c) 7–10 years	15.625	5	
d) more than 10 years	25	8	
3. Current teaching level:			32
a) Primary 3	18.75	6	
b) Primary 4	31.25	10	
c) Primary 5	28.125	9	
d) Primary 6	21.875	7	
4. Levels taught:			32
a) Primary 3	75	24	
b) Primary 4	75	24	
c) Primary 5	71.875	23	
d) Primary 6	46.875	15	

These data show that 37.5% of the respondents were men and 62.5% were women. Approximately 60% of the respondents had six years or less of teaching experience (estimated from the profile of the school, in which approximately 80% of the teaching staff were under 30 years of age). At least 70% had taught Primary 3 to 5, indicating that most of the respondents had some idea of the subject content as well as the readiness of students in these three levels to use calculators.

**Research Issues: Questions 5 to 17**

Two research questions in this study concern teachers' perceptions towards the use of calculators in the primary (P5 and P6) mathematics classes. These questions were grouped under the issues of:

- Current use (Q5 and Q6)
- Teachers' support for calculators in terms of their benefits and limitations (Q7 to Q9)
- Year of introduction of calculators in the classroom (Q10)
- Uses of calculators (Q11)
- Influences on teachers' perceptions of the use of calculators (Q12)
- Professional development and resources (Q13 to Q16)

**Current Use**

Table 4.2

Question	Percentage (%)	Absolute number	Total (N)
5. Currently using calculators:			32
a) Yes	28.125	9	
b) No	71.875	23	
6. Usages of calculators:			9
a) as the need arises	66.67	6	
b) for specific lessons on using calculators	100	9	
c) as a tool for problem-solving	77.78	7	
d) for computation work	55.56	5	
e) to reinforce estimation skills	55.56	5	

Only 28% of the teachers, all nine P5 mathematics teachers, allowed their students to use calculators in their mathematics classes. The responses for Question 6 were taken only from the P5 teachers, all of whom said that their students used calculators for specific lessons in the school textbooks. The next highest response was the use of calculators as a tool for problem solving. This was due to the fact that calculators are used only in Paper 2 of the Primary School Leaving Examination, where all the word problems are tested.

**Teachers' Support for Calculators**

Table 4.3

Question	Percentage (%)	Absolute number	Total (N)
7. Support for the use of calculators:			32
a) Yes	65.625	21	
b) No	34.375	11	
8. Benefits of using calculators:			21
a) speed up children's work (saves time)	71.43	15	
b) as a technology tool for use in mathematics	90.48	19	
c) help to reduce individual differences	76.19	16	
d) help to develop problem solving skills	76.19	16	
e) increase students' confidence	80.95	17	
f) take the focus off computation	90.48	19	
g) increase students' motivation	90.48	19	
9. Limitations of using calculators:			11
a) reduce the need to learn basic facts	90.91	10	
b) discourage mathematical thinking	81.82	9	
c) should only be introduced in secondary school	81.82	9	
d) prevent the learning of pencil-and-paper computational skills	90.91	10	
e) calculators are too complicated and difficult for students	9.09	1	

Approximately 65% of the respondents supported the use of calculators in the primary (P5 and P6) mathematics classrooms and felt that calculators would benefit the

students greatly. In total, 19 of them indicated that the calculator is a technological tool that reduces time spent in tedious computational work and in turn increases students' motivation in mathematics. Most of those who had reservations felt that calculators would hinder the learning of pencil-and-paper computational skills and algorithms, though they realized that calculators are not too complicated and difficult for the students to handle.

### Year of Introduction of Calculators in the Classroom

Table 4.4

Question	Percentage (%)	Absolute number	Total (N)
10. Level when calculators should be introduced:			32
a) Primary 1	0.0	0	
b) Primary 2	0.0	0	
c) Primary 3	3.125	1	
d) Primary 4	9.375	3	
e) Primary 5	50.0	16	
f) Primary 6	0.0	0	
g) Secondary school	37.5	12	

Half of the respondents felt that Primary 5 was a suitable year for introducing calculators to students. The percentages for Primary 1 to 4 and 6 are extremely low compared to the 37.5% who supported using calculators in secondary school.

### Uses of Calculators

Table 4.5

Question	Percentage (%)	Absolute number	Total (N)
11. Uses of calculators:			32
a) in problem-solving activities	62.625	21	
b) in doing algorithms	31.25	10	
c) in exploring activities	59.375	19	
d) for number pattern work	56.25	18	
e) unsure	0	0	
f) should not be used	15.625	5	
g) others	0	0	

There was a strong indication that calculators should be used in problem-solving activities, followed by exploration activities and number patterns, indicating that the respondents knew that calculators are meant for higher level activities rather than just for doing algorithms, which students could achieve with a pencil and paper.

### Influences on Teachers' Perceptions of the Use of Calculators

Table 4.6

Question	Percentage (%)	Absolute number	Total (N)
12. Factors:			32
a) their own professional reading	21.875	7	
b) their own teaching experience	87.5	28	
c) other teachers	18.75	6	
d) in-service courses	15.625	5	
e) parents of students	3.125	1	
f) others, e.g., personal experience	3.125	1	

The main influence in forming the teachers' perceptions towards students' use of calculator in primary mathematics classes was thus their teaching experience. Only seven depended on their own professional reading, six depended on other teachers and five depended on in-service courses.

### Professional Development and Resources

Table 4.7

Question	Percentage (%)	Absolute number	Total (N)
13. Attended calculator courses			32
a) Yes	28.125	9	
b) No	71.875	23	
14. When			9
a) Past 6 months	11.11	1	
b) Past 1 year	55.56	5	
c) Past 2 years	33.33	3	
d) More than 2 years ago	0	0	
15. Intend to attend such courses			23
a) Yes, within school hours	73.91	17	
b) Yes, outside school hours	13.04	3	
c) No	13.04	3	
16. Areas in which support is needed			32
a) Related training	81.25	26	
b) Related resource	78.125	25	
c) Other areas	0	0	

More than 70% of the respondents had never attended a calculator course, which explained why a low percentage of respondents depended on in-service courses as a factor influencing their perceptions on the use of calculators. All nine teachers who had attended these courses had done so during the previous 2 years. The courses were organized by the Ministry of Education to prepare P5 and P6 teachers for the introduction of the calculators into the mathematics new syllabus.

Twenty of the 23 teachers who had never attended calculator courses commented that they would like to attend such courses, either within or outside school hours. This trend was in line with the areas in which the teachers would like to have support to enhance their teaching and use of calculators in classrooms. Another area that required support was the availability of calculator-related resources.

### **Classifications of Open Comments and Interviews**

Overall, 25% of the respondents took the opportunity to write comments. Twelve teachers, constituting 37.5% of the respondents, were invited for follow-up interviews as described above. The interview questions and the responses are as follows:

1. Pertaining to questionnaire Q10
  - a. Why do you think calculators should not be introduced in primary school?
  - b. Are there any particular reasons that you think calculator should be introduced in Primary 5 and not in Primary 6 or another level?

Besides the fact that this was Ministry of Education policy, many interviewees suggested that by Primary 5, students had more or less learnt the computational skills as well as the algorithms needed to solve mathematics problems with pencil and paper, hence the use of calculators at this level would enhance the learning and teaching of mathematics. That also explained the low percentages of teachers who thought calculators should be introduced at Primary 1 to 4 levels. As for Primary 6, many felt that the last year of primary education was crucial for preparing graduating students for Primary School Leaving Examinations and that thus learning a new tool such as a calculator at this stage would divert their attention and focus on the mastery of content.

Those who were not supportive of calculator use in primary mathematics classrooms insisted that secondary school is the most suitable level for the introduction of calculators, where the students are more mentally ready and this would inevitably reduce the limitations of using calculators to a great extent.

Open comments:

- Calculators should be introduced in secondary schools. However, mathematical questioning should be based on skills and concepts, rather than pupils spending time on computation.
- Pupils must show the processes involved in arriving at the answer.

2. Pertaining to questionnaire Q8, Q9, Q11, and Q12
  - a. Do you support the use of calculator in the primary mathematics classroom?
  - b. What are the factors that influence your perceptions for accepting and rejecting the use of calculators?
  - c. Why do you think one's own teaching experience is the most important influence on your perception on the use of calculators?

All 12 interviewees admitted they lacked the time to do their own professional reading and based their acceptance and rejection of using calculators in the primary and mathematics classroom on their teaching experience, though they knew their experience may not have been totally representative or relevant. Based on their teaching experience, they felt the need to teach students the basic facts and skills of mathematics before introducing them to calculators because calculators mostly serve as a tool for tedious computation. The interviewees did not really know the ways in which calculators could benefit students in terms of exploration activities or even number pattern work.

Among the interviewees, only four had undertaken a calculator course during the past two years. They commented that the power of calculators cannot be underestimated if teachers were able to use the correct methods and activities to teach students how to use them. Professional reading and in-service courses serve as important platforms for educating and creating awareness among teachers so as to dispel the negative myths surrounding calculators. These myths greatly impede the universal acceptance of calculators in the classroom and they only serve to slow down the inevitable implementation of technology in the classroom and put students at a disadvantage in a world that is rapidly embracing technology.

Open comments:

- Calculators are an additional source of distraction from learning basic mathematical skills. They make students too dependent on them, even in simple calculations that can be solved mentally.
  - Calculators allow students to check answers and help slow learners to gain confidence at the initial stage. If they are misused, however, they may do more harm than good.
  - Students do not learn basic multiplication tables if they are allowed to use calculators.
3. Pertaining to questionnaire Q11 and Q16
- a. Have textbooks been useful tools in enhancing the teaching and the use of calculators in the primary mathematics classroom?
  - b. Do you need other resources?
  - c. What kind of resources or training would support your teaching and use of calculators in the classrooms?

Most of the interviewees responded that textbooks tend to be their main or only resource for teaching students how to use calculators, but they do not really provide different types of activities to allow teachers and students to make optimal use of the calculators. Teachers also lack the time and knowledge or even the skill to come up with useful resources to enhance their teaching and their students' use of calculators.

All interviewees welcomed in-service training as well as more materials in terms of guides or assessment books. They saw a need to acquire the knowledge and the skills to handle calculators, which would in turn benefit their students. In fact, they needed to draw confidence from experts to ensure that they were on the right track and that they were not alone, struggling helplessly to teach and use a new technology tool. They would also like to have more resources to tap into, so as to reinforce the teaching of problem-solving skills, exploration skills and number pattern work or even estimation skills to their students.

Open comments:

- Develop a simple checklist for both teachers and students on the use of the calculators.
- Though there are many benefits in using calculators, a focus on pupils' basic foundations in calculations is still needed. Perhaps a test could be developed to ensure they had acquired these foundations.
- There are reasons for using calculators, but I'm not sure that they really benefit the pupils greatly.

## Conclusion

For the purposes of this study, all Primary 3 to 6 mathematics teachers in a primary school in Singapore were asked for their responses to a questionnaire designed by the author to investigate primary teachers' perceptions toward the students use of calculators in primary (Primary 5 and 6) mathematics classroom.. Twelve follow-up interviews were conducted to get more insights into some of the issues.

About two-thirds of the respondents supported the use of calculators in the primary mathematics classrooms and indicated that the calculator is a technological tool that reduces time spent in tedious computational work and in turn increases students' motivation in mathematics. Most of those who had reservations felt that calculators would hinder the learning of pencil-and-paper computational skills and algorithms, though they realized that calculators are not too complicated and difficult for the students to handle.

Teachers who strongly supported the introduction of calculators into the primary mathematics classroom acknowledged that calculators were a powerful learning tool that allows students to experience the richness and value of mathematics by greatly reducing the need to do paper-and-pencil computations and algebraic manipulations. Teachers who did not support students' use of calculators expressed concern that they reduced the need for children to learn basic mathematical facts and might prevent children from acquiring paper-and-pencil computational skills.

There have been no negatives results reported on students' knowledge of basic facts or computational ability in any study on calculators in the classroom. Teachers need to be made more aware of the findings of research studies such as those of PrIME (1989) and Hembree and Dessart (1986), which focused on the use of calculators and their effects on student achievement. There is evidence of an increasing trend in teacher support as more than 85% of the teachers who had not attended any calculator courses, stressed the importance of school-based professional development courses and their own willingness to attend if such courses were provided.

However, there was an obvious divergence of opinion amongst teachers concerning the year in which calculators should be introduced at primary school. This has reinforced the need for clearer directions from educational authorities and the need for the ongoing professional development of teachers to disseminate research findings.

Calculators are here to stay in Singapore as a new initiative, but most importantly, as the fear of technology is overcome and it is accepted that technology is changing the way that mathematical computations and manipulations are executed, mathematics instruction will begin to take tremendous strides in a push towards a future of new and better opportunities for student learning.

## Recommendations

Teachers should be encouraged to read more widely to upgrade not just their pedagogical skills but also their awareness of emerging research findings. They are at the front-line, moulding the future of their nation, and hence it is essential for teachers to keep themselves updated, not just in knowing the role of calculators in the primary mathematics classroom in order to use calculators effectively, but also in dispelling myths about calculators, which only slow down the inevitable introduction of calculators in the primary mathematics classrooms and put students at a disadvantage in a world that is rapidly embracing technology (McCauliff, 2004; Wachira, Keengwe & Onchwari, 2008). Professional publications produced by mathematics educators, for mathematics educators, serve as good resources for expanding teachers' horizons as well as their knowledge base, and provide insights into research findings related to new initiatives or syllabi (Walen, Williams & Garner, 2003).

On the other hand, schools should plan and offer structured, school-based professional development courses on the use of calculators in primary school mathematics classrooms. Besides providing teachers with intensive start-up training, regular follow-up activities ensure the sustainability of such training. These courses should be progressive and continuous as some teachers may require refresher course or practical solutions when they encounter problems along the way. The courses and training do not only prepare teachers to teach with calculators but also challenge their beliefs about mathematics and mathematics instruction. Such courses should be a part of a school's staff development plan. The key to successful technology reform in mathematics teaching and learning is assembling a massive network of school leaders capable of providing appropriate training to all teachers.

School can also involve teachers in sharing effective strategies for using calculators as well as encourage teachers to work as teams to create lesson packages as resources for teaching calculators. Last but not least, heads of departments of mathematics should involve mathematics teachers to source useful and relevant books and materials to build up a pool of resources for teachers to tap into. This may also help teachers to decide what materials or resources they require for their teaching and use of calculators in the classroom.

## References

- Blane, D. (1986). Guidelines for the use of calculators in mathematics teaching in Australia. In Nerida Ellerton (Ed.), *Mathematics who needs what?* (pp. 234-239). Melbourne: The Mathematical Association of Victoria.
- Del Campo, G. (1986). Calculators: Vehicles for developing mathematical language infant classes. In Nerida Ellerton (Ed.), *Mathematics: who needs what?* (pp. 240-242). Melbourne: Mathematical Association of Victoria.
- Ellington, A. (2003). A meta-analysis of the effects of calculators on students' achievement and attitude levels in pre-college mathematics classes. *Journal for Research in Mathematics Education*, 34(5), 433-463.
- Graham, T. & Smith, P. (2004). An investigation into the **use** of graphics calculators with pupils in Key Stage 2. *International Journal of Mathematical Education in Science and Technology*, 35(2), 227-237.
- Hembree, R., & Dessart, D. J. (1986). Effects of hand-held calculators in precollege mathematics education: a meta-analysis. *Mathematics Education*, 17(2), 83-89.
- Hermans, R., Tondeur, J., van Braak, J., & Valcke, M. (2008). The impact of primary school teachers' educational beliefs on classroom use of computers. *Computers & Education*, 51(4), 1499-1509.
- Howson, G., & Wilson, B. (1986). *ICMI study series: School mathematics in the 1990's*. Kuwait: Cambridge University Press.
- Lambert, P. (1985). *Teaching with calculators K-6*. Darlinghurst, New South Wales: Primary Association for Mathematics.
- McCauliff, E. (2004, Spring). The calculator in the elementary classroom: Making a useful tool out of an ineffective crutch. *CONCEPT: An Interdisciplinary Journal of Graduate Studies*, Article 2. Retrieved July 3, 2005, from <http://www.publications.villanova.edu/Concepts>
- McIntosh, A. (1990). Becoming numerate: developing number sense. In S. Wills (Ed.), *Being numerate: What counts?* (pp. 24-43). Hawthorn Victoria: The Australian Council for Educational Research.
- Meissner, H. (2007). *Primary School – Calculators or Paper and Pencil Techniques?* Retrieved on Nov 12, 2009, from <http://www.math.uni-muenster.de/didaktik/u/meissne/WWW/mei146.doc>
- National Council of Teachers of Mathematics. (1987). A position statement on calculators in the mathematics classroom. *Arithmetic Teacher*, 34(6), 61.
- Primary Initiatives in Mathematics Education (PrIME) Project. (1989). *The second year of CAN*. Homerton College Cambridge: National Curriculum Council.
- Shuard, H. (1992). CAN: Calculator use in primary grades in England and Wales. In C.Hirsch (Ed.), *Calculators in mathematics education*. Reston, VA: NTCM
- Wachira, P., Keengwe, J., & Onchwari, G. (2008). Mathematics preservice teachers' beliefs and conceptions of appropriate technology use. *AACE Journal*, 16(3), 293-306.
- Walen, S.B., Williams, S.R., & Garner, B.E. (2003). Preservice teachers learning mathematics using calculators: A failure to connect current and future practice. *Teaching and Teacher Education*, 19(4), 445-462.
- Yvon, B. R. (1987). A compelling case for calculators. *Arithmetic Teacher*, 34(6), 16-19.

*The Android Appreciations Training Package in Change Money System  
According to IDFVE Model for the Technical Training*

Thosporn Sangsawang

Rajamangala University of Technology Thunyaburi, Thailand

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Abstract

The android appreciations training package had the efficiency at the 80/80 efficiency criteria, trainees were trained from the packages achieved significant training progress at the .05 level and there's opinions were at the highly agreement level regarding the appropriateness of the training packages. The sampling group was 42 undergraduate trainees of Rajamangala University of Technology Thunyaburi, The trainers were the android appreciations training package in change money system according to IDFVE model; an achievement test; and a questionnaire to assess trainees' opinions toward the developed training packages. Statistical procedures for data analysis included the  $E_1/E_2$ , mean, standard deviation, and t-test.

**Keywords:** training packages, the android appreciations training package, change money system, IDFVE model

## Introduction

This research was created the android appreciations training package in change money system according to IDFVE model, that this model had being an Internet-based Instructional Design Framework for Vocational Education. There can be training for self-regulated trainees, training at the vocational level will provide an alternative method of trainers and will influence decisions regarding what instructional strategies may be adopted (Dick, Carey & Carey, 2005, p.4). The researcher was adapted the IDFVE model that there synthesized from training processes; there is a synthesis of behaviorism, constructivism, and constructionism, a focus on mental processes, the training by doing approach, and social context by using the Delphi technique, the significance of these technique is to offer a new model and an Internet-based instructional design framework to trainees and trainers of vocational education. It is a circular instructional design model offering evaluation at every phase of the operation to allow not only for an effective new design but also for inherited projects to be produced in an efficient and timely manner. After finalizing the Delphi technique, an examination of the model by the opinions of trainees in the instructional design field will aid the IDFVE model for self-regulated, training for vocational education. It is believed that the model is likely to help produce more efficient and effective training environments or more efficiently designed and produced curricula for today's training environments. An improved Internet-based Instructional Design Framework for Vocational Education (IDFVE) model will also benefit anyone who uses the model for training design.

## The results of research

In this research is presented in the three phases.

**Phases 1** To created the android appreciations training package in change money system according to IDFVE model that there was created as follow in the orientation training theories focus on the three theories of mental processes, training by doing, social context and psychological theories of principles, teaching-training activities and strategies, teaching-training environments, stages of instructional sequence, and teaching-training models. The stages of the training process according to IDFVE model for the android appreciations training package in change money system; as shown in Figure 1.

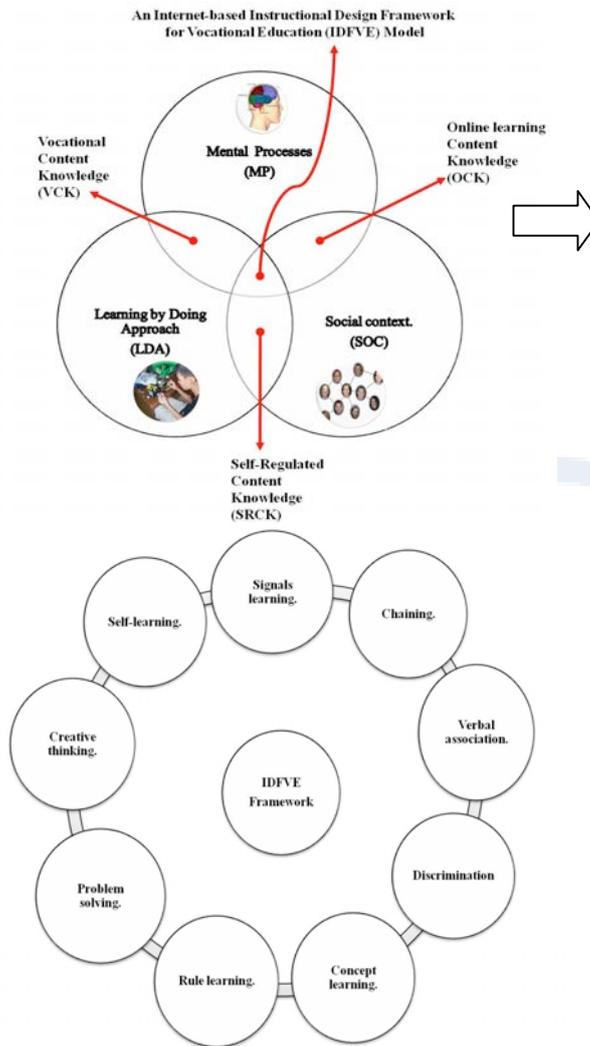


Figure 1 Creating the android appreciations training package.

**The stages of the training process according to IDFVE model for the android appreciations training package in change money system**

This framework was synthesized from three theories. There was focus on training process theories related to principles regarding mental processes, training by doing, and social context.

1. Mental processes. Both trainees and trainers can be participated in class, take note and study hard before exam; trainees would be created cognitive strategies including internal mental phenomena; situated cognition; elements of situated cognition; cognitive structure; cognitive organizers; cognitive activity. they should be doing as following in creating conditions for internal mental training process as in insight information, creating processing memory, perception knowledge and information, providing situated cognition (content, activities), performing processes access drill and practice, and supporting construction of knowledge.

2. Training by doing approach. Trainees and trainers would be created trainees who they have able to do working and thinking shush as activities to fulfill potential strategies in ways of doing and thinking for example, that humans have been acts of society and cognition and active methods in sharing knowledge and skills. Trainers should be doing as following in activities training by doing their own self-

understanding of the course with training by doing work, creating thinking together with ability to learn on their own, sharing their knowledge and skill through various types of method training environment, constructing knowledge, activity, and performances processes access (activities and games).

3. Social context. Trainers and trainees can be interacted and make social activity skills, construct knowledge and social strategies including knowledge-building together that they have able to be social and situational constructionism; situated training; social contexts; and social work and teaching or experiential training. Trainers should be doing as following in construction of knowledge by social strategies through social context, discussing constructions, sharing constructions, creating wit and knowledge by themselves, working socially, transferring organization of knowledge.

### **The stages of the training package process**

The step by step how to make the trainers and trainees better in the android appreciations training package in change money system according to IDFVE model that there had to being the stages of the training process as following:

1. Discrimination; trainees learn through testing and feedback, share activities together, share understanding of knowledge with both trainers and trainees who they are share regulating activities to transfer knowledge, and present activities.
2. Concept training; trainers create tasks and conditional training as a method and stages of training process for trainees , and both trainees and trainers are share thoughts and build their own self- knowledge.
3. Rule training; trainees learn how to achieve the objectives of training and to meet conditional training, and trainees and trainers are build structures to construct their own self- constructionism.
4. Problem solving; trainers provide programmed instructions, tutorials, simulation, games and drill as well as practice and test for trainees , trainees construct knowledge - building via communities, and trainees can solve problems by simulation, games and drills as well as practice and test via social networks.
5. Creative thinking; trainees are encouraged to recognize and understand reflective thinking and thinking initiatives, both trainees and trainers are discuss and construct organization of knowledge, and they are joint shear construct information to manage knowledge.
6. Self-training; trainees can plan, set assumptions, investigate and solve problems by themselves. They should use simulation and gaming media by themselves, and both trainees and trainers are construct and collaborate on their tasks and combine experiences to develop themselves.

### **Phases 2**

To the efficiency of training with the android appreciations training package in change money system according to IDFVE model. This result from the trainees'opinions in identifying and developing an instructional model for using training process theories for self-regulated online training in vocational education. It was created from psychology theories, namely mental processes, training by doing, and constructionism social context, and then trainees were trained from the packages achieved significant training progress at the .05 level. The sampling group was 42 undergraduate trainees of Rajamangala University of Technology Thunyaburi, The trainers were the android appreciations training package in change money system according to IDFVE model that how to create activities between trainers and trainees

for the training the android appreciations training package in change money system that the stages of the training process as following:

1. Signals training, trainers provide operating conditional training, giving information, objectives, expected outcomes, benefit from training and activities and create teaching criteria to suit the trainees with external conditions, trainers create stimuli to activate receptors, trainers create level of expectation for training, trainers build retrieval and activation of short-term memory, trainers select perception of content, trainers create semantic encoding for storage of long term memory,
2. Chaining, trainers provide events for training as well as a step by step process of training, trainers guide how trainees respond to questions to enhance encoding, trainers create verification, (reinforcement and assessment of correct performance), trainers create retrieval and reinforcement of content as final evaluation of training, and retrieval and generalization of learned skills for learner to build new situations.
3. Verbal association, trainers use process training and instruction model, trainees rethink to activate pre-knowledge, trainees find questions, trainees perform self-regulation training by doing their tasks.
4. Discrimination, trainees learn through testing and feedback, trainee share activities together, learner share understanding of knowledge with trainers, trainee share regulating activities to transfer knowledge, trainee present activities.
5. Concept training, trainers create tasks and conditional training as a method and stages of training process for trainees, trainees and trainers share thoughts and build their own self- knowledge.
6. Rule training, trainees learn how to achieve the objectives of training and to meet conditional training, trainees and trainers build structures to construct their own self-constructionism.
7. Problem solving, trainers provide programmed instructions, tutorials, simulation, games and drill as well as practice and test for trainees can be construct knowledge - building via communities, trainees can solve problems by simulation, games and drills as well as practice and test via social networks.
8. Creative thinking, trainees are encouraged to recognize and understand reflective thinking and thinking initiatives, both trainees and trainers discuss and construct organization of knowledge, trainees and trainers share and construct information to manage knowledge.
9. Self-training, trainees can plan, set assumptions, investigate and solve problems by themselves. They should use simulation and gaming media by themselves, trainees and trainers construct and collaborate on their tasks and combine experiences to develop themselves.

### **The Self-Regulated Content Knowledge (SRCK)**

This research was to construct content knowledge that there were training and managing environments as following:

1. Content knowledge for creating mental processes; trainee use education media such as concept map, spider diagram, fishbone, structured overview, and T-chart to create cognitive mental processes by themselves.
2. Content knowledge for training by doing approach; trainees use action activity environments such as interactions within a training by doing process; trainees share their knowledge and skills through various types of social activities/opportunities to develop meta- cognitive knowledge about persons, tasks and strategies; trainees evaluate their training by considering their own part of the total experience; ensure that all activity environments help them through a training by doing approach.

3. Content knowledge for constructing social context; trainee interact with social constructionists such as experiential training, perceive experience by their own understanding, construct their own thinking as training-by-making, develop social training, interaction and cognitive processes. All interaction with social constructionists is to construct a social context for themselves.

**The training environments**, how to creating training in the android appreciations training package in change money system according to IDFVE model.

1. Constructing Mental Processes (MP) activities, how to manage training environments. Using education media; concept map, spider diagram, fishbone, structured, and T-chart. Training model; signals training, chaining, verbal association, discrimination training, concept training, rule training, problem solving, creative thinking, reflective thinking, thinking initiatives.

2. Constructing Training by Doing Approach (LDA) activities, how to manage training environments. Using action, activities and environments, Interactions within a training by doing process, sharing their knowledge and skills through various types of social activities, activity/opportunities to develop meta-cognitive knowledge about persons, tasks, and strategies to evaluate their training by their own part of the total experience. Training model; training by doing, co-operative training, project-based training, problem-based training, group Investigation, inquiry method, new knowledge, planning training by themselves, presentation.

3. Constructing Social Context (SC) activities, how to manage training environments. Using interaction with social constructionists. Training model; self-training (simulation and games), situation training, brainstorm for projects, training assessment, modifying actions, experiential training, perceptions of experience by their own understanding, construction by themselves or thinking of it as training- by-making, actions for social training, interaction and cognitive processes.

### **Self-Regulated Content Knowledge (SRCK)**

How to training environments by self-regulated content knowledge:

1. Content knowledge for creating mental processes. Trainees use action activity environments such as interactions within a training by doing process; trainees share their knowledge and skills through various types of social activities/opportunities to develop meta- cognitive knowledge about persons, tasks and strategies; trainees evaluate their training by considering their own part of the total experience; ensure that all activity environments help them through a training by doing approach.

2. Content knowledge for constructing social context. Trainees interact with social constructionists such as experiential training, perceive experience by their own understanding, construct their own thinking as training-by-making, and develop social training, interaction and cognitive processes. All interaction with social constructionists is to construct a social context for themselves.

### **Vocational Education Content Knowledge (VECK)**

1. Teaching for vocational education content knowledge; creating conditions for internal mental training process such as insight information, creating processing memory, perception knowledge and information, providing situated cognition (content, activities), performing access processes (drill and practice), supporting construction of knowledge.

2. Activities training for vocational education content knowledge; activities training through their own self-understanding of the course with training by doing work,

creating thinking together with ability to learn on their own, Sharing their knowledge and skills through various types of method training environment, constructing knowledge, activity, access processes performance (activities and games),

3. Training for vocational education content knowledge. Using education media, action activities environments, and interaction with social constructionists in constructing content knowledge for signals training. Information for chaining that trainee can learn on their own (objective of training, activities, event of training, step-by-step of process training, instructional media), create activities verbal association (using process training, and instructional models), Setting events for training regarding discrimination training (testing, feedback training), construct content knowledge for trainees to create concept training (create tasks, conditional training), method training, stages of teaching of training process, select media, environment management), construct content knowledge in rule training so learner can be self-regulated (how to able to achieve objectives of training and conditional training), construct social contexts for the learner to solve problems by themselves, (instruction models such as programmed, tutorials, simulation games drill and practices, test), construct social context for learner to be able to do creative thinking, recognition, understanding of sustainability according to reflective thinking, and thinking initiatives, construct social context so learner can do self-training, (trainee can be training by doing and planning, setting assumptions, doing investigations, and solving problems independently), self-regulated model for vocational education content knowledge, brainstorms for projects, planning their own training, training by doing, presentations, training assessments, modifying actions, construction of knowledge by social strategies through social context, discussing constructions, sharing constructions, creating wit and knowledge by themselves, working socially, promote reflection and articulation for training and teaching.

In this article, the researchers have offered a framework and design process for the Internet-based environment. The implementation of the IDFVE model involved several steps including a consideration of various aspects of information, conceptual development, psychology theories and evaluation of the overall quality of the system environment. In particular, the research aims to improve the design process and usability of the Internet-based environment. The study also confirms that for Internet-based Instructional Design Framework for Vocational Education (IDFVE model) to be successful, various aspects of the online environment should be considered such as the application of domain knowledge, conceptual theory, psychology theories, and evaluation of the overall quality of the design process.

### **Phases 3**

To find trainee's opinions were at the highly agreement level regarding the appropriateness of the training packages. The sampling group was 42 undergraduate trainees of most trainees strongly agreed with the effect of mental processes on teaching-learning models as follows: signals training; chaining; verbal association; discrimination training; concept training; rule training; problem solving; creative thinking, reflective thinking, and thinking initiatives. Most trainees strongly agreed with the learning by doing approach on teaching-learning models in terms of self-learning (simulation and games) and situational training. Additionally, most trainees were neutral on the learning by doing approach in terms of co-operative training; project-based training; problem-based training; group investigation; and inquiry method. For social context, most trainees strongly agreed on co-operative training;

project-based training; problem-based training; group investigation; and inquiry method. Also, the researcher selected the items from the results of questionnaire. This means that all four terms on principles, teaching-learning activities/strategies, teaching-learning environments, and teaching-learning models of mental processes, learning by doing approach and social context were pooled together.

### **Discussion of Results**

The use of an Internet-based Instructional Design Framework for Vocational Education (IDFVE) model can solve problems such as the lack of environment management in electronic media and in technology-enhanced and student-centred training environments where there has been no integration of psychology theories or trainees' understanding of how the abstract becomes concrete. It can also facilitate the training and understanding of abstract concepts due to the fact that students can notice graphically displayed changes of concrete experience. Also, the lack of attention to effective e-training environments allows students to work socially with each other.

The research found the opinions of trainees concerning instructional design and evaluation effective in terms of trainees' activities and critical thinking style; application of previous knowledge; new situations; solving problems; researching decisions; and making critical evaluations; clear thinking; presenting in class and trainers' promotion of class participant/controlling activities, effortful endeavor, designing tasks; trainers' organization of his/her thoughts; finding new ideas; making simple charts, diagrams or tables for organizing course materials; making notes and an outline of concepts and social context (construct knowledge and situation model in cloud: brainstorm for projects; planning their own training; training by doing; new knowledge; presentations; training assessments; modifying actions); developing trainee' interaction style: the relationship between people and environment; participation in communities of practice and utilization of resources; and in encouraging trainee to collaborate and learn together. Trainers create a situational style by constructing new knowledge and understanding concepts, encouraging creativity and developing problem-solving strategies for trainee. "Full participation in communities of practice and utilization of resources that include: construct new knowledge; understand concepts" (Merriam and Caffarella, 1991, p. 138)

An Internet-based Instructional Design Framework for Vocational Education (IDFVE) model was developed as an efficient, effective, flexible and easy to use system. It is, however, not for only vocational education. Most trainees' opinion concerning the IDFVE model is that it is efficient, effective, flexible and easy to use for developed electronics media (such as WBI (web-based instruction), CAI (computer assisted instruction), eBook, and eTraining)) in vocational education fields (such as electrical, electronics and mechanics), in situational training; in group investigations, and for inquiry methods.

### **Contributions**

The significance of the Delphi technique is to offer a new model and an Internet-based instructional design framework to learner and teacher of vocational education. It is a circular instructional design model offering evaluation at every phase of the operation to allow not only for an effective new design but also for inherited projects to be produced in an efficient and timely manner. An Internet-based Instructional Design Framework for Vocational Education (IDFVE) model for self-regulated,

online training at the vocational level will provide an alternative method of instruction and will influence decisions regarding what instructional strategies may be adopted (Dick, Carey & Carey, 2005, p.4). In order to find a model, the researchers developed the IDFVE model synthesized from training processes; there is a synthesis of behaviorism, constructivism, and constructionism, a focus on mental processes, the training by doing approach, and social context by using the Delphi technique. After finalizing the Delphi technique, an examination of the model by the opinions of trainees in the instructional design field will aid the IDFVE model for self-regulated, online training for vocational education. It is believed that the model is likely to help produce more efficient and effective training environments or more efficiently designed and produced curricula for today's training environments. An improved Internet-based Instructional Design Framework for Vocational Education (IDFVE) model will also benefit anyone who uses the model for instructional design.

Thus, the significance of the study may specifically be summarized as follows:

1. Trainers can apply the results of this study to develop a teaching style for the management of trainees' activity so they may learn by themselves.
2. Trainees can apply the results of this study to a training style that allows them to make sense of the new information that they are receiving by themselves.
3. Both, trainers and trainees can apply the results of this study to the training style of active participants who construct their own self understandings of the world around them by using past experience and knowledge.
4. Also, this may improve e-training courses to help trainees achieve their training objectives effectively and efficiently, as well as help trainees to understand in a faster and more stable way (Sangsawang, Jitgarun, & Kaattikomol, 2006, p. 1). The interactive content in the self-regulated instruction of an e-training course can keep the trainee's attention (Muzio & Mundell, 2002, p. 21).
5. There are implications for future research into the IDFVE model presented here. The researcher has offered a framework and design process for the Internet-based environment. The implementation of the IDFVE model involved several steps including a consideration of various aspects of information, conceptual development, psychology theories and evaluation of the overall quality of the system environment. In particular, the research aims to improve the design process and usability of the Internet-based environment. The study also confirms that for Internet-based Instructional Design Framework for Vocational Education (IDFVE model) to be successful, various aspects of the online environment should be considered such as the application of domain knowledge, conceptual theory, psychology theories, and evaluation of the overall quality of the design process. Also, the researcher recommends this model as being applicable to support instructional design for self-regulated, training in other content areas or at other educational levels.

Also, the researcher recommends this model as being applicable to support instructional design for self-regulated, online training in other content areas or at other educational levels.

## References

Attwell, G., 1997, "Pressures for Change in the Education of Vocational Education and Training Personnel", **Promoting Vocational Education and Training: European Perspectives, Tampere**, In A. Brown (Ed.), Finland: University of Tampere, Finland, pp. 107-122.

Case, L., Harris, K. R., and Graham, S., 1992, "Improving the Mathematical Problem Solving Skills of Students with Training Disabilities and Self-Regulated Strategy Development", **Journal of Special Education**, Vol. 26, pp. 1-19.

Cobb, P., and Steffe, L.P., 2011, "The Constructivist Researcher as Teacher and Model Builder", **A Journey in Mathematics Education Research: Mathematics Education Library**, Vol. 48, No. 1, pp. 19-30.

Conroy, C.A., and Walker, N.J., 2000, "An Examination of Integration of Academic and Vocational Subject Matter in the Aquaculture Classroom", **Journal of Agricultural Education**, Vol. 41, No. 2, pp. 54-64.

Dick, W., Carey, L., and Carey, J. O., 2005, **The Systematic Design of Instruction**, 6<sup>th</sup> ed, Boston: Pearson, Allyn and Bacon, pp. 4.

Dineke, E.H., Tigelaar, Diana H.J.M. Dolmans, and et al., 2004, "The Development and Validation of a Framework for Teaching Competencies in Higher Education", **Higher Education**, Vol. 48. No. 2, pp. 253-268.

Edmondson, A.C., 2003b, "Speaking up in the Operating Room: How Team Leaders Promote Training in Interdisciplinary Action Teams", **Journal of Management Studies**, Vol. 40. No. 6, pp. 1419-1452.

Ennis-Cole, D. L., and Lawhon, T., 2004, "Teaching, Technology and Support in The New Millennium: A Guide for New Community College Teachers", **Community College Journal of Research and Practice**, Vol. 28, No. 7, pp. 583-592.

Ertmer, P.A., and Newby, T.J., 1996, "The Expert Learner: Strategic, Self-Regulated, and Reflective", **Instructional Science**, Vol. 24, pp. 1-24.

Fink, A., Kosecoff, J., Chassin, M., and et al., 1984, "Consensus Methods: Characteristics and Guidelines for Use", **American Journal of Public Health (AJPH)**, Vol. 74. No. 9, pp. 979-983.

Gagné', M, R., 1970, **The Conditions of learning**, 2<sup>nd</sup>ed, The United States of America: Holt, Rinehart and Winston, pp. 95-333.

Gagné', M, R., 1979, **Principles of Instructional Design**, New York: Holt, Rinehart and Winston, pp. 141.

Gagné', M, R., 1985, **The Condition of learning**, 4<sup>th</sup> ed, New York: Holt, Rinehart and Winston, pp. 1-361.

Gagné', M. R., 1997, "Conceptual and Procedural Knowledge", **International Journal of Technology and Design Education**, Vol. 7. No. 1/2, pp. 141-159.

Gordon, T. J., 1994, **The Delphi Method** [Online], AC/UNU Millennium Project Futures Research Methodology, Availabel: [www.gerenciamento.ufba.br](http://www.gerenciamento.ufba.br). [2011, June 1].  
pp. 1-30.

Gustafson, K.L., and Branch, R.M., 2002, **Survey of Instructional Development Models**. 4<sup>th</sup> ed, (Report No. IR-114), Washing, DC: Department of Education, pp. 34.

Honebein, P., 1996, **Seven Goals for The Design of Constructivist Training Environments**, New Jersey: Educational Technology, pp. 17-24.

Hung, D., & Nichani, M., 2001, "Constructivism and E-Training: Balancing Between The Individual and Social Levels of Cognition", **Educational Technology**, Vol. 41. No. 2, pp. 40 - 44.

Jetin, B., 2006, "The Cognitive International Division of Labour Hypothesis: What Possible Effects for Thai Labour and Education?", **Journal of Education**, Vol. 33, No. 1-2, pp. 1-45.

Kafai, Y., and Resnick, M., 1995, **Constructionism in practice: Designing, Thinking, and Training in A Digital World**, Mahwah, NJ: Lawrence Erlbaum, pp. 71- 96.

Kruse, K., 2002, **Beginner Basics: Gagné's Nine Events of Instruction: An Introduction** [Online], Availabel: <http://www.e-trainingguru.com/articles/art3#.htm> [2006 May, 30].

Kuhn, T.S., 1970a, "Logic of Discovery or Psychology of Research?", **Criticism and the Growth of Knowledge**, In Lakatos, I. and Musgrave, A. (Eds.), Cambridge University: England, pp. 1-22.

Kuhn, T.S., 1970b, **The Structure of Scientific Revolutions**, 2<sup>nd</sup> ed, University of Chicago Press, Chicago, pp. 10-22.

Lawler III, E.E., 2006, **Designing Organizations That are Built to Change**, Center for effective organizations, pp. 1-8.

Likert, R., 1932, "A Technique for The Measurement of Attitudes", **Archives of Psychology**, pp. 140: 1-55.

Linstone, H.A., and Turpff, M., 2002, **The Delphi Method** [Online]. <http://www.wis.nij.edu/delphibook/index.html#copyright> [2011, August, 9].

Ludwig, B., 1997, "Predicting The Future: Have You Considered Using The Delphi Methodology?", **Journal of Extension**, Vol. 35, No. 5, pp. 266.

Macmillan, T., 1971, **The Delphi Technique**, Washington, D.C.: ERIC Clearinghouse, pp. 1-24.

Marr, M.J., Thomas, E.W., Benne, M.R., and et el., 1999, "Development of Instructional Systems for Teaching an Electricity and Magnetism Course for Engineers", **American Journal of Physics**, Vol. 67, No. 9, pp. 789-802.

Martin, J. and Sugarman, J. H, 1997, "The Social-Cognitive Construction of Psychotherapeutic Change: Bridging Social Constructionism and Cognitive Constructivism", **Journal of General Psychology**, 1, 375-388.

Maslow, A. H., 1968, **Toward a psychology of being**, 2<sup>nd</sup>ed, New York: Van Nostrand Reinhold, p. iii.

McCormick, R., 1997, "Conceptual and procedural knowledge", **International journal of technology and Design education**, Vol. 7, No. 1-2, pp. 141-159.

Merriam, S. and Caffarella, 1991, **Training in Adulthood**, San Francisco: Jossey-Bass. pp. 1-528.

Miles, M. B., and Huberman, A. M., 1994, **Qualitative Data Analysis**, 2<sup>nd</sup> ed, Thousand Oaks, CA: Sage, pp. 1-339.

Morrison, G. R., Ross, S. M., and Kemp, J. E., 2004, **Designing Effective Instruction**, 4<sup>th</sup> ed, Wiley, pp. 21

Muzio, J.A., Heins, T., and Mundell, R., 2002, "Experiences with Reusable E-Training Objects: From Theory to Practice", **The Internet and Higher Education**, Vol. 5, No. 1, pp. 21-34.

Nordhaug, O., 1998, "Competence Specificities: A Classificatory Framework", **International Studies of Management and Organization**, Vol. 28, No. 1, pp. 8-29.

Office of National Education Commission, 1999(2542), **In Organizing The Training Process, Educational Institutions and Agencies Concerned Shall Provide Training in Thinking Process, Management, How to Face Various Situations and Application of Knowledge for Obviating and Solving Problems**, Bangkok, National Education Act B.E., Section 24.

Office of National Education Commission, 1999(2542), **Trainee Shall Have The Right to Develop Their Capabilities for Utilization of Technologies for Education as soon as Feasible so That They Shall have Sufficient Knowledge and Skills in Using These Technologies for Acquiring Knowledge themselves on a continual lifelong basis**, Bangkok, National Education Act B.E., pp. section 66.

Olson and Hergenbahn, 2009, **Chapter 5 Discussion**, Anti Essays, pp. 71- 432.

Open Training Technology Corporation, 1996, **Open Training Technology**, Corporation, p. 6.

Papert, S., 1980, **Mindstorms: Children, computers and powerful ideas**, New York: Basic Books, pp. 24-234.

Papert, S., 1991, "Situating Constructionism", In **Constructionism** Haral, I and Papert, S., (eds.), 1<sup>st</sup> ed, New Jersey, pp. 1-11.

Paris, S. G., and Byrnes, J. P., 1989, "The constructivist approach to self regulation and training in the classroom", In **Self-regulated training and academic achievement theory research and practice: Progree in developmental research**, B. J. Zimmerman & D. H. Schunk (eds.), New York: Springer-Verlag, pp. 169-200.

Paris, S. G., and Byrnes, J. P., 1989, "The constructivist approach to self regulation and

Patton, M.Q., 1990, **Qualitative Evaluation and Research Methods**, 2<sup>nd</sup> ed., Sage, Newbury Park: CA, pp. 339-428.

Patton, M.Q., 1990, **Qualitative evaluation and research methods**, 2<sup>nd</sup> ed., Sage, Newbury Park: CA, pp. 339-428.

Pazziferro, M., 2008, "Online technologies self-efficacy and self-regulated training as predictors of final grade and satisfaction in college-level online courses, **American Journal of Distance Education**, Vol. 22, No. 2, pp. 72-89.

Piaget, J., 1964, **Six Psychological Studies**, The United States of America: Originally, pp. 51- 107.

Piaget, J., 1972, **To Understand is to Invent**, New York: The Viking Press, Inc, pp. 1-150.

Sangsawang, T., Jitgarun, K., and Kaittikomol, P., 2006, "A Training Strategy Suitable for Trainee ' Self-Discovery", **EDU-COM 2006 Engagement and Empowerment: New Opportunities for Growth in Higher Education**, November 22-24., Nong Khai Campus of Khon Kaen University, Nong Khai, Thailand, p. 619.

Sangsawang, T., Jitgarun, K., and Kaittikomol, P., 2006, "Comparison of Selected Psychology Theories as In Gagné's, Constructivism, and Constructionism", **The 4<sup>th</sup> International Conference on Developing Real- Life Training Experiences: Education Reform through Performance-Based Training**, July 13-14., 2006 KMITL, Bangkok, Thailand, pp. 327- 328.

Sangsawang, T., Jitgarun, K., and Kaittikomol, P., 2006, "Students Self Appraisal for online Training", **ASIA Pacific Educational Research Association International Conference**, November 28 - 30, 2006, The Hong Kong Institute of Education of Hong Kong, SAR CHINA, pp. 1-5.

Sangsawang, T., Jitgarun, K., and Kaittikomol, P., 2007, "A synthesis of Meaningfulness of training theories as in Gagné's, Constructivism, and Constuctionism Towards Online Training and Instructional Design", **The ICAST Asian Symposium 2007 Science Education for all: Towards Sustainable**

**Development Regardless of Resource**", November 6-9, 2007, Pattaya Thailand, pp. 1-11.

Sangsawang, T., Jitgarun, K., & Kaittikomol, P. (2011), "An Internet-based Instructional Design Framework for Vocational Education", *International Journal Soft Computing*, Vol. 6, No. 4., pp. 119-127.

Zimmerman, B.J., 1995, "Self-regulation Involves More Than Metacognition: A Social Cognitive Perspective", **Educational Psycho**

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*Culture Education on College Language Teaching:  
A Study on Language Acquisition and Culture Awareness*

Shihong Liu, Nanjing University of Aeronautics and Astronautics, China

0341

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Abstract

As language and culture are interdependent dual unity, they can't be separated from each other. However, it is a common practice in a large number of Chinese universities that the second language teaching only attaches importance to the acquisition of the target language without sufficient and systematical introduction to its cultural background; or though it also shows its concerns about culture, the culture awareness is only one-way ---the target culture is emphasized, but the native culture is absent. This paper analyzes the ties of language acquisition and culture awareness. In the meanwhile, it reveals the relevant problems brought about by the separation of language and culture in foreign language teaching in Chinese universities. In the end, the paper proposes some solutions to the problem from both the perspective of the second language administration level and instructors. It points out that on the basis that the level of administration pays close attention to the matter and sets up policies to ensure the two-way culture education in the second language teaching, the instructors can attempt to realize the two-way culture education in the second language teaching by means of both Classroom and Extra-curricular activities as explicit and implicit education fields. What's more, the comparison between the target and the native culture is an emphasis in the two-way culture education. By doing so, the second language learners (Chinese college students) can be expected to acquire the second language properly.

## I. Relation between Language and Culture

As language is a kind of social phenomenon, Language system can't exist and develop when isolating itself from social system, whose components it establishes a sophisticated relation with.

“Culture” refers to a general mode specific to believes, customs, objectives and technology of a society. 【1】

Culture is associated with language closely. Social linguist Goodenough notes in his book Cultural Anthology and Linguistics that the language of a society is one of the components of the social culture.

As part of culture, language is unique in its nature which can serves as a tool to acquire the whole culture when people are studying and using language

“Language and culture cannot be independent from each other, for language can reflect culture, and culture needs language. Culture is all-inclusive. The acquisition of the target language’s culture (western culture) and the native culture (Chinese culture) both are of great help for college students to gain the practical ability to use language. 【2】

Culture can be reflected, and what’s more, cognized by language.

One links, influences as well as restrains the other.

Without enough attention to its cultural implication or enough knowledge of the culture of the mother tongue and target language, we will fail to master the nature of language so that we won’t acquire and apply a language truly.

## II. Purpose of Cultural Education in Chinese University’s

### Second language Teaching (College English Teaching)

#### 1. The requirement of realizing the goal of college English teaching

The ultimate goal of English teaching is to realize the function of communication---cross-cultural communication.

#### 1. The requirement of realizing the goal of college English teaching

By doing so, college students cannot only master the basic language skill of English, but also learn of the cultural background of mother tongue and target language---English so as to broaden horizon and bring up cross-culture awareness.

As a result, colleague students probably avoid making communicative mistakes and improve their ability of language application and two-way culture awareness.

## **2. The requirement of globalization**

In an era of a globalization in economy and fast-developing communication technology, different nations and cultures are trying to communicate and cooperate with each other increasingly in more and more aspects.

In such background, it's very important and necessary to strengthen the cultural education in language teaching in order to understand each other well and achieve successful communication.

## **3. The requirement of bringing up Chinese college students with sharp awareness of native culture**

As for college students, the ultimate goal of the second language acquisition is to make successful two-way communication, to be specific, not only to "import the western" but also to "export China".

Two-way culture education can help to cultivate Chinese college students the native culture awareness, and spread out the essence of Chinese tradition to the world, helping the world know China well, which is one of their responsibilities.

## **III. Problems in culture education of Chinese college English teaching**

### **1. The absence of culture education of the second language**

Influenced by the limitation of correspondent theoretical knowledge and pressure of examination, it's a fact that Chinese college English teaching has been stressing the teaching of linguistic knowledge such as pronunciation, vocabulary, grammar, etc.

■ There is a lack of of systematic and conscious education on the cultural factors of the second language. 【3】

As a result, many Chinese students has got some knowledge of linguistics without enough knowledge of cultural implication of the second language.

Besides, there is no enough or even no textbook on culture in college English teaching.

There seems to be only some casual culture education, or there is some simple

introduction to the exterior culture phenomenon. The interior or profound factors of culture are neglected.

Hence many college students fail to catch the differences between the English and Chinese cultures in the way of addressing, introduction, expressing habits and thinking patterns and privacy, which brings about a mode of communication “Chinese thinking pattern+ English language”.

Consequently, students may offend the customs of the western culture and the people from this culture by improper expressions; On the other hand, even the expression itself is proper, it may be a shallow one.

The college English teaching without cultural education will hinder the realization of college English teaching, and also cannot satisfy the requirements of the era of cultural globalization.

## 2. Neglect of native culture education

In the meanwhile, Chinese college English teaching also may go to another extreme: put too much emphasis on the target language's culture but without Chinese culture education.

Some Chinese scholars have stated that “Chinese culture is neglected obviously.” [4] Chinese traditional culture need English to introduce itself to the world. If Chinese college students, the future elite of China don't have enough native culture awareness, then Chinese excellent culture would be obscure in the time of culture diversity.

What's more, little awareness of native culture and little knowledge will lead to the alienation of college students' value. They will be hard to establish the national cultural identity to some degree.

## IV. Strategies

### 1. The relevant administrative departments should intensify the macro management of the culture education

In a world where diverse cultures are communicating with each other increasingly, faced with the current situation of two-way culture education, Chinese administrative departments of college English teaching should have insight into the problems and the requirements of the times and take measures to strengthen the culture education in college English teaching. This will guarantee the interaction of Chinese college English language teaching and two-way cultural education.

First, revise the college English teaching outline and impose requests of cultural

education on English teaching.

■  
Second, make the textbooks of cultural education scientific, standardized and systematic.

Arrange scholars and experts to rewrite textbooks: add vocabulary and expressions of culture, and introduction and comparison of two cultures.

Edit specific cultural textbooks in English for college students to learn of philosophy, history, religion, literature, arts and social customs of the cultures of both target language and mother language.

Third, require the universities and college where conditions permit to offer elective courses on culture comparison, such as “Cross-culture communication”, “Language and Culture”, “Selected Readings of American and European Literature”, “Appreciation of Traditional Chinese Literature”.

It would help to form a pattern of college English teaching combining language and culture, and Chinese culture education and English culture education.

## **2. Improve the professional qualification of college English teachers**

In order to satisfy the requirement of dual strategy of “Globalization” and “Localization”, a qualified college English teacher should not only acquire the knowledge linguistics but also has cultural awareness and cultivation, especially the central cultural factors such as value, thinking patterns, and so on.

What’s more, teacher should change their teaching pattern from the transmission of pure language to the education of both language and culture, avoiding discriminating against one and favouring the other between culture and language as well as the culture of the target language and mother language.

Only in this way can we educate college students who can exchange with people from foreign culture successfully and equally.

## **3. Combine explicit and implicit cultural education to achieve interactive education of language and culture**

### **1) Bring the function of explicit education in college English teaching into full play**

Explicit cultural education refers to the pointed and effective cultural education by correspondent courses, which serves as the main battlefield for cultural education.

College English teachers should study and sum up the teaching experiences and make college English teaching the interactive teaching of both language and culture, melting the cultural knowledge of English speaking countries’ literature, history, geography, customs, religions and way of living into language classes.

### **Teaching methods**

Cultivate culture awareness with the introduction of basic units of language, for example, idioms, proverbs, sayings, colloquialisms, and allusions, for the concrete language expressions are supposed to interpret the cultural ideas and semantic so as to help students to reveal the rich cultural implication of language.

When giving lectures on grammar and articles, teachers should try to find out the differences by making a comparison of these aspects such as grammar, sentence structure, and article structure;

### **Teaching methods**

The cultural differences about specific communicative environments can be introduced into college English teaching, for example, ways of addressing, expressing thanks, being humble, praise others, and introduction to people, habits of wording, expressions, taboo, privacy, how to shown concern, time consciousness and thinking patterns;

introduce college students the customs and habits of society and living style in order to broaden their' horizon and grasp the interior cultural implication;

### **Teaching methods**

When analyzing the theme of an article and author's points of views, teacher should introduce the relevant values and background of the target language's culture, and make proper comparison between the Chinese culture and the English culture so as to make clear the respective characteristics and values of the two cultures.

Introduced from different aspects, such cultural education can cultivate a systematic and objective ability of the target language English and two-way cultures, and apply language properly, realizing the language teaching and pragmatic teaching.

### **Teaching techniques**

Diverse teaching techniques will promote the learning and understanding of cultural knowledge.

In class, teacher can make full use of multimedia devices to present the courseware, showing students relevant cultural feature films or other audio and video materials to make the class more lively and artistic so as to motivate students' curiosity and interest and realize the interactive language and cultural teaching directly and fully.

### **Teaching techniques**

In the meanwhile teacher should initiate students' to learn of culture and raise their own learning and studying ability by these techniques: assign some cultural topics for students to study.

They can be encouraged to cooperate in groups, look for the sources of relevant materials in library and internet beyond the confines of textbooks, thus write or edit research paper and investigation reports, or hold keynote speeches or debates.



Such profound study and analysis on culture can deepen their knowledge of cultures and lay a solid foundation for cross-cultural communication and transmission of native culture.

## 2) Make active use of the function of **extracurricular** activities as **implicit cultural education**

Culture affects an individual in an unconscious way, for culture “can never be conscious of fully...What it embodies is larger than what we are aware of; Moreover, it cannot be designed because it is an unconscious background for all we have designed.” 【6】

Supporting the major battlefield of cultural education---classroom, extracurricular activities exercise its function of implicit cultural education to achieve a penetrating, artistic and indirect cultural education unconsciously and naturally.

College English teachers can instruct these intelligent and active young students to take part in various entertainment activities, such as

performing self-directing,

watching both Chinese and English classical plays and movies;

holding debates and speech contest;

inviting experts to give lectures on customs, history, music, fine arts, and masterpieces. etc..

With the unconscious but enjoyable influence of these extracurricular activities, students can cultivate ability of language and awareness of culture, and become an inheritor of Chinese cultural traditions, as well as a new generation with broad horizon and spirit of times.

## V. Conclusion

**The language of English cannot be separated from its cultural background, where it is brought up.**

It is the only way to train Chinese college students to be English learner and achieve cross-communication successfully that Chinese college teaching attach great importance to interactive education of both language and culture, and that of the second Language's culture and mother culture, which can cultivate college students' awareness of the two cultures and ability of cognition.

Two-way Cultural Education in the second Language Teaching is the demand of nature of English language, demand of Chinese development, and also the demand of the era of globalization

## References:

- [1] P.3, Deng Yanchang, liu runqing. Language and Culture [M] Beijing: Press of foreign language teaching and research. 1989
- [2] P.20. Zhang gongjin, Ding Shiqing. Course on Cultural linguistics [M]. Beijing: Press of Educational Science, 2004:18-26.
- [3] P. 56, Shu Dingfang, Zhuang Zhixiang. Modern Foreign Language Teaching--Theory,Practice and Method [M]. Shanghai: Press of Shanghai Foreign Language Education, 1996.
- [4] P34, Zhang Weimin. Chinese Culture in College English teaching [J]. Qinghua University's Study on Education (supplementary edition), 2002(2).
- [5] P92, Wang Shouren. On the all-round Chinese English Education [J]. Foreign Language Teaching. 2002(2).
- [6] P94, T. S. Eliot, Notes Towards the Definitions of Culture [M]. London: Faber & Faber, 1948.

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*On Increasing Instructional Emphasis on the Differences  
between Written and Spoken Language Grammars*

Mayumi Ajioka, Yumiko Kawanishi

University of California, USA

0353

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## 1. Introduction

The current trend of using a communicative approach in language classrooms has improved the average speaking skills of second/foreign language (L2) learners and has increased interest in a variety of instructional methods and approaches focusing on communication in the target language (TL). This trend is admirable, given that learners' primary purpose is to communicate in the TL with native speakers and that an increasing number of learners have acquired *survival* skills with their TL in the target culture. If they are to be truly accepted in the target culture, however, mere *surviving* should not be sufficient—the necessary condition will be the skill of communicating with an appropriate language in accordance with the situation.

This skill is not limited to spoken language but is also applicable to written discourse. However, the recent oral-communication-focused curriculum has made it difficult for teachers to spare enough time for the instruction of an appropriate language of written discourse. Hence, many of the learners of Japanese are found to apply spoken language grammar in their compositions, without any distinction between these two mediums of communication.

The current paper presents how differently native speakers of Japanese use the two mediums of language—the spoken and written languages—based on the Multiple Grammar Model (Iwasaki, in preparation). Native speakers of Japanese use a variety of styles in spoken language, such as in conversation or debate, in accordance with the situation in which the speakers find themselves. Speakers sometimes include written language in order to communicate what they mean most effectively. However, native speakers of Japanese never mix spoken language in their written products.

Our primary purpose in this paper is to propose the necessity to emphasize the difference between spoken language and written language in language classes and to have a dual focus on conversation practice and writing practice, based on the Multiple Grammar Model. The structure of the paper is as follows. Section two delimits the written language or writing that we deal with in this paper, and Section three reviews the literature background in terms of the difference between spoken language and written language. Section four presents our sample data to show how learners overuse spoken language in their compositions and categorizes their patterns into five types of overuse. We present samples from both intermediate and advanced learners of Japanese as a foreign language (JFL) and heritage learners in Los Angeles. We picked these samples out of third-year or higher classes, but this kind of overuse can be found also in the beginning level of learners. In Section five, we suggest possible factors of the overuse of spoken language in writings, and Section six concludes the paper.

## 2. Terminology

By the terms 'writing,' 'written language,' and 'written discourse,' we are specifically dealing with *sakubun*, which is a general Japanese term for compositions as course assignments, reports of any kind, and articles or essays. In short, 'writing' in this paper refers to any kind of written products that are (1) intended to be read by superiors or unspecified and general people, (2) written about the author's ideas or opinions, or (3) require a certain level of logicity and objectivity. Thus, the 'writing'

in this paper does not include letters or personal writing, such as diary or journal entries.

### 3. Spoken Language vs. Written Language

Since the 1980s, it has been generally acknowledged that spoken and written languages are different (Chafe 1994; Clancy 1982; Halliday 1989; Iwasaki in preparation). Halliday (1989) put forward a question: *Can we say that spoken language and written language are different ways of expressing the same meanings?* (p. 92). He gave two answers of both *yes* and *no* to this question. For the answer *yes*, he explained that these two are both languages. For the answer *no*, he presented three reasons from three distinctive perspectives, as follows. (1) In terms of form, such as prosody or paragraphs, written language misses prosody and other meaning potentials of speech, while spoken language does not show sentences and paragraph boundaries. (2) In terms of context, purpose, and function, spoken and written languages are used differently. (3) In terms of the world or reality that both languages create, but differently—written language creates a world of things, while spoken language creates a world of happenings. We agree with his argument, but his viewpoint is rather general, and thus it is not clear how different the two mediums of language are in actual language use.

Then, let us take a closer look at more specific linguistic points in Japanese. Clancy (1982) found that connecting two or more verb phrases in Japanese, *te*-form—i.e, the gerundive form—is more likely used in conversation, while *ren'yoo-kee*, the infinitive form, is used exclusively in written language (see Examples 1 and 2). In this way, Clancy pointed out that spoken language is different from written language by using particular linguistic evidence.

1. Spoken language

*daigakuin e it-te, kenkyuu suru koto ni shi-ta.*  
graduate school to go-GER, research do NOM DAT do-PAST

2. Written language

*daigakuin e iki, kenkyuu suru koto ni shi-ta.*  
graduate school to go-INF, research do NOM DAT do-PAST  
'(I) decided to go to graduate school and do research.'

Also, Taylor (2010) found that the morpheme *-tari* has different structures and functions between spoken and written languages. In written language, it is used to list several actions with multiple *-tari* phrases in the construction of *V<sub>1</sub>-tari V<sub>2</sub>-tari suru* 'doing such as V<sub>1</sub> and V<sub>2</sub>.' However, in conversation, it is more often used in a single *-tari* construction and expresses hedge (see Examples 3 and 4).

3. *o-ryoori shi-tari mo suru no?* (hedging; spoken language)

HON-cooking do-*tari* too do PP  
'Do you also cook or something?'

4. *ryoori shi-tari sooji shi-tari shi-masu* (listing; written language)

cooking do-*tari* cleaning do-*tari* do-PRES  
'I do such as cooking and cleaning.'

From these and other different linguistic phenomena, Iwasaki (in preparation) proposed the Multiple Grammar Model in which “a speaker will acquire various grammatical constructions not only from conversational language but also from other types of language, most significantly from written language, and learn to employ the appropriate grammar for the task at hand” (pp. 5–6). Iwasaki argues that:

The spoken/conversation grammar and the written language grammar are expected to take different shapes as they evolve in two significantly different environments (sound vs. graphic mediums), and are used mainly for different purposes (interaction vs. ideational formation). Though the two will be merged at the most abstract level, each grammar contains specific grammatical resources with varying degrees of abstraction (p. 1).

Thus, spoken language grammar and written language grammar develop differently in the cognition of native speakers through two completely different mediums. However, in spoken discourse made by Japanese native speakers, as Iwasaki noted, a ‘mixture’ of these two types of grammar is often found in order to communicate the speaker’s point most effectively. Let us look at an example of ‘mixture,’ which was spoken by Shinzo Abe, the current Prime Minister of Japan. This example is a part of a debate that took place between two major political parties in 2012. When this debate occurred, the party of Shinzo Abe was not the ruling party, and he was not Prime Minister yet.

#### 5. Example of ‘mixture’ in spoken language by a native speaker<sup>1</sup>

- 1 *tatoeba watashi no toki to Hatoyama-san no toki [ ] kurabe-*  
*mashoo*  
for-example I GEN time with Mr. Hatoyama GEN time  
compare-let’s
- 2 *watashi no toki wa 81 choo-en deshita.*  
I GEN time TOP 81-trillion-yen COP-PAST
- 3 *soshite soshite desu **ne**, soshite meemoku GDP wa ikura datta*  
*ka.*  
and and COP PP and nominal GDP TOP how much COP-  
PAST QP
- 4 *513 choo en desu **yo.***  
513 trillion yen COP-PRES PP

‘Let’s compare the budget of my Cabinet (in the past) with that of Mr. Hatoyama (of your party). It was 81 trillion yen during my time as Prime Minister. And, and, and how much was the nominal GDP? It was 513 trillion yen.’  
(Spoken by Shinzo Abe. adapted from Iwasaki in preparation)

In this example, the features of spoken language, particularly of conversation, are grey-shaded, and the linguistic forms often used in written language are underlined. The speaker, Abe, basically uses written language grammar such as *-deshita* (line 2) and *-datta-ka* (line 3), and written language word choice such as *meemoku* (line 3)

<sup>1</sup> Throughout this paper, the grey-shaded part in bold font stands for spoken language, while the underlined part in bold font refers to written language.

due to the formality of this speech environment, which is the National Diet of Japan. However, he also makes an effective use of the features of conversational grammar, such as lack of the accusative particle (line 1) and the use of pragmatic particles *ne* (line 3) and *yo* (line 4), in order to enhance the liveliness and cogency of speech.

However, in writing, Japanese native speakers consistently adopt written language grammar without any of conversational grammar. Let us look at another example. This is a part of a native Japanese speaker's composition, and the writer is an 18-year-old female student from a high school in Tokyo.

6. Example of 'No Mixture' in written language by a native speaker:

- 1 *senshuu no nichiyoubi ni yuujin to toshokan ni*  
last-week GEN Sunday on friend with library LOC  
2 *benkyoo o shi-ni iki mashi-ta.*  
study ACC to do go PAST  
3 *gogo kara it-ta node, manseki de suwarezu,*  
afternoon from go-PAST because fully-occupied and unable-to-sit  
4 *benchi de benkyoo sezaru-o-e-nai jookyoo deshi-ta.*  
bench LOC study cannot-help-doing situation COP-PAST

'I went to the library with my friend to study last Sunday. Because we went (there) in the afternoon, all seats were occupied, and we could not help studying on a bench.'

In this composition, the writer neither includes any pragmatic particles nor drops any case particles. Instead, she explores appropriate written language grammar (the underlined parts) such as sentence endings like *-mashi-ta* (line 2) and *-deshi-ta* (line 4), and also *ren'yoo-kee* 'the infinitive form' for *suware-zu* 'unable to sit' (line 3). She also adopts appropriate words and expression for written language, such as *manseki* (line 3), which means 'all seats occupied,' *sezaru-o-e-nai* (line 4) 'cannot help doing,' and *jookyoo* (line 4) 'situation.'

Thus, the important point we need to notice in the comparison of these two mediums of language—i.e, spoken language and written language—is that native speakers of Japanese tend to mix spoken language grammar and written language grammar in spoken language in order to make their communication the most effective possible, but they do not use spoken language grammar in their writing.

#### 4. Sample Compositions

This section presents some samples of non-native speakers' compositions and classifies five types of their overuse of spoken language grammar into written language grammar. Four of the types are from JFL learners, and the fifth is from heritage learners. Below are three sample sentences excerpted from three non-native speakers of Japanese. The writers are all from intermediate-advanced Japanese classes in universities located in the Los Angeles area.

7. *kono kooen ni iku no wa sutoresu kaishoo no hoofoo desu ne.*  
this park LOC go NOM TOP stress release of way COP PP  
'Visiting this park is a way of stress release, **right?**'
8. *kongakki, watashi wa takusan yara naku-cha-ikenai koto ga atta*  
this-term I TOP many do have-to thing SUB exist-PAST  
*kara,*  
because  
'Because I had a lot of things to do this quarter,'
9. *sono kurasu wa mae no [ ] yori sugoku muzukashi-katta.*  
that class TOP previous of than terribly difficult-PAST  
'The class was much harder than the previous one.'

The grey-shaded parts indicate the spoken language form that should not be involved in written language. It can be seen that each of the samples includes a certain amount of spoken language grammar of some type. We classify these and other examples of overuse by non-native JFL learners into the following four types: Interactional, Contract, Word Choice, and Ellipsis.

#### 4.1 Interactional

The first type of overuse, Interactional, is found in Example 7 above. The grey-shaded part *-ne* at the end is called a pragmatic particle or a sentence final particle. The function of this particle is basically to 'reflect the speaker's attitude toward the proposition and/or the interlocutor(s) and play a pivotal role in spoken Japanese' (Hasegawa 2010, p. 71). In writing, the writer should not be interactional or friendly to readers, and thus no sentence final particle, such as *-ne*, *-yo*, *-sa*, *-no*, and *-na*, should be included.

#### 4.2 Contract

The second type is the overuse of contracted forms in written language, with the most noticeable contracted forms being *ja* and *cha*. The former is the contracted form of *de wa* (Example 10), and the latter is the contracted form of *te wa* (Example 11).

10. *watashi wa gakusee ja (→ de wa) arimasen.*  
I TOP student CON COP TOP exist-NEG  
'I am not a student.'
11. *kyoo wa shukudai o shi-naku-cha (→ te wa) ik-e-nai.*  
today TOP homework ACC do-NEG-CON te TOP go-POT-NEG  
'I have to do homework today.'

In English, the contracted forms such as *isn't* for 'is not' and *gonna* for 'going to' are limited to casual conversation. Likewise, the contracted forms in Japanese, such as *-ja* and *-cha*, are not suitable for written material and should be avoided. Among other Japanese contracted forms that are inappropriate for written language are: ***-te nai*** (→ *-te inai*), ***-teru*** (→ *-te iru*), and ***-toku*** (→ *-te oku*).

### 4.3 Word Choice

The third type of overuse is word choice. As spoken language such as conversation has its own proper vocabulary to be used, so written language should explore its appropriate words and expressions. For example, *yara-* in Example 8 above, which is a conjugated form of the verb *yar-u* 'to do,' should be exclusively used in relatively casual conversation, and in the cases of more formal spoken language and written language another verb form with the same meaning, *sur-u* 'to do,' is preferred. Likewise, Example 9 includes an extremely casual intensifier *sugoku* 'terribly/tremendously/very,' which should be changed to another, more formal intensifier such as *totemo* 'very' or *hijooni* 'very' in written language.

This is a rather complicated type of overuse because it is closely related to formality, which requires further investigation. In this paper, we would like to present several cases of overuse in terms of the three categories listed. Below are the words or expressions that are only usable in very casual conversation between those with a close relationship, so that they should be avoided in written language.

- ❑ Casual expressions: *dame* 'no good,' *daijobu* 'OK,' *heeki* 'OK'
- ❑ Degree words: *sugo-i* 'terrible,' *sugo-ku* 'terribly,' *kekko* 'fairly,' *chotto* 'a little'
- ❑ Function words: *toka* 'or,' *nanka* 'something/like,' *mitai-na* 'something like,' *-tte* (quotative marker)

### 4.4 Ellipsis

The fourth type of overuse is ellipsis. In casual conversation in Japanese, repeated words and case particles are frequently dropped. However, ellipsis is not appropriate in written language. The sentence presented in Example 9 above has an ellipsis of a word *kurasu* 'class' after *mae no* 'the previous.' Thus, the correct sentence that is preferred for written language is in Example 9':

- 9' *sono kurasu wa mae no [kurasu] yori muzukashi-katta.*  
that class TOP previous of class than difficult-PAST  
'The class was much harder than the previous class.'

### 4.5 Heritage Learners' Overuse

The previous sections showed the four types of salient overuses in compositions written by learners of Japanese as a foreign language at all levels. However, these kinds of overuse not only happen with learners of Japanese as a foreign language but also with heritage learners. Moreover, heritage learners' compositions involve a much more interesting type of overuse that clearly shows that written language needs its own particular way of instruction independent of spoken language. In this section, we would like to present the fifth type of overuse that is particularly found in the writings by heritage learners. First, let us take a look at a sample composition below.

12. A heritage learner's composition (a male student from a university in Los Angeles).

Topic: Cultural difference

1. ... *tatoeba, maeno nihon no josee wa ie ni i-te, kaji **toka** o-kane no koto o shi-te i*
2. *mashi ta.*
3. *ima wa mada sou iu **kata** mo **irasshai-masu** ga, dandanto shigoto [ ] shi-te*
4. *daigaku mo sotsugyoo shi-te iru **kata** mo **kekko** i masu.*

'For example, Japanese women before stayed home and did housework *or (S)* managed the household budget. Although *there are (polite)* still some *women (polite)* doing so now, there are also *many (S)* other *women (polite)* who work (outside) and graduate from university.'

In this case, the writer's parents are both first-generation Japanese in the U.S., and the writer speaks Japanese in his home and community. So, his speech sounds like native speakers in both casual and formal settings.

The interesting point of his composition is that it clearly shows that he merely transcribes his spoken discourse. If this were a spoken discourse and we had just heard him speaking, it would sound just like a native speaker's speech. However, since this is a written discourse, it points up multiple inappropriate words and expressions as described in the previous sections: two instances of inappropriate word choice (Type 3), such as a casual hedging expression like *toka* and a casual degree word *kekko*, and one ellipsis of an accusative case particle after *shigoto* 'job' in line 3. However, the most interesting and noteworthy type of overuse that is typical in heritage learners' writing is polite expressions. There are two unnecessary polite expressions in lines 3 and 4, *kata* and *irasshai-masu*—the former is a polite noun form for 'a person,' and the latter is a polite verb for 'to exist.' In the Japanese language, honorific expressions—e.g., *keigo*—are generally based on the relationship between the speaker and the interlocutor, and thus written discourse, which should be as objective as possible, should not include them.

Heritage learners of Japanese at the advanced level in general have fewer grammatical errors, but they have the following three inappropriate characteristics in their writings: (1) they write in the same way as they talk to other Japanese speakers, (2) they include an excessive number and quality of polite expressions, and (3) they adapt inappropriate vocabulary from conversation, mostly for hedging. Thus, advanced speaking skills do not always mean advanced writing skills. Therefore, teachers need to emphasize the difference between the spoken and written languages.

In summary, through the analysis of compositions of non-native speakers of Japanese, including both learners of Japanese as a foreign language (JFL) and heritage learners of Japanese, we identified five types of overuse of spoken-language grammar in written language.

Table 1: Five Types of Overuse of Spoken Language in Written Language

Type	Examples
Interactional	Pragmatic particles such as <i>-ne, -yo, -sa, -no, -na</i> <i>kinoo no eega wa omoshiro-katta desu ne.</i> ‘Yesterday’s movie was interesting, <b>ne</b> (right)?’
Contract	Contracted forms such as <i>-ja, -cha, -teru, -tenai, -toku</i> <i>kyoo wa ame ja nai. → kyoo wa ame de wa nai.</i> ‘It will not rain today.’
Word Choice	<i>kyoo wa sugoku samui. → kyoo wa totemo samui.</i> ‘It is very cold today.’
Ellipsis	<i>kono tokee wa watashi no [ ] yori takai.</i> → <i>kono tokee wa watashi no tokee yori takai.</i> ‘This watch is more expensive than my watch.’
Politeness	<i>nihon no kata wa mina kinben de irasshairu to omoi-masu.</i> → <i>nihonjin wa mina kinben da to omoi-masu.</i> ‘I think Japanese people are all industrious.’

### 5. Possible Factors of Overuse

In this section, we would like to suggest four major possible factors that contribute to the overuse of spoken language in writing: (1) the excessive focus on communication in language instruction, (2) the learners’ intention to express their friendliness and politeness, (3) the learners’ exposure to mixed uses in *spoken materials*, and (4) the learners’ exposure to mixed uses of spoken and written languages in *written materials*.

The first factor, the excessive focus on communication in language instruction, has affected the allocation of time and energy in the instruction of communication and writing. Teachers tend to devote more time to communication practice rather than writing practice. Thus, teachers need to keep in mind that writing needs a special type of instruction and exercises outside the communication practice.

The second factor, the expression of friendliness and politeness, stems from a fundamental misunderstanding of the concept of politeness by non-native learners of Japanese, especially native English speakers. Hill et al. (1986) and Ide et al. (1992) pointed out that in English-speaking culture friendliness is considered to be a part of politeness. However, in Japan, if you are friendly to interlocutor(s), you are not considered to be polite at all. This factor is mostly related to the overuse of the pragmatic particles *ne* and *yo*.

The third factor, the learners’ exposure to mixed uses in *spoken materials*, can be found both inside and outside the language course. As we mentioned before, spoken language produced by native speakers of Japanese involves both spoken language and written language grammar freely, as they try to make their communication more lively, persuasive, and effective. Thus, a teacher’s language in the language classes and also various spoken materials outside the language course, such as TV news, formal presentations, and conversation with native-Japanese friends, contain a variety of language and communication styles from both spoken and written language. Unlike native speakers of Japanese, non-native learners of Japanese will have difficulty

making a distinction between spoken and written language phrases and expressions if they do not have instruction from native speakers.

The last and most important factor is the learners' exposure to mixed uses of spoken and written languages in *written materials*. This is also found both inside and outside the language classes, including in textbooks and other course materials inside the course and a proliferation of Weblogs and other written media on Internet outside the course. The most significantly influential source is the textbooks used in language classes. Textbooks are learners' language models, and in some cases, where learners have almost no exposure to their target language in their daily lives, textbooks are their one and only language model that they try to imitate and from which they try to learn. Even for those with a certain amount of target-language exposure outside the course, they are often willing to adopt the phrases and expressions their textbooks contain.

However, with the recent emphasis on communication, the amount of spoken language in textbooks has been increasing in comparison with written language grammar. Thus, there is a risk of learners' acquiring spoken language grammar, phrases, and expressions as the best and most useful samples of the target language, without understanding the distinction between spoken and written language.

Here in this section we would like to specifically deal with the mixed uses in written materials, showing three major factors through actual examples from some Japanese textbooks.

### 5.1 Transcribed Dialogues and Conversations

The first factor is that most textbooks have dialogues or conversations that are transcribed into a written format in every lesson. This is an inevitable and necessary source of learning communication, but exposure to transcribed spoken languages possibly makes learners confused and also makes them believe that they can freely use spoken language in their writing without any question. Let us take a look at Example 13.

#### 13. Dialogues/conversations transcribed into a written form.

Excerpt 1 (from Intermediate Japanese, p. 239)

Ken'ichi: Jason, *kono goro nihongo ga zuibun joozuni natta ne.*

'Jason, your Japanese has improved a lot these days, *ne (right)?*'

Jason: *soo demo nai kedo.*

'Not quite / not really.'

Ken'ichi: *sonna koto [ ] it-te kenson suru tokoro mo, sasuga Jason da ne.*

'Your saying that modestly is really impressive, as I expected, *ne (right)?*'

In this excerpt, again, the grey-shaded parts are the words/phrases or grammar particular to spoken language. Since this is an excerpt of a dialogue exercise in a textbook, it includes a considerable number of spoken language phrases and also ellipsis. In order to avoid learners' confusion and prevent them from mixing spoken language in their compositions, we propose that teachers need to carefully indicate which tokens or expressions should not be used in writing.

### 5.2 The presentation of target grammar points

The second factor from textbooks is the way of presentation of target grammar points. Some grammar points are not appropriate for writings, but the marking system is not clear enough and not systematic. Thus, when they teach new grammar points of spoken language in the textbook teachers still need to clarify which grammar points should not be used in writing.

### 5.3 The possibility of ‘fossilization’ of spoken forms

The third factor is related to the possibility of ‘fossilization’ of overuse of spoken forms in written language. In some textbooks, because of much focus on communication, the contracted forms such as *ja* or *cha* are emphasized from the very beginning level. For example, the textbook *Genki 1* introduces *ja nai desu*, meaning ‘isn’t,’ as early as lesson 2 and continuously provides learners with written input of *ja*. The result is that some students still overuse this contracted form *ja* in compositions at the beginning of the third-year class. Thus, instruction with more emphasis on the distinction between spoken and written languages should be started at the beginning stage in order to avoid the persistent overuse of spoken forms in writing.

## 6. Conclusion

This research on how to make learner’s writing more native-like has just started and is still going on. The main point we are making at this beginning stage of the study is that writing in Japanese requires specific instruction focusing on the written language grammar—it is not just a transcribed form of spoken language. Spoken language and written language should be treated differently from the elementary stage of learning Japanese. This does not mean that writing is more important than conversation. Rather, we would like to propose that a dual focus on conversation practice and writing practice is needed in Japanese language classes. As the first step of this proposal, we listed the five most salient types of overuse of spoken language grammar in written discourse: interactional, contract, word choice, ellipsis, and politeness. In our future study, we would like to go further into the formal level of word choice in written language, including written media such as texting and Weblogs.

## References

- Chafe, W. (1994). *Discourse, consciousness, and time*. Chicago and London: The University of Chicago Press.
- Clancy, P. (1982). Written and spoken style in Japanese narratives. In Tannen, D. (ed.), *Spoken and written language: Exploring orality and literacy*, pp. 55–75. Norwood: Ablex.
- Halliday, M. A. K. (1989). *Spoken and written language*. Oxford, U.K.: Oxford University Press.
- Hasegawa, Y. (2010). The sentence-final particles *ne* and *yo* in soliloquial Japanese. *Pragmatics*, 20, pp. 71–89.
- Hill, B., Ide, S., Ikuta, S., Kawasaki, A., and Ogino, T. (1986). Universals of linguistic politeness: Quantitative evidence from Japanese and American English. *Journal of Pragmatics* 10, 347–371.
- Ide, S., Hill, B., Carnes, Y. M., Ogino, T., and Kawasaki, A. (1992). The concept of politeness: An empirical study of American English and Japanese. In Watts, R. J., Ide, S., and Ehlich, K. (eds.), *Politeness in language: Studies in its history, theory and practice, Trends in linguistics, Studies and Monographs Vol. 59*, pp. 281–297. Berlin/New York: Mouton de Gruyter.
- Iwasaki, S. (in preparation). Multiple-Grammar Model for Speaker's Linguistic Knowledge.
- Taylor, Y. (2010). Approximative *tari* in Japanese: Focus on interaction and information. In Iwasaki, S., Hoji, H., Clancy, P. M., and Sohn, S. (eds.), *Japanese/Korean Linguistics 17*, pp. 533–546. Stanford: CSLI.

## Abbreviations

ACC	Accusative particle	CON	Contracted form
COP	Copula	DAT	Dative particle
GEN	Genitive particle	GER	Gerundive form
HON	Honorific marker	INF	Infinitive form
LOC	Locative particle	NEG	Negative marker
NOM	Nominalizer	PAST	Past tense
POT	Potential verb	PP	Pragmatic particle
PRES	Present tense	QP	Question particle
SUB	Subject particle	TOP	Topic particle

*Implementing Mobile Assisted Language Learning in Rural Schools for Enhancing Learning Opportunity*

Saida Ulfa

State University of Malang, Indonesia

0356

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Abstract

There are gaps between students in rural school and urban school in Indonesia relating to motivation and interests in learning English as a second language in Indonesia. In fact, the students in rural area typically achieve an English proficiency less than students in urban school. There are some factors impact the rural students motivation and interest in learning English including socio economic background of students, learning materials and after school programs. In order to increase an individual's foreign language proficiency, spending cost and time are required and mostly students in rural couldn't afford these requirements. The aim of this research is to increase rural students' motivation and interest in learning English by implementing Mobile Assisted Language Learning (MALL). Since currently a mobile phone becomes a pervasive technology in Indonesia, almost all people carry mobile phone even in rural areas. Mobile phone would be used to facilitate language learning. In second language learning, high intensity of learning is required and learning via mobile phone can serve for that, learning can take place everywhere and every time. The MALL system gave a great impact in increasing student's learning opportunity, motivation and interests in learning English in a rural school in Indonesia

**Keyword:** Education for All, English, Independent Learning, Mobile Assisted Language Learning

## Introduction

In this globalization era, everyone should have English language competency in order to compete in the working world, because nowadays English has become a common communication tool in the world not only in international business, education but also in nearly every context of human life. WallstreetInstitute(2013) presents nearly 70 countries and 10 International organizations use English as an official language after their mother. Unfortunately, according to English Educational Institutions “English First” (EF) announced the report of English Proficiency Index (EPI) English Language proficiency of Indonesian is still low based on their first comprehensive report (EPI, 2011) for 44 countries where these countries are not English as their first language. As a fact, Indonesian high school students’ test score for English National Examination are quite low (Yusuf, 2012). Despite the English is being taught since in the Elementary school in Indonesian.

Moreover, there are competency gaps of English between students in the rural areas and in urban areas. English competency of students in rural areas is quite low compared to students in urban areas. There are some factors that influence the English competency gap such as local facilities and demography background of the students. These factors are able to influence the students’ motivation, interests in learning English. While in second language learning needs high intensity of learning which correlates to the way of an individual’s learning.



Figure 1 Junior High School SMP PGRI 01 Karangploso, Malang, East java  
Indonesia

Therefore in order to improve the rural students’ English competency requires the learning strategy which can enhance the students’ motivation, interests and engagement in learning. The high intensity of learning requires the media that can facilitate learning. The media that will be utilized in the learning should be easy to find with affordable price and everyone has it. The media that could meet the criteria is a mobile phone. A mobile phone has computing capability and has feature similar

to a personal computer has. The advantage of this media is easy to carry, so it can provide a mobile learning. The learning can take place at everywhere and anytime.

Currently number of mobile devices users are keep increasing each year such as mobile phone, tablet, ipad and so on. According to data of *Wireless Intelligence* in Santoso (2012) said number of Indonesian mobile phone have reached 250 million subscribers and at the sixth position as large number of subscribers in the world. Based on the fact, Indonesia is entering a mobile age era, which the number of mobile phone subscribers almost equal to the Indonesian population. It means everyone has a mobile phone or everyone carries more than one mobile phone. Almost all Indonesian population are networked and interconnected.

Meanwhile, number of internet users in Indonesia are also increasing 58 % compared to the data of 2012. Indonesian in the third place of internet access users in the world (Tempo, 2012). 70 % of those users are accessed the internet from mobile devices (VivaNews, 2013). Based on these facts, utilizing a mobile devices into teaching and learning as a challenge and an opportunity.

The research was the initiate project in implementing mobile phone into learning English in rural are. The objective of the research was to observe the effect of Mobile Assisted Language Learning application in increasing learning opportunity, interests and motivation of rural area students in learning English. It was a study case, the research project was undertaken at Junior High School SMP PGRI 01 Karangploso Malang, East Java Indonesia during Mei 2003 until November 2013 (Figure 1). The school located in the Ampelmento village in Karangploso Regency. The research method incorporated Instructional System Design ADDIE model with System Development Life Cycle (SDLC). Based on the preliminary research, all students have a mobile phone with various type and brands. The category of students' mobile phone type are feature phone and smartphone. 90 % of the students have a feature phone type with java based and the remaining was Smartphone. The students was actually have the potential media that can be utilized for learning.

## **1. Related Works**

The mobile devices more affordable for Indonesian people now days. The function of the mobile devices not only for communication purposes however for entertainment, hobby, social networks, business and education. Despite the penetration of mobile phone in Indonesia is increasing, unfortunately its implementation into teaching and learning still low. Whereas mobile learning which utilizes mobile devices is future learning innovation.

In the early emergence of mobile phone, all the education practitioners in the world had focused on the utilization of the mobile phone into teaching and learning. A mobile learning enable to increase and expand the learning opportunity (UNESCO, 2005). In fact, some countries in Africa had succeed to integrate mobile devices in their formal education. A mobile phone had utilized to improve and enhance learning delivery in their classroom. In addition, a mobile phone also had been used to improve students' learning performances (UNESCO, 2012).

Based on the theory of Kukulska-Hulme dan Traxler (2005), mobile learning has an attributes that contribute to its term, namely: spontaneous, personal, informal, contextual, portable, ubiquitous (available everywhere) and pervasive. These attributes refers to the mobile term itself so when it is utilized in education, it could be serve the learning occurs everywhere and anytime.

Many research findings concerning the successful implementation of mobile devices into teaching and learning have been published in journals or magazines. One of the research findings of the benefits of mobile learning had been published by Atwell, et al(2009). Atwell stated that the utilization of mobile phone into teaching and learning impact to :

- encourage and support learning at any time of day, in any location including in college or school, at home, in the workplace, on field trips and in transit
- make learning more convenient, accessible, inclusive and sensitive to learners' individual needs and circumstances
- make learning more interesting, more enjoyable and therefore more attractive to learners
- encourage non-traditional learners and learners who have not succeeded in traditional education to engage in learning and to improve their self-confidence and self-esteem
- help to overcome the digital divide between those learners who have broadband access at home and those who do not
- help teachers to provide differentiated learning activities to suit different learning

The research findings that had been conducted by Haag (2011), concluded that the technology accessed by mobile technology in teaching and learning have a great impacts on the students' test score achievement and performances compare to the learning accessed by personal computer (e-learning). According to Tella (2003), a mobile devices enable to develop the cognitive competence of students and motivated the students to learn.

Chen, et al(2008) conducted the research concerning the utilization of mobile phone in language learning, it is called Mobile Assisted Language Learning (MALL). Chen utilize MALL for vocabulary learning at a school in Taiwan. His research findings shows the students enjoy the learning process because the students can easily access the learning content and conduct exercises at everywhere and anytime. Some students interested in the limited screen of mobile devices since the content is easily to manage compare to other media.

## Research Methodology

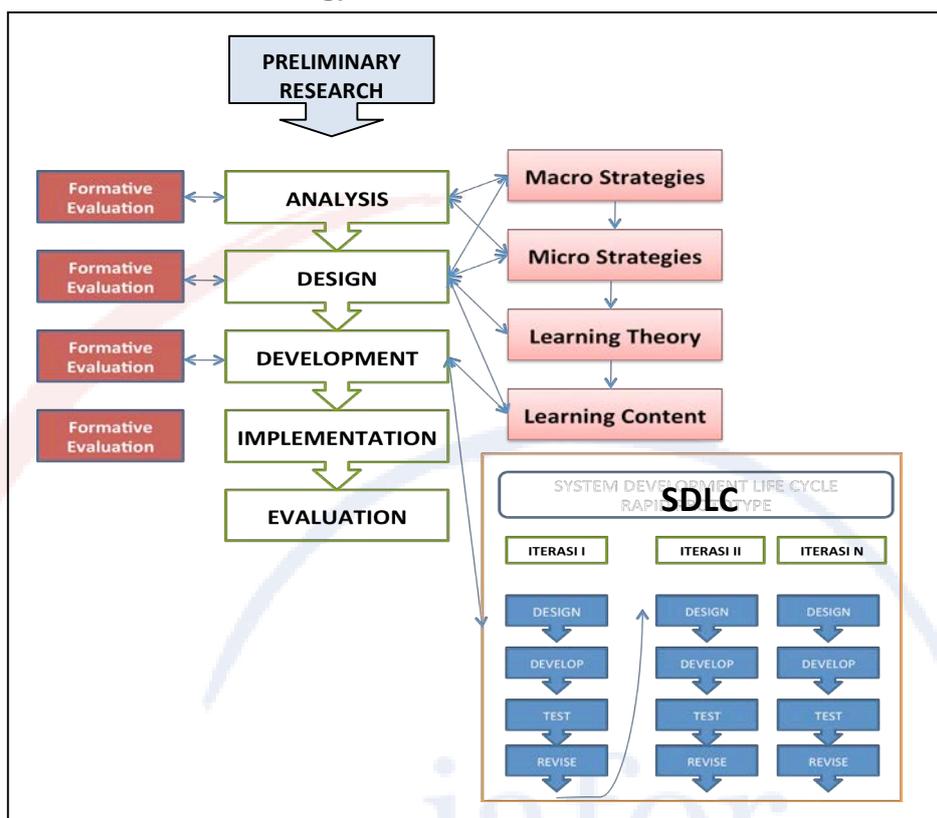


Figure 2 Research Methodology

In order to design and develop Mobile Assisted Language Learning (MALL) which provided English as a learning content, in general the research was follow Instructional System Design Model (ISD) which followed ADDIE model and the development of mobile application used System Development Life Cycle (SDLC). The outline of research methodology as shown in Figure 2.

The acronym of ADDIE is Analyze, Design, Development, Implementation and Evaluation. The research follows the phase of ADDIE acronym. The ADDIE model offers some benefits in designing instructional system, the benefits relating to cost effectiveness, time saving, and effective learning.

Before following the research phase of ADDIE model, the preliminary research had been conducted. It was intended to determine the feasibility of the study related to the research procedures and other things which were still unclear. In this stage, the subject, object and location of the research were determined as well through observation of the case study relating to problems that encountered in the research field and the literature review.

Other benefit of ADDIE model is in each phase has a formative evaluation. It cannot allow the designer to continue to the next phase before conducting formative evaluation. In the formative evaluation stage consists of:

- 1) Experts review
- 2) One to one evaluation
- 3) Small group evaluation

In the phase of Analyze, the characteristics, learning performances, learning style of the students, learning content, media were observed and analyzed. These data would be used to determine the macro strategy, micro strategy and learning content in the next phase of Design. In the Design phase, learning content and story board for learning and interface were designed. In Development phase the mobile application were designed concurrently by following the SDLC with rapid prototype model as shown in Figure 2. After passing the formative evaluation in Development phase, the MALL system were implemented. And the last phase of the research was Evaluation phase. In the last phase the limitations and the research constraints were evaluated.

## 2. Findings and Discussions

The research project incorporated the English teacher to develop the learning contents. The content were developed based on the consideration of the limitation of a mobile devices, screen and memory storage. Therefore, the content should be written concisely, clearly and has a small size in the storage memory.

The MALL application was developed by using java ME as shown in the emulator in Figure 3. Figure 3(a) and 3(b) are using Java Emulator during the development process. Figure 3 (c) is the real application that have embedded in the student's mobile phone. The content based on the text application considering the limited space of students' mobile memory storage.

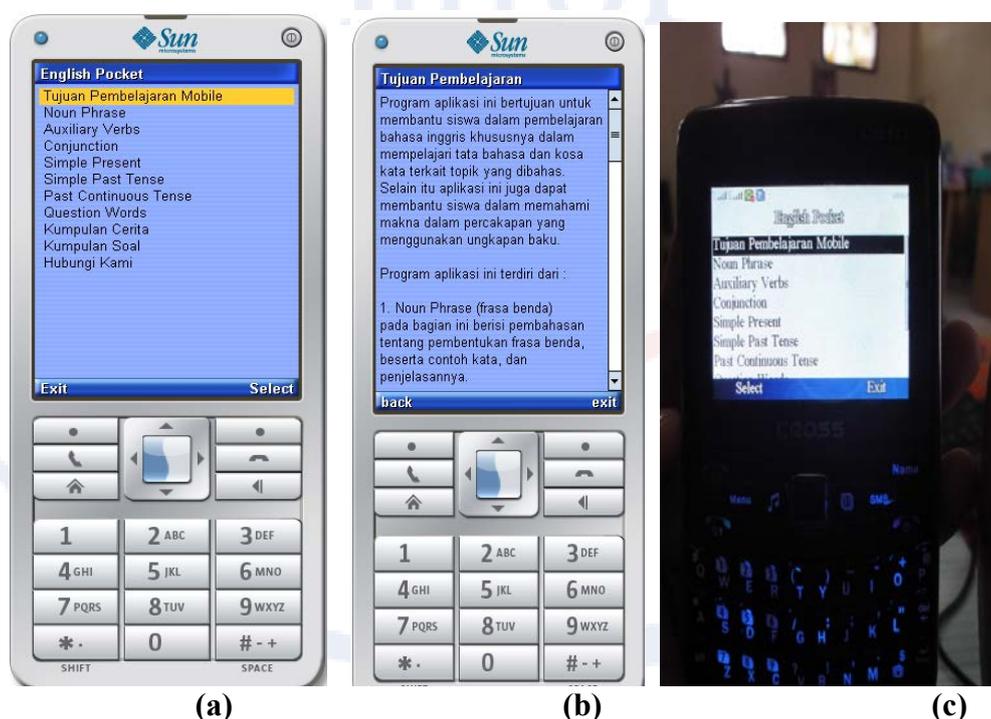


Figure 3 MALL application

Not all schools in Indonesia allow their students carry mobile devices into the classroom. Every school has a regulation. In Junior High School SMP PGRI 01 Karangploso, the school does not allow the students to take the mobile devices into the classroom. If the students carry the mobile phone to school, they have to collect their mobile devices in the school's mobile devices counter store as shown in Figure 4. After school the students can take their mobile devices back to their home.

Number of respondents of the research were 37 students of second graders students of Junior High School SMP PGRI 01 Karangploso Malang East Java, Indonesia with sampling selected criteria. Only 10 % of respondents were taking English course after school. Since most of the students from low income family. 90% of mobile customers in Indonesia use pre-paid billing. The pre-paid system allows the customers to purchase the airtime at first time. Most of the students buy the airtime only Rp.20.000 IDR (\$ 2 USD) per month. Therefore only 23 % of students have ever used their mobile devices for internet access, the remains were using their mobile phone for text messaging and calling.

The MALL application was a standalone application. The students did not use the network for accessing the application. 85 % agree that mobile application is easy to use. 74% of respondent used the MALL system twice a day and they used it in leisure time and 93.75 % of respondents could learn everywhere and anytime by using the MALL system. These data prove that by facilitating the learning through mobile phone can increase the learning opportunity for students. 100 % of respondents agree that the MALL system enable to help them to increase their English Competency. 97 % of respondents are interesting to use this MALL. 86 % of respondents claimed that they could learning individually. In order to accessed the complex learning materials which consists of image, audio/video and more complete materials, 77.4 % of respondents were willing to buy a more sophisticated mobile devices.



Figure 4 The School's Counter Store of Mobile Phone

### **3. Conclusions**

The number of mobile phone users in Indonesia has equaled to Indonesian population. It means that almost all Indonesian people have mobile phone or each person have more than one mobile phone. Unfortunately, the implementation of this mobile phone into teaching and learning are still low. Almost all school in Indonesia prohibits their students to take the mobile phone to school for many reasons, for example the students will be get distracted by this devices, they could not concentrate to their lesson.

The research project had proved the positive impacts of the implementation of mobile phone in the classroom. The research findings shows that the MALL application could increase the learning opportunity, interest and motivation of students in learning English. Since the learning can take place at anywhere and anytime. The students believe that it is an innovative way to enhance their learning performances especially in English language competency.

There were some constraints in conducting this research project concerning the students' mobile devices itself which could not support the application and the school regulation which prohibited the students to carry mobile phone to school.

#### **Acknowledgements**

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## References

- Attewel, J., Savel-Smith, C., & Douch, R. (2009). *The Impact of Mobile Learning*. London, UK: Newnorth Print Ltd.
- Chen, N. S., Hsieh, W., & Kinshuk. (2008). Effect of Short Term Memory and Content Representation type on Mobile Learning. *Language Learning and Technology*, 93-113.
- Haag, J. (2011). From eLearning to mLearning: The Effectiveness of Mobile Course. *Interservice/Industry Training, Simulation, and Education Conference (I/ITSEC)*, (p. Paper No. 11053).
- Kukulska-Hulme, A., & Traxler, J. (2005). *Mobile Learning : A handbook for Educators and Trainers*. London, UK: Routledge.
- Tella, S. (2003). M-learning – cybertextual travelling or a herald of post-modern education. *H Kynäslahti and P Seppälä (eds) Mobile learning* (pp. 7–21). Helsinki: IT-Press.
- Tempo. (2012, Desember 4). *Indonesia, Pengguna Internet Nomor 3 Dunia*. Retrieved 3 01, 2013, from Tempo: <http://www.tempo.co/read/news/2012/12/04/072445832/Indonesia-Pengguna-Internet-Nomor-3-Dunia>
- Santoso, B. (2012, November 1). *Indonesia, Negara Pengguna Ponsel Terbesar Keenam di Dunia*. Retrieved 3 1, 2013, from T&t Magazine: <http://www.tnt-magz.com/berita-teknologi-out-of-topic/12674-indonesia-negara-pengguna-ponsel-terbesar-keenam-di-dunia>
- UNESCO. (2005). *Mobile Learning for Expanding Educational Opportunities*. Thailand: UNESCO Asia and Pasific Regional Beureau.
- UNESCO. (2010). *Mobile Learning: A Platform for Educational Opportunities at The Base of Pyramid*. Paris: UNESCO.
- UNESCO. (2012). *Turning on Mobile Learning in Africa and the Middle East*. Paris: UNESCO.
- VivaNews. (2013, Januari 16). *Teknologi*. Retrieved 3 1, 2013, from Berita online: <http://teknologi.news.viva.co.id/news/read/382740-pengguna-internet-di-china-tambah-51-juta>
- WallstreetInstitutue. (2013). *Artikel*. Retrieved 3 4, 2013, from Wall Street Institute School of English: <http://www.wallstreet.ac.id/en/news/articles/bahasa-inggris-bahasa-international>
- Yusuf, H. (2012). *Motivasi dalam Pembelajaran Bahasa Inggris*. Retrieved 3 13, 2013, from [ejournal-unisma.net/ojs/index.php/makna/article/.../402/370](http://ejournal-unisma.net/ojs/index.php/makna/article/.../402/370)

*Knowledge Management Competencies Development of Students in the 21st Century*

Benyapa Kongmalai, Sorngate Areesophonpichet, Ajchara Chiyuprathum

Chulalongkorn University, Thailand

0362

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Abstract

Students in the 21st century should be developed to perform the necessary operations to be a great member in learning organization. Knowledge management is a core competency for workforce in every organization. This enables person in various functions to carry out their performance effectively. There are including knowledge storage publishing and sharing embedded knowledge of organizational which are the explicit knowledge to lead the organization to the sustainable development. This research aims to analyze and synthesis ideas about knowledge management competencies of students in the 21st century by document research and analyzed by content analysis from books, articles, documents, web sites and related research since year 1963-2013 total 140 items.

The results showed that the elements of knowledge management are (1) People (2) Technologies (3) Knowledge management process and (4) Leadership. The core competencies in the knowledge management of undergraduate students in the 21st century include nine competencies which are (1) Principles of knowledge management knowledge (2) Understanding of information technologies (3) Knowledge capture skills which existing in a person or document (4) Knowledge management skill within person or the system. (5) Interpersonal communication skills (6) Knowledge sharing skills (7) Problem solving skills. (8) Moral consciousness and (9) Responsibilities to share knowledge.

**Keywords:** Competency, Knowledge management, Knowledge management competencies, Student. Higher Education, Higher Education Students, 21st Century, 21st Century student, 21st Century Higher Education Student.

## Introduction

The main key to success of organizations in the 21st century is the ability to manage and create knowledge since knowledge is the most valuable intellectual asset of organizations (Prusak, 1998). The vision, the knowledge, the ideas and the creation of a systematic learning culture will lead to the development and advancement of organizations' operations. In order to support and encourage an organization's personnel to learn continuously and efficiently under the concept of cooperation and co-learning, which will enable the organization to reach a common goal (Senge, 1990), all business organizations agree that the important tool that is needed is knowledge that has been collected in the companies, which can also be referred to as knowledge assets (Wiig, 1997). Knowledge management, therefore, is essential for the systematization and understanding regarding the search for knowledge from textbooks, databases or documents as a way to develop human resources in that organization so that they can discover new products which will allow the bodies of knowledge to reach the highest goals (Thomas, Kellogg, and, 2001). Therefore, organizations need to have personnel with the capabilities of knowledge management, the knowhow of related technologies and the personal experience of familiarity with basic business procedures (Davenport, and Laurence, 1998).

In this scenario, the duty of higher education organizations is to cooperate with the manufacturing sector, both industrial sectors and spatial industry groups, to provide knowledge and develop skills for the labor in preparation for entering into the manufacturing sector. In terms of the basic learning structure, higher education institutions must realize that their future education is both "the preparation for human beings to live their lives and the adjustment of people to commence their work." Higher education institutions have a mechanism for the creation of knowledge, wisdom and human resources for the propulsion of society and the economy of a country. The quality and the efficiency of higher education institutions are, therefore, the indicators of the country as well as the society's expected sources of quality human resource production, which create people with competence, expertise and professionalism for the society at present.

The development of knowledge management competencies ever since students have studied in higher education institutions is, therefore, still of utmost importance nowadays. This is because students are expected to become the country's leaders, academically and socially; that is, to utilize the branches of knowledge that they have studied with responsibility (Chaiyupatham, 2007). This idea is in accordance with the opinion of Perry (1970), who pointed out that the development of students indicated by their positions is an indication of their level of advancement. This process will happen continually throughout students' lives. After they graduate and enter their working life, their employers expect them to be able to integrate and create new bodies of knowledge for the smoothness of operation the business and for living in a constantly changing society. Ever since university days, the development of knowledge management competencies is the accumulation of bodies of knowledge concerning knowledge management by the methods of distributing knowledge, enhancing skills and developing knowledge management competencies. As a result, students will learn and understand knowledge management and are able to learn from one another.

Knowledge management competencies mean knowledge, skills, abilities and behaviors of people in organizations, which are developed through knowledge-

building activities organized by experts in different fields. Knowledge management competencies development is a major tool that brings the graduates to join public and private agencies. These agencies will develop into learning organizations, and the knowledge will be further enhanced intellectually, making people in the organizations more knowledgeable. As a result, the organizations will become stronger and turn into agencies that can truly direct the development. Thus, the development of knowledge management competencies requires cooperation from everyone in an organization who should also give creative suggestions for the sharing of knowledge through the procedure of dialogue, discussion and community of practice.

The competencies of students in the 21st century need to be developed by the knowledge from the core curriculum created from basic subjects. By combining it with a framework of supportive systems, including the standard of subjects, the evaluation of curriculum, professional development and the provision of learning atmosphere (The Partnership for 21st Century Skills, as referred to in Areesophonpichet, 2010).

Currently, knowledge management uses technology as a tool, which is called a knowledge management system for the development of basic structure of knowledge in organizations into the knowledge that benefits people in the period of time and in the pattern that they want (Namprasertchai, 2003). Knowledge management technology is related to organizational development. If an organization wishes to develop itself into a learning organization, it needs to focus on knowledge management with an emphasis on various factors in the management of the knowledge-based system. It is an ability to gather bodies of knowledge that are scattered in many forms and organize them for utilization. The knowledge management strategy in a business organization in the form of "Pull Model" is used as real-time knowledge management. Also, there are many channels of knowledge management in the real-time system.

Hence, knowledge management competencies of students in the 21st century must be developed in order to create efficient knowledge managers for different organizations in the our future society. This is because students are the country's major force. At this age, they are in search of knowledge, experience as well as indoctrination of cultures, attitudes and values. Therefore, this is an important age for people to develop into complete human beings who will continue to serve the society. The ability to manage knowledge will lead organizations to their goals.

### **Objective**

The objective of this research is to analyze and synthesize the concept of knowledge management competencies development of students in the 21st century.

### **Research procedure**

This academic work is a qualitative research conducted by the study of documents in order to analyze and synthesize bodies of knowledge regarding knowledge management competencies of undergraduate students. This research focuses on the study of the main competency, which is an ability to manage knowledge of students who are equipped with knowledge, skills and ability to relate causes and effects of efficient operations individually by content analysis of 140 textbooks, articles, documents, electronic documents and relevant research from 1963 to 2013. Then, the

concept of knowledge management competencies development of students in the 21st century is concluded by content analysis, which helps to sum up and analyze the qualitative data.

### **The results of the research**

Presently, students who have graduated are called the graduates who are getting prepared to enter their working life. Students at this age are completely mature. They are seekers of experience until they are filled with knowledge and ready to produce more knowledge by developing themselves. They are interested in specific branches according to their experiences and put an emphasis on the problem-solving procedures, participation in learning activities as well as the distribution of knowledge and experience of students who are the major force of the country. At this age, they are seeking knowledge and experience in order to change and improve beliefs, values and attitudes. They are at the top of educational levels and are getting prepared to serve society. The desirable competencies of graduates in the 21st century include various skills, knowledge and elements that learners can use in their working life and their lives outside universities. They are the combination of knowledge, specific skills, expertise and understanding.

The competencies of learners in the 21st century must be the development of knowledge from the core curriculum of universities, which is created by basic subjects. After educational institutions create a basic curriculum by combining it with the framework of a supporting system, which comprises the standard of subjects, the evaluation, the curriculum and teaching, the professional development and the provision of learning environment, learners will participate in the learning procedure. It is also a preparation for utilization after graduation in an economic-based society in the future.

The elements of knowledge management competencies development of students in the 21st century that the researcher has found are:

1. Definition of competencies
2. Elements of competencies
3. Evaluation of competencies
4. Definition of knowledge management competencies
5. Desirable competencies of students in the 21st century
6. Knowledge management competencies of students in the 21st century

### **The details are as follows:**

#### **Meaning and definition of competencies**

Competency is an ability to work and to live sufficiently. It has the characteristics of a noun and a verb that can be used interchangeably by the expression of individual capability. Thus, competency means a group of knowledge, skills, ability and characteristics, which are connected to each other and have an effect on a person's behavior, resulting in the relationship between work competencies of an individual according to the career standard. They can be evaluated in comparison with the standard and gain acceptance, and they can be created by training and developmental plans. Thus, it is important to define competencies in operations in order to allow employees to succeed in reaching the organization's targeted goals and to support competencies in competition between business organizations nowadays.

### **Elements of competency**

Elements of competency are the ability to determine competency level by measuring the performance of individuals. Elements of competency consist of (1) competency names and definitions, (2) competency cluster to classify behaviors of work according to the competence cluster and core competency and professional competency determined for each group to encourage appropriate behavior to functions, (3) three competency levels, covering positive behavior, neutral behavior, and negative behavior, and (4) behavioral indicators which are role and duty under specific circumstances.

### **Competency Evaluation**

Competency evaluation was divided into three major groups: (1) Tests of Performance is a test for the testees under certain conditions. Behavior Observations is a test related to the behavior observations of the testees for certain situations and (2) Self-Reports is a test where the respondents reported on themselves such as feelings, attitudes, beliefs, interests, personality test, questionnaire, on a survey form by using different evaluation methods such as (1) individual evaluator, (2) methods for making a self-assessment and conclusion of evaluation result together with evaluators, and (3) several evaluators such as 360 degree have more than one evaluator and consist of commander, colleagues, and subordinates. The score evaluation from many evaluators would be determined by using the scale as criteria of at least four patterns. The measure was appropriately developed as the understanding of personalities and such measures must have the power for classification under the competency level such as the 1st measure is to consider the percentage of behavior, the 2nd measure is to consider the strength of testees, the 3rd is to consider competency of the testees compared to a good model of other people, and the 4th measure is to refer competency of personalities of the same level by using the measurement of competency evaluation. For the 4th measure, the scales consists of (1) rating scale or behavior level for reference, (2) bar scale using behavior competency in a dictionary as the scale for evaluation, and (3) hybrid scale combining the use of behavior competency as a basic measurement to measure a combination of the performance behavior when competency level is evaluated.

### **Definition of knowledge management competency**

Management competency is presently acknowledged as important for modern society because changes in society result in greater demand, and further sharing of knowledge. Competency and knowledge management are significant for individuals and organizations. Many definitions depend on the place and the use of each situation. Therefore, knowledge management competency means knowledge, skill, and property of personalities in the organization in terms of knowledge management. It consists of (1) knowledge of principles, (2) cognition of technology, (3) knowledge of information, (4) skills of the knowledge identification, (5) skills of interpersonal communication, (6) skills of knowledge management, and (7) sharing knowledge.

Students who have recently graduated are called new graduates to prepare for a working society. Students in this age have completed maturity. They seek experience until they have full sources of learning and are ready to increase the productivity of knowledge as self-development. They are interested in a specific field regarding their existing experiences and they focus on the problem solving, participate in learning activities, and provide knowledge. Desirable competency of students in the 21st

century requires awareness of skills, knowledge, and elements so that students can apply them to their working and personal lives outside the university. It is a combination of knowledge, specific skills, expertise, and cognition skills.

### **Desirable competency of students in the 21st century**

Desirable competency of students in the 21st century is a special condition linking students in the 21st century to achieve education and working in the era of technology and change consisting of many factors as follows:

1. Basic literacy is to be able to have linguistic and mathematical capabilities in order to accomplish work efficiently. Scientific Literacy is knowledge and understanding of conceptual knowledge and scientific methods required as information for making decisions and participation in a social system. Economic Literacy is to understand economy, measurement and anticipation for changes in terms of economics and public policy, balance of expenses and benefits. Technological Literacy is knowledge and ability to effectively and efficiently use technology to achieve the determined goal. Visual Literacy is the ability to use interpretation, creation of media for the development of thinking, decision-making, communication and learning. Information Literacy is capable of evaluation, information access, analysis, efficient use of information by effectively using technology to support their success. Multicultural Literacy is knowledge and understanding of the similarities and differences between formal procedures, values, and beliefs of their own culture and others. Global awareness Literacy is ability to remember and understand relationships among countries.

2. Inventive thinking due to technology resulting in present living becoming simple. Creation and thinking invention will upgrade existing skills and abilities and it is necessary for it to consist of adaptability and managing complexity. Self-Direction is ability to set goals related to learning, curiosity, creativity, risking, higher-order thinking and sound reasoning.

3. Effective communication is an essential skill required in the 21st century (21st Century Literacy Summit, 2002). The meeting concluded that Effective communication skills would result in success in knowledge based society. Communication skill consists of teamwork, interpersonal skills, personal responsibility, social civic responsibility, and interactive communication.

4. High productivity in current work containing information and knowledge from the use of technology. This will result in the person failing or achieving success in work depending on the following elements: prioritizing planning and managing for results, effective use of real world tools, ability to produce relevant, high-quality products.

It was found that more than 50% of students in the 21st century had desirable competency. The institutions indicated that desirable competency included the following properties: (1) Knowledge, conceptual principles, academic and professional skills can supplement and develop the professional knowledge. (2) Potential to learn and seek for knowledge is ability to access information and knowledge, to seek for knowledge sources accurately and effectively (3) Global awareness literacy is ability to remember and understand the relationships among countries (4) Curiosity is expression of desire to know or eagerness to know what a person is interested in. (5) Teaming and Collaboration is ability to coordinate with more than one person, work with others to solve problems, create new things or learn

and model for others. (6) Interpersonal skills means ability to understand and deal with their own emotions and those of others, great motivation and interaction within a society. (7) Social & civic responsibility means to manage and control the use of technology in the public and protect society, environment and democracy. (8) Foreign language skills sufficient for utilization and high level for academic learning. (9) Appropriate values for living such as adherence to the principles of sufficiency economy, democracy, respect for human dignity, and self-dependence. (10) Conscious of virtue, morality, and honesty which are necessary for living and expression in behavior such as self-discipline, adherence to professional ethics, honesty, avoidance of vice and drugs, conscious of social participation. (11) Ability to take care of their physical and mental health. (12) Creativity and innovation is ability to use new and innovative techniques, work creativity with others to develop, implement and communicate new ideas to others openly and respond to new perspectives within the group, response to the input and output feedbacks, present original things and create new things in a workplace, to understand the global limitations to adapt new ideas and utilize new innovations for assets and benefits. (13) Higher-order thinking and Sound reasoning is ability to adapt for appropriate criticism, comparison, interpretation, evaluation, and synthesis for academics and solutions. (14) Prioritizing Planning and Managing for results means ability to manage different things to meet the objectives of the determined project or problem faced. (15) Effective use of real world tools is ability to use modern tools (such as hardware, software, networks or devices connected to a computer used by information technology officers suitable for current world. (16) Problem-solving skills; identification, determination, solutions, definition for problem content, systematical analysis by applying existing knowledge. And (17) Students must have accurate and great sacrifice, dedication, to the common interest.

### **Knowledge management competency of students in the 21st century**

Management knowledge is to help a person discover knowledge, skills hidden in people, find a way to share knowledge, appropriately supplement and implement to real situations, build knowledge or new innovations, contribute mutual learning of all people involved in the process resulting in successful solution and development of difficult tasks. Knowledge management means knowledge creation, knowledge collection in persons or documents to systematically develop and manage to provide knowledge, exchange knowledge, and appropriately apply to real situations, build knowledge or innovations for everyone to access knowledge and develop themselves to be experts, efficiently operate work to develop ability of business growth effectively and sustainably including highest potential for competitiveness.

Elements of knowledge management are tools to develop performance of personal in the organization to achieve the targeted goals consisting of (1) people who utilize knowledge,

(2) technology, a tool for people to search for, store, exchange, and apply knowledge easily and swiftly such as transforming data to information, transform information to knowledge and use of knowledge for action, (3) processes to exchange knowledge for efficient operation in a workplace by using a good plan resulted from policy, apply knowledge, observation, data collection and transformation as information, and (4) leadership to support and participate in the activities of knowledge management, which is a property to push knowledge management in successful organizations.

Process knowledge management is general in many organizations, both knowledge of persons and organizations to conform and response to visions, targets, and objectives of the organization resulting in learning system of personal so that they can mutually learn, search for, share and transfer knowledge for knowledge existence and development within the organization as valued intellectual property. It can be applied to develop performance to efficiently achieve the operational objectives of the organization. The main processes of knowledge management cover (1) knowledge of experts in each field, (2) management processes to maintain knowledge, activities, or systems, (3) knowledge collection, (4) knowledge sharing, and (5) knowledge application.

Currently, business organizations integrate knowledge management and technology in the work process by managing the original information technology or "Push Model". It is putting information into the system. However, strategy for knowledge management in organizations needs to be adapted by using the knowledge management model or "Pull Model". It is knowledge utilization in the form of Real time knowledge management. Knowledge management by using information technology as a tool to develop the infrastructure of the organization as benefits for personal in required time and the model is called knowledge management systems. Elements of knowledge management systems consist of (1) technology for storing information technology, computer servers, various information sources, including providing information such as external knowledge, structured and information internal knowledge to the relevant department, (2) platform of collaboration, system and database resources for collaboration and support are required, (3) infrastructure network as network system supporting communication and conservation, and (4) culture, for example, organizational culture results in mutual exchange and use of information.

At present a knowledge management system is a core component of website or electronic communication networks. To present useful information for people interested in both public and government sectors, officers or executives concerned should be able to search and access data sources across domains effectively. There are various channels by which data and information can flow, including: Data Collection, Concept library, E-learning, Collaboration technology, Collection technology, Storage technology, Intranet, Groupware platforms such as Customer Relationship Management infrastructure or Business support system business units, Web-boards and Systems Software

Thus, a knowledge management capability of students in the 21st Century would imply that the core competency of the students involves the ability to perform knowledge management tasks - including knowledge skills and logical qualification of determining whether there is an actual cause-and-effect relationship for operational effectiveness to meet the goals on an individual basis by establishing an acceptable performance to meet the criteria specified for the role and response. There are three components of nine capabilities as follows:

1. Knowledge Competencies consists of the following capabilities: (1) the capability to have a clear understanding of the principles of knowledge management, (2) the capability to have a clear understanding the information technology.
2. Knowledge Management Competencies consists of the following capabilities: (1) having skill in knowledge indication, collecting existing knowledge that is inherently in people or documents, understanding and ability to assess their knowledge, and

seeking new ideas and evidence from extensive knowledge sources, (2) having skill in systematic management of knowledge that is inherently in people or documents, (3) having communication skills, great interaction, effective teamwork and good collaboration, (4) having skill in knowledge sharing by using technology as a tool for searching, collection, retention and knowledge sharing, both internal and external, and (5) having skills in systemic thinking, rationality and complex problem solving ability.

3. Qualification in Knowledge Management consists of the following features: (1) consciousness of moral, ethical and integrity in knowledge management, and (2) responsibility in knowledge sharing for the benefit of the society and community.

### **Discussing Research Findings**

Lehtonen (2009) studied in Nonaka's knowledge creation theory revisited: a semiotic analysis of communicating knowledge in a geographically dispersed team in the University of International Business of Misteri found that there were six components affecting knowledge communication including language, cooperative relationship between people, attitude toward knowledge sharing, organizational environment and trust.

Dhamasiri (2000) explored in Learning Organization Model development through the human resources development department in the extension in higher education. In this study, the executive opinion surveys are used as the data collection tool. The surveys were distributed to the higher education institutions in both public and private sectors related to the subsystems in the organization to evaluate the following aspects; organization vision and strategy, general practice of top, intermediate, and lower-level executives, atmosphere in the workplace, structure of the organization and roles in the organization, information dissemination, independent practice and practice as a team, work processes, goals and performance, training and education, rewards and praise, personal and team development. The results revealed that the current conditions of Thai organizations have an intermediate level of Learning Organization. Moreover, the study indicated that Thai nature that is conducive towards the Learning Organization includes the ability to have adaptability to changing circumstances and the chance to learn what to do and how to that which is required to achieve the study objectives as well as having sensitivity to other people's feelings. On the other hand, the factors of Thai nature that are not conducive towards the Learning Organization are the favor of centralization, lack of initiative, following orders and avoiding responsibility, indirectness and inability to express feelings clearly. The author proposed the human resource development department model as the main factor leading to the organizations change and transition into the Learning Organization. The model consists of three main components including (1) twelve subsystems in three dimensions including leadership, structure and working system, performance and development as well as the natures which are conducive and not conducive to the Learning Organization, (2) the development division must perform in terms of curriculum development and instructional design to improve personal competencies, systematic thinking, learning as a team, mental imagery, common vision and leadership by using six courses including communication skills, employee empowerment, creative thinking and problem resolving, leadership development to changes and thinking skills development, (3) leadership roles in stimulating and improving communication of information, demonstration, training, supporting and instilling these skills.

McAdam (2001) studied about SMEs (less than 250 people) and large (more than 250 people) organization perceptions of knowledge management, knowledge implementation and the investment in knowledge management system and found that there were more perceptions and knowledge implementation in the larger organizations than in those of SME organizations. Furthermore, it was found that SME organizations have less investment in operational and knowledge management system than larger ones.

The model as proposed by Nonaka and Takeuchi (1995) has been used in the development of knowledge management model. It was the creation of knowledge as part of knowledge management capabilities involved in quality and knowledge processes improvement. Moreover, the organization focus on people through performance development and knowledge management. However, the components affecting the assessment of individual knowledge management capability development depend on personality, and working environment should be measured by individual performance based on performance standards for each duty of the organizations along with knowledge management capability development for the sake of implementing it as reference information to create an organization's staff development activities.

### **Guideline of knowledge management capability development for students**

Knowledge management capability consists of three components with nine capabilities including competency, knowledge, skill and attitude, which can further development as the model of knowledge management capability development for undergraduate students. By survey interviewing current conditions of knowledge management problems in organizations and undergraduate students in the higher education institutions, the research findings have been used as the guideline for a proposal of the knowledge management capability development model for the undergraduate students, which consists of principles, objective, expected learning outcome, essential learning, activities management process and model performance assessment. Moreover, it should be used as instruction for a knowledge management capability development model for undergraduate students for maximum effectiveness.

### **Acknowledgements**

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## References

- Areesophonpichet, S. (2010). *National Qualifications Framework: Case Study International Qualification Framework*. Research Report. Office of the Education Council. Education Ministry of Education.
- Chaiyoopatham, A. (2007). *The Development of Undergraduate Student's Skills. Doctoral Research. Higher Education Faculty of Education*. Chulalongkorn University.
- Chickering and Reisser. (1993). *Education and Identity*. 2<sup>nd</sup>.ed. Sand Francisco: Jossey Bass.
- Davenport, T.H. and Prusak, L. (1998). *Working Knowledge Management*. USA: Harvard Business School Press.
- Dhamasiri, M. (2000). *Developing a Learning Organization Model Via Human Resource Development Unit as an Extension of Higher Education*. Doctor of Philosophy in Higher Education. Chulalongkorn University.
- Lehtonen, M. and Maisterin, T. T. (2009). *International Business Communication*. Lehtonen, M., Nonaka's *Knowledge Creation Theory Revisited : A Semiotic Analysis of Communicating Knowledge in a Geographically Dispersed Team*. International Business Communication Maisterin tutkinnon tutkielma. Helsinki School of Economics.
- McAdam, R. and Reid, R. (2001). SME and Large Organisation Perceptions of Knowledge Management: Comparisons and Contrasts. *Journal of Knowledge Management*, Vol. 5 Issue 3, pp.231 – 241.
- Nonaka, I. and Takeuchi, H. (1995), *The Knowledge Creating Company*. Oxford University Press, New York, NY.
- Numprasertchai, S. (2003). *Technology and Knowledge management, Microcomputer* (June: p.103-107)
- Pawaseena, P. (2004). *Knowledge Management*. [Online] Available from: <http://www.cpss.ac.th/km002.pdf>
- Perry, William G., Jr. (1970). *Forms of Intellectual and Ethical Development in the College Years: A Scheme*. (New York: Holt, Rinehart, and Winston.)
- Senge, P.M. (1990). *The Fifth Discipline: The art & practice of the Learning Organization*. London: Century Business.
- Thomas, J.C., Kellogg, W.A, Erickson, T. (2001). *The Knowledge Management Puzzle: Human and Social Factors in Knowledge Management*. IBM Systems Journal 40 (4): 863–884. doi:10.1147/sj.404.0863.
- Wiig, K. M. (1997). Knowledge Management: An Introduction and Perspective, *The Journal of Knowledge Management*, Volume 1, Number 1, September 1997. Knowledgebase system: "KBSI" [Online] Available from: <http://www.kbsi.com/KBSICapabilities.pdf> [2011, Jan 20]

*One Approach to Reducing of Stress during and before the Iranian Entrance Examination  
(Concours)*

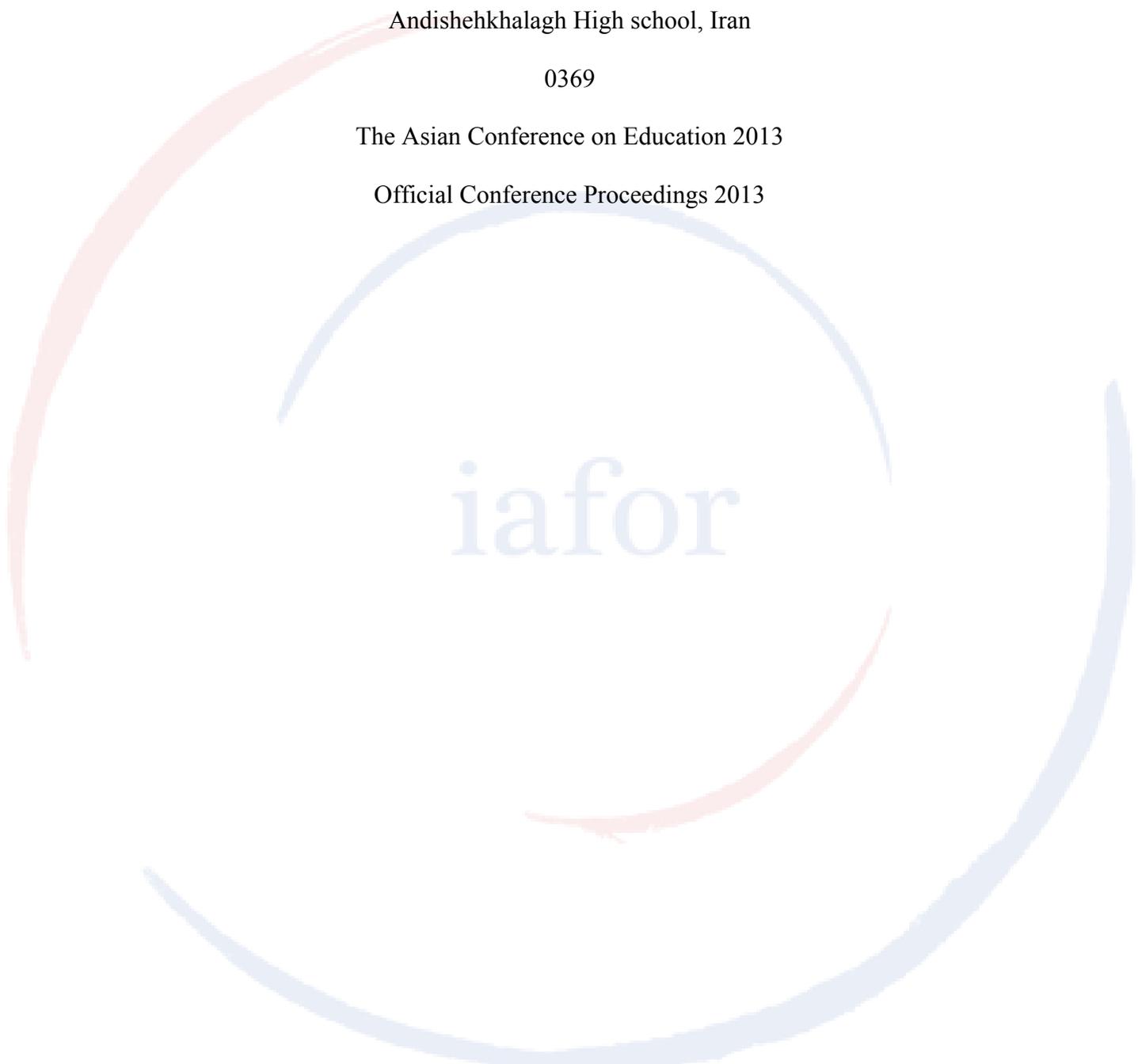
Maryam Roohipoor, Mitra Rezakhanloo

Andishehkhlagh High school, Iran

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## Introduction

The story of "concours" or the Iranian entrance university exam is not for current generation of Iranian students. Since 50 years ago, once a year, Iranian eager students to higher education, have engaged with challenges of more educated position in universities. Alternatively, other choices are full of risk for middle and poor classes: just doing business or hard work encompasses rest of their life.

Any person who wants to be more educated is interwoven his/her destiny with this exam, but beside of its crucial role in life of Iranian people, actually it is very hard and complicated, with more than 300 multi choice questions that must be answered around 4 hours.

For showing of its statistical aspects, in the following table No.1 with a little focus on "chance of acceptance" column, each person can feel the hard time of applicants for succeeding, especially experimental and art applicants.

**Table No.1**

<b>Fields of study</b>	<b>Number</b>	<b>Chance of Acceptance</b>
<b>Math</b>	250,000	%87
<b>Experimental</b>	500,000	%31
<b>Humanities</b>	290,000	%81
<b>Art</b>	150,000	%43
<b>Language</b>	100,000	%33

It must be added that just 15 percents of majors with limited capacity are highly concerned by the students. These majors are supposed to have the better occupations and incomes after graduation of the students. Sometimes, these discussions about the majors are true and sometimes they are just public opinions of the families without any touchable facts.

Anyway, these rumors and invalid information about the small-capacity majors plus reality of the majors with better social position have led to increasing stress among the students.

On the other hand, there are just 15 top universities all around Iran. It duplicates the stress of students and motivates them to be competitive with other students and friends not only scientifically but also mentally. It makes them aggressive because the source of successful such as top universities and the top majors is limit. The final result is stress.

This competitive sphere cause more control and educational planning for students but unfortunately without attention to mental health of students. The following table (table No.2) shows the gradually increased tension of Iranian entrance exam from first year of high school till its fourth year:

**Table No.2**

<b>Years of Study</b>	<b>Main Educational Policy</b>
<b>First Year</b>	General learning
<b>Second Year</b>	Choosing of majors in math, experimental and humanities
<b>Third Year</b>	Diploma exam (25% of entrance exam score)
<b>Fourth Year</b>	One year intensive education planning and testing plus entrance exam of universities

### **Toward the problem**

Beside of this competitive condition, with attention to two factors of intelligence and endeavor, it is possible for students to be aware of their abilities. Also, in our high school, they can estimate their level and possibility of succeeding in base of their endeavor, practicing and regular educational planning except of just inclination to their intelligence. As follows, my experience shows that the students can be categorized with considering of endeavor and intelligence in four groups:

- 1- **Most of** the high intelligence with endeavor can entrance to top governmental universities of Tehran and main cities and their top majors
- 2- **Most of** the high intelligence but without endeavor can entrance to private universities of Tehran and main cities and their top majors
- 3- **Most of** the middle intelligence with endeavor accepts in non-popular majors but in top governmental universities of Tehran and main cities.
- 4- **Most of** the middle intelligence without endeavor also continuing of their studies in expensive private universities is possible.

This categorization is valid but as a third factor, mental tension and disturbance before and during the entrance exam causes the students couldn't get the predicted result. It's the main question of this article: How can the students' stress be reduced?

### **Practical Solutions**

In accordance with each sort of stress-based disturbance of students, the different solution has been expanded. Actually, at high school, suddenly and ceaselessly, stresses with different causes have been occurred. The students more or less show their anxiety off exaggeratedly, sometimes as a victim of educational competitive structure and sometimes due to confused and conflictual atmosphere of their families.

Through the involvement with these tensions, a variety of our caring and attention to students' mental needs were collected. In this point, these practical experiences for reducing of the student's tension were formed at three below issues:

- 1- Interfamily problems
- 2- School-related problems
- 3- Society-related problems

## **1- Interfamily Problems**

### **i) Non-emotional relationships between the parents**

In first case, the emotional conflicts of family are projected to high school. For example, this projection can be traced: "My father doesn't like my mother anymore". Truly, this emotional problem is true but not new. It means that student wants to release her stress by engaging to different matters such as disagreements between her parents.

So, students must be convinced about the old roots of family contention. It is not supposed to solve during one day, three months or even more than one year. Specially, preparing time of entrance exam cannot afford extra concentration on old unresolved problems of family.

Accepting of this reality must be parallel with advises to parent of student. For short time of before the entrance exam, advises vary from maximally loving in relationship till minimally having a respectful manner of parent. Candidly, the last one is better considered by parents during the preparing time of students even temporally.

### **ii) Sensitivity of students about compare with other persons by their parents**

In some cases, parents judge the educational progress of their girl students naively, harshly and unfairly. Although, the student is high intelligent or weak in lessons, in both of them, fear from being in comparison and judgment by their parents can intensify the effects of stress.

As a solution, talking with parents about their judgments is first step. Firstly parents ignore comparing of their children directly with other students. They name their judgments advice. In this way, sometime, parents unconsciously under cover of advising compare their children. So, because of indirect judgment of advices, it must be cleared for parent that neither judgment, nor advice should be considered.

In these cases, one parent accepts to stop their harsh evaluation verbally, but continue it mentally. Finally, with finding of their mental blaming and wanting them to stop it, the stress of students reduced.

### **iii) Be anxious about the high expense of studying at fourth years of high school**

In this topic, students blame themselves or are blamed by their parents because the high price of high school's tuition fee. After blaming, students not like the first case, depressively go inside of themselves and find themselves guilty.

With considering of their parents, showing the opposite results of their approach, must be explained through the students' scores, their mental disorder, tensional and scattered learning. Talking seriously and pose deniable facts of their children's stresses make them more responsible about their critical harsh approach.

Parallely, the student must cut off their idle thoughts of guiltiness. It is very hard but its feasibility can be increased with mutual simultaneously dialogue with students and their parents.

#### **iv) Nagging hints and blaming of parents**

Sometimes, the weight of parents in nagging and making the tensional sphere is more than the students who are questioned their minimum activities pessimistically. For example, student says: "Every time for break, I get up from my study desk, my mother said me that you spoil time for learning."

The reason of this strict control is underlain this belief that after low score of students, just more studying is the solution of parents! In addition, parents do not attention to abilities of their children.

Most of the times, individually talking with parents about their unbalanced approach do not have effect. But as a solution, discussing about this problem in public session with other parents lead to better results. Indirectly, referring to different cases of strict control and subsequent student's failure at entrance exam, motivate the parents to think of their nagging and its consequences more seriously.

In this way, bolding of the each small success of students beside of ensuring parents that their blaming can disorder abilities of their children is more effective.

## **2- School-related Problems**

### **i) Tensional actions of teachers**

During the preparation for entrance exam, some of teachers want students to assign more time for studying of just their own lessons. Due to weak self-management of the students, result is unbalanced educational progress. So, score of some courses increase and another decrease.

Toward the balanced curriculum, weekly checking of the students' grade, their weekly schedule and students' assigned time to each courses, are monitored exactly. With analysis of the students' score data and talking with low-score students, teacher's overweighed assignments can be traced. Finally, through the weekly session with teachers, their educational schedules and assignments are replanned cooperatively.

### **ii) Friendship problems (sensitivity, disarranged relationship, exaggerated emotions)**

In this case, students need to be approved by their friends in high school. With losing of their individualities, disapproval of their kindness and attention by their friends may lead to collapsing of their personality and in some sensitive students can cause the emotional trauma. So, this emotional turmoil substitutes for concentrated studying of studying and final result is educational failure and distress.

But isolation of the students in home or high school with full time assignments or more control on their educational schedule cannot reduce their emotional crisis. Keeping of their warm friendship in high school not in their homes but with modest manner and more rational attitude strongly is suggested.

For example, not studying of the students with their friend or reducing of its level until acceptance in universities can reshape their emotional sphere of friendship. Now with this new atmosphere of modest thinking in high school, simultaneously sympathy with their sad feelings help them to positively relieve what occurred between them and greaten what they did gently for their friends before cutting of their friendship.

### **iii) Impassive and unfeeling relationships between staff members, manager, counselor and students**

As a basic factor in high school, mental security among the students implicitly relates to warm dialogue and cooperation between the high schools colleagues from manager and teachers till counselors and staff members.

This calm atmosphere of high school with their friendly but respectful relation of staff members with students, help students to deeply assimilate their behavioral patterns and find similarities with their teachers and manager, especially with younger teachers. Generally this mental security and intimate relationship between the high school's staffs release the stresses of the students before the entrance exam.

With this approach in our high school, whenever student like their high school, prefer to stay and study in high school until night and after graduation come back to high school.

## **3- Society-related problem**

### **i) Advertise on entrance exam**

Advertising is one of the most intangible factors that increase anxiety in students. During the years of secondary school, private institutes and semi-hero teachers show off their exaggerated unreal abilities through the billboards in the streets, on the radio and even s.m.s. form of advertising messages. Therefore, mentality of the students before they reach high school is filled with this competitive stressful anxiety and fear about teacher's competences in and outside high school and their suspended educational future.

So, students are under effects of deceptive advertising and they go to schools that have not clear justification about these ads. In this way, it is considered a stressor.

In this condition, in our high school and at first year of study, diagnostics and deceptive aspects of educational advertisement are explained clearly. Wanting them to judgment about the differences between the inside and outside of high school and fairly compare both of them freely. Also, they are convinced the money is aimed at promoting greater.

## **ii) Problems in social networks, the Internet, between the fourth-year students.**

Now, Internet use among students has become an addiction. The dependence of the charm of this space is like "face book". Experience has shown that most students spend their exam period in Internet and to escape the stress of their own, the internet takes refuge and then spends more time in virtual space and more will be stress. In fact, their stress is increased.

But different from semi-official policy of most high schools, web space is not forbidden in our school solution, but the high school staffs plans to use the internet offers limited, for example: Allow students to use the internet midday weekend. However, our experience shows that successful students are completely cut off their communication with the internet in fourth grade.

## **iii) Emotional or sexual relationships with boys in high school.**

Although present in Iran, we are in a period of transition from tradition society to modern society, most families cannot accept remiss relationships with boys and these connections are blocked. We have students as young girls aged 15 to 18 years are not allowed to have relationships. Our discussion here is not the truth or falsity. However, our experience shows, during the fourth year, students who have relationships outside of school often do not succeed in entrance exam. Because, they are forced to hide their relationship and it will increase students' stress.

Another problem is students often do not talk about it and they fear for speaking and this makes the emotional and sexual abuse, that this is a great stress. In our high school, students are aware of the damage these hidden relationships. We can try to create a safe space to talk about these issues with us. Then the advisory role at this stage is highlighted.

On the others, if we encounter such a student, we talk about, with her parents - if the parents are reasonably well – and with regard to her feelings of being valued, we are aware of the dangers related to her. This will enhance his confidence to us, in 70% of cases. And after succeed in entrance exam highlighting the positive sense to spend more time for their personal interest in the university. Then, they are motivated to studding and encouraged to finish their education.

## **Conclusions**

Here, I present common solutions to relieve stress on the students:

It is important to create loving relationships between our students, For example: with Get hands, warmly. With look deep and loving. With Heart wishes success. Staffs of high school try always nice to hear what they say. All of these behaviors are reduced the entrance exam problems and increase motivation of students. To be important in emotional behavior, especially by those who have mastered all aspects of the test is important.

Patience in the face of stress and anxiety related behaviors, they are very helpful. Sometimes they are lying to us, if instead we deny bad behavior, we understand their stress, and we have a lot of help to our students. The thing we do to build good relationships at school: Camp and student travel! We create good memories for them to build better relationships. Due to their

important lessons and low time in the fourth grade, there is no possibility of a long travel, but day camps, going to the theater, museums and poetry readings are possible. Children's memories of previous years in this space and the space of their own mental nostalgic well-being make the atmosphere for their again experiencing of these travels in near future after succeeding in entrance exam.

On the other hand, other techniques are practiced them, such as proper breathing exercises to reduce stress in their intensity. Just breathe, the body will absorb more oxygen and increase alertness.

The other side, experienced principal, skilled assistants and young teachers work to our high school. Young teachers recently have gone through the stress and anxiety of the exam and have been successful in the entrance examination, so they can better understand their students. And good relations between persons of school teachers together with teachers, principal teachers and administrators are there. Although the school does not have a high salary, but all of us feel good about being in the school. Because to be built into all aspects, is important for the emotional needs and principal tries to put a lot of time to problems with teachers like: family, personal and financial problems and to hear and help them. In our high school, the teachers come to school even on holidays!

Here's what the doctor William Glasser refers to:

They believe that in this world there are four important relationships. These include relations between husband and wife, between parent and child, teacher and student and the manager and employee. He believed that if these relations do not improve, problems cannot be solved. Paper provided an overview of the role of these relationships in reducing the anxiety and stress of entrance exam. We see that each of these relationships, are large role in this problem. School can be a place, using emotional relationship and reduce student stress.

## Reference

1. Glasser, William M.D. (2000) **Choice Theory**. Harper Perennial.
2. Gottfried, A.E. (1990) 'Academic Intrinsic Motivation in Students'. **Journal of Educational Psychology**, 82(3): 525-538.
3. Stipek, Deborah (1997) **Motivation to learn: from theory to practice**. Allyn & Bacon.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The text is surrounded by two large, overlapping, brush-stroke-like arcs. The upper arc is a light red color, and the lower arc is a light blue color, matching the text. The arcs are thick and have a slightly irregular, hand-drawn appearance.

*American Progressive Education and Yutori Kyoiku*

Craig Sower

Shujitsu University, Japan

0370

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Abstract

Few groups in the history of education have been as influential as the American progressives, who were part of the broader wave of Progressivism that swept the developed world in the late-19th century. It is often seen as an American movement, but its roots lay in the Prussian welfare state. American intellectuals educated in Germany in the 1800s were inspired by the Prussian model of an efficiently organized society under the leadership of experts backed by the power of the state bureaucracy. They returned home imbued with ideas about a paternalistic state, and began to advocate similar changes in the US. Since Japan's *yutori kyoiku* (education free from pressure) owes more than a passing debt to Progressivism, Japanese teachers should familiarize themselves with the origins of this philosophy. To paraphrase Leon Trotsky, you may not be interested in Progressivism, but Progressivism is interested in you. This paper will introduce key elements of American progressive education and four men considered its early architects: Stanley Hall, John Dewey, Edward Thorndike, and David Snedden. Their work set the stage for the child-centered movement, educational psychology, and educational sociology. They ushered in "The Age of the Experts," the years just before and after World War I during which the movement's influence grew within academia and the teaching establishment. They used science to justify the differentiated curriculum, empower pedagogical experts, and redefine democracy. From 1910-1950, progressives oversaw a 60% reduction in academic content while "life-adjustment" courses rose ten-fold. They de-emphasized reading, put pupils' self-esteem over learning facts or developing good habits, and established an ongoing hegemony over teacher education. Similarly, *yutori kyoiku* reforms reduced the school week from six days to five, and cut "the educational requirements by a third." In both the US and Japan, academic performance declined significantly.

Few groups in the history of education have been as influential as the American progressives, who were part of the broader wave of Progressivism that swept the world in the late-19<sup>th</sup> century. Progressivism arose in response to the rapid industrialization and social upheavals of modernity. It is often mistaken as an American movement, but its roots lay in the welfare state engineered by Prussian Chancellor Otto von Bismarck. American intellectuals educated in Germany in the late-1800s were inspired by the Prussian model of an efficient society run by experts backed by the power of the state. They returned home advocating similar changes in the U.S. (Rahe 244). Progressive educators based their ideas in part on Rousseau's assertions about the nature of children, learning, and teaching. Since Japan's *yutori kyoiku* (education free from pressure) is progressive, Japanese parents, teachers, and policymakers should familiarize themselves with the origins of this philosophy before deciding if it is good for Japan.

This paper begins with the results of progressive education in America and of *yutori kyoiku* in Japan. It traces the rise of Progressivism, then introduces key elements of American progressive education and four men considered its early architects: Stanley Hall, John Dewey, Edward Thorndike, and David Snedden. Their work sparked the child-centered movement, educational psychology, and educational sociology. They used science to justify the differentiated curriculum, to empower pedagogical experts, and to redefine democracy. Stevenson and Stigler write that from 1910-1950, progressives reduced academic courses in high school "by 60% while...[life-adjustment] courses increased tenfold" (108); they also discredited heroes and cultural role models in "a deliberate effort to expose models' feet of clay" (86). They de-emphasized reading, put pupils' self-esteem above learning facts or developing good habits, and established an ongoing hegemony over teacher education. We then turn to Japan, where *yutori kyoiku* reduced the school week from six days to five in 2002, and cut "educational requirements by a third" (Nakai). In both countries, academic performance has declined significantly. Progressive education results in a two-tiered system with well-educated elites on top, poorly educated masses underneath, and lower overall academic achievement, as is demonstrated in the U.S. and Japan. This is not a bug, it's a feature.

By any objective standard, American education is in crisis. The 2011 National Assessment of Educational Progress tests of 4<sup>th</sup>- and 8<sup>th</sup>-graders show that performance has flat-lined (Paulson, Education). In a related story, most California 4<sup>th</sup>-graders are unsure which is bigger: California or Los Angeles (Paulson, Which). Bloomberg reports the 2012 average SAT reading score has fallen to 496, the lowest since data became available in 1972. Writing, at 488, is the lowest since it was added to the test in 2006. Math remains at 514 (Lorin). U.S. scores have also declined in the Program for International Student Assessment (PISA). In math, the US slipped from 18<sup>th</sup> out of 27, to 25<sup>th</sup> out of 30 countries. In science, the U.S. dropped from 14<sup>th</sup> out of 27, to 21<sup>st</sup> out of 30 countries. In the Progress in International Reading Literacy Study, scores have declined in every subject in both grade levels studied (4<sup>th</sup> and 8<sup>th</sup>) since the tests began in 2000 (Coulson, Conflicting). U.S. students are still number one in self-esteem. American teachers blame inadequate support. However, as performance declined from 1970 to 2009, staffing doubled and total inflation-adjusted spending per student for K-12 public education increased from \$55,000 to \$151,000 (Coulson, Impact). Tests sometimes give misleading results, but for 40 years?

In Japan, “declining scholastic abilities of Japan’s children and university students—formerly ranked at the top of the world—is said to be a failure of the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) policy of *yutori kyoiku*” (Nakai). Japan’s free-fall shocked the nation.

**Japan PISA Ranking (*PISA*)**

	<b>Math</b>	<b>Science</b>	<b>Reading</b>
2000	2	2	8
2003	6	2	14
2006	10	5	15

This occurred as academic contents were slashed and class size was reduced from a post-war average of 50 to the current 35 (Wada & Burnett).

### **American progressive education**

The late-19<sup>th</sup> century was a time of social instability. Traditional governments contended for political power with monarchists, nationalists, social democrats, and communists. In Prussia, by the 1870s, Bismarck needed to blunt the appeal of the Social Democratic Party and its reform program while modernizing and meeting the demands of German nationalism. He staved off the opposition by gaining the Kaiser's support for welfare-state legislation in the early 1880s that provided token health, employment, and education benefits to the masses in exchange for expanded government control and curtailed individual liberties. As Bismarck told William Dawson, "My idea was to bribe the working classes, or shall I say, to win them over, to regard the state as a social institution existing for their sake and interested in their welfare" (Ebeling 4). The results were an ostensibly rational Statism in which the needs and rights of individuals were subsumed under, and superseded by, the needs of the state.

At the end of the century, similar ideas were also gaining currency in the U.S. Criticism of the goals and methods used in American schools increased, culminating in a series of muckraking articles written by Dr. Joseph Rice and published in the monthly magazine, *The Forum*, in 1892. Rice was a pediatrician who studied in the central-German cities of Jena and Leipzig from 1888-90. He returned home full of ideas about the "science of education," which he successfully parlayed into a collection of sensational essays (Cremin 4). The picture he painted of American schools was a bleak one in which children studied useless subjects, taught by indifferent or authoritarian teachers, for obscure purposes. Much of his criticism was valid—there actually were bad schools, bad teachers, and bad practices. At about the same time, the National Education Association (NEA) formed the "Committee of Ten" to address admissions standards for universities. Its 1893 report fed public discontent. The committee recommended that secondary schools provide a high-quality, liberal education to all students. Implicit in the committee's work were three assumptions: 1) rigorous study disciplines the mind; 2) this benefits all students; and 3) studying the cultural, scientific, and religious heritage of the nation adds value to the society and uplifts the community as a whole. The committee explicitly stated that the high schools "do not exist for the purpose of preparing boys and girls for college," but nevertheless it opposed a differentiated curriculum, noting that, "every subject which is taught at all in a secondary school

should be taught in the same way and to the same extent to every pupil so long as he pursues it, no matter what the probable destination of the pupil may be, or at what point his education is to cease” (Ravitch 42-3). Despite the committee’s clearly stated intent, critics charged that the report was elitist and would result in forcing most children into the drudgery of academic studies irrelevant to their needs.

Many of the detractors came from academia itself, chief among them Stanley Hall (1844-1924). After receiving his Ph.D. in psychology, the first ever awarded at Harvard, Hall studied with Dr. Wilhelm Wundt at the University of Leipzig. Wundt was of the view that people are animals “devoid of spirit and self-determinism” (Lionni & Klass 13). Wundt’s work inspired the Behaviorism of Pavlov, Watson, and Skinner. Hall returned to America in 1883, and established a psychology laboratory at Johns Hopkins University where John Dewey was among his first students. Hall was a devotee of the French philosopher, Jean-Jacques Rousseau, the enlightened genius who sent his own five illegitimate children to foundling homes before sitting down in 1762 to pen his extended sermon on childrearing, *Emile, or On Education*. Rousseau drew the child as a Noble Savage who would achieve authentic greatness if only he were liberated from the oppression of the family and society. Rather than stale academic exercises, the child would learn by doing. According to Rousseau, “Emile at the age of twelve will hardly know what a book is” (Ravitch 170). French philosophy was not the only thing European that fascinated Hall. He was an admirer of German authoritarianism, was attracted to the idea of *Das Volk*, had a taste for Social Darwinism, advocated selective breeding and forced sterilization of undesirables, and believed individualism was bad for the U.S. (*Brief*). Had he lived a decade longer he could have seen similar pseudo-scientific theories of racial eugenics and social efficiency writ large on the German stage. Hall and his students collaborated with Edward Thorndike in establishing the field of educational psychology along lines laid down by Wundt (Lionni & Klass 17).

Hall is also credited with starting the child-study movement. His 1883 article, *The Contents of Children’s Minds*, proclaimed the Rousseauian faith in the purity and wisdom of children untainted by the civilization that has corrupted their parents. He felt that children should learn in free, unstructured play, guided only by their interests. To discover what those interests were, Hall

organized teachers and parents to survey children and share findings through the NEA. Ravitch reports a contemporaneous response to these “Hall Clubs” from the Ohio Commissioner of Education, who observed, “To be told that a careful and scientific investigation has revealed the wonderful fact that Santa Claus appears to have a strong hold upon the hearts of boys and girls of all ages makes us tremble at the dense ignorance in which we have all been living” (72). Hall attacked the academic curriculum as harmful, and disparaged mathematics, geography, and language arts, preferring in their stead woodworking, sewing, and other useful subjects. He suggested it was unnecessary for most children to learn to read but that, if they must, they should not do so until at least the age of eight. He advocated different courses of study, also starting at age eight; one for the chosen few going on to college, and another for those destined for work.

Hall’s most famous student was John Dewey (1859-1952), who eclipsed his teacher and towered above all other progressives. His stature was due to his longevity, to the sheer volume of his writing, and to his social and political contacts. Henry Commager wrote in 1950, “So faithfully did Dewey live up to his own philosophical creed that he became the guide, the mentor, and the conscience of the American people; it is scarcely an exaggeration to say that for a generation no issue was clarified until Dewey had spoken” (Ryan 19). He became president of the American Psychological Association (APA) in 1899. In 1904, Dewey moved to Columbia University, where he remained until he retired in 1930. He believed the purpose of education was social reform for which he campaigned actively. He wrote a series of paeans-cum-travelogues from Russia in the twenties. Throughout the thirties and forties, he and his protégés helped guide, support, and staff New Deal programs. In the sixties, President Johnson, who referred fondly to Dewey as “Dr. Johnny,” invoked his theories to push his Great Society (Miller 37).

Dewey rose to prominence when he became chairman of the new department of philosophy and psychology at the University of Chicago in 1894. Shortly thereafter, he and his wife founded the Chicago Laboratory Schools, where he experimented with pedagogical theories that embodied the ideas of Rousseau, whom Dewey admired. Students learned by doing projects that sought to integrate knowledge and skills from different subjects. Unlike the later Project Method, the highly trained staff at the school paid close attention to the goals and objectives of the projects, and the

curriculum was tightly linked from one year to the next. Like other progressives, he believed reading should be delayed until children were older. His book, *The School and Society*, published in 1899, is basically a progress report on the laboratory school, complete with pictures of children's drawings, diagrams of ideal school buildings, and a chart depicting the "isolations of the school system itself" (60). There is much to be admired in the book and in the school he oversaw, and his students were no doubt engaged in novel ways that enhanced their learning. Having said that, *The School and Society* reveals the beginnings of what became a pattern for Dewey and his followers. Dewey wrote,

We are apt to look at the school from an individualistic standpoint, as something between teacher and pupil, or between teacher and parent. . . Yet the range of the outlook needs to be enlarged. What the best and wisest parent wants for his own child, that must the community want for all its children. Any other ideal for our schools is narrow and unlovely; acted upon, it destroys our democracy. . . Here individualism and socialism are at one. Only by being true to the full growth of all the individuals who make it up, can society by any chance be true to itself. (3-4)

Introducing what he termed the "New Education," Dewey began to make the case that the individualistic, family-centered school of the past was antiquated, selfish, and undemocratic. In place of the "isolations" of the old system, he proposed modern definitions of self-fulfillment and democracy in which individual identity and freedom may only be realized collectively. Dewey shifted the locus of control away from home and school and towards outside experts who supposedly knew more about children than did their parents and teachers. Applied to a single experimental school in the Midwest, staffed with brilliant and dedicated teachers, these ideas would not have mattered much. In less capable hands, and applied throughout the country his New Education was less benign.

Dewey was a long-time member of the Socialist party, but was chagrined at its lack of popular appeal. Dewey's solution to the socialists' PR problem was to recast their ideas as "liberal." In a 1931 series of articles for *The New Republic*, titled "The Need For a New Party," Dewey argued,

The greatest handicap from which special measures favored by the Socialists suffer is that they are advanced by the Socialist party as Socialism. The prejudice against the name may be a regrettable prejudice but its influence is so powerful that it is much more reasonable to imagine all but the most dogmatic Socialists joining a new party than to imagine any considerable part of the American people going over to them. (quoted in Miller 37)

Dewey was more direct in his 1935 essay, *Liberty and Social Control*. He wrote,

The ends which liberalism has always professed can be attained only as control of the means of production and distribution is taken out of the hands of individuals who exercise powers created socially for narrow individual interests. The ends remain valid. But the means of attaining them demand a radical change in economic institutions and the political arrangements based upon them. (125)

Not to put too fine a point on it, but classical liberalism has never entailed the seizure of the “means of production,” redistribution of wealth, or usurping individual property rights in the name of the state. Simply asserting that liberalism means any of these things does not make it so, even if “Dr. Johnny” is making the assertions. Publicly avowed Socialist or not, Dewey did everything he could do to push that agenda, whether openly as Socialism or Progressivism, or by stealth as liberalism. His real problem was that Statism rests on the supremacy of the state over individuals and civil liberty, ideas inimical to most Americans. Statists favor centrally planned, top-down, big-government solutions to the problems faced by citizens and society. Statists portray themselves as rationalists, believing their new ideas superior to traditional institutions and religion, but they are just garden-variety oligarchs.

Throughout his career Dewey spoke out on such topics as the child-study movement, the perils of the academic curriculum, vocational training for the masses, IQ testing, delayed reading for children, removing parents and teachers from their customary roles in schools, empowering

experts to control society and education, redefining democracy, curtailing individualism, the evils of capitalism, the glories of Soviet Russia, and the formation of progressive organizations and political parties. At many junctures a word from him could have ended some of the worst abuses of his fellow travelers. But he usually chose either to remain silent, or to advance the progressive project under his imprimatur. Great as Dewey was, however, he could not have done this alone. During his long career at Teachers College at Columbia University (TCCU), he worked closely with Edward Thorndike and David Snedden, among many others.

Edward Thorndike (1874-1949) received his Ph.D. in psychology from Columbia University in 1898, and spent most of his career at TCCU. In 1901, he conducted experiments that he claimed demonstrated transfer does not occur in learning—that skills learned in one context cannot be generalized to others (Ravitch 65). Progressives seized upon his findings as proof that a basic tenet of liberal education (i.e., that mental discipline trains the mind) was false. While his claims were later disproven, he did irreparable damage to the academic curriculum. Thorndike asserted that students would benefit more from learning life skills than pursuing academic subjects. He believed we were beguiled into thinking advanced courses made students into good thinkers when those students would have been smart no matter what they did. He said if good students took PE and art classes we would assume that PE and art make people good thinkers, too. Hence, he and other progressives concluded that it did not matter what students studied so long as they were engaged. Thorndike was a true believer in science and thought psychological testing could accurately measure students' capabilities and efficiently assign them to their future roles in society. He became president of the APA in 1912, but is best known for his involvement in the notorious Army IQ tests that began in 1917.

With the foundations of educational psychology laid by Hall and Thorndike, and Dewey's child-centered approach well established, the stage was set to apply new scientific principles to the whole of society. David Snedden (1868-1951) began his education and career in California. In a speech titled "The Schools of the Rank and File," he posited that most students would follow the lead of a small elite, that schools would assume roles previously performed by the family and church, and that vocational training was more important for the masses than was a liberal education (Labaree

8). Snedden embraced Herbert Spenser's theories of Social Darwinism, and by the time he completed his doctorate at TCCU in 1907 he was a well-known champion of social efficiency and the differentiated curriculum. Ravitch (82) boils down Snedden's position to four main points which may be paraphrased thus: 1) different groups (separated by gender, occupation, and ability) need different kinds of education; 2) after the age of twelve, but no later than fourteen, all children need to be in vocational training; 3) academic programs are "useless, elitist, and of little value to a democratic society" save for those few who will lead; and 4) these views are scientific and enlightened and all others are ignorant, if not evil. Arguably, Snedden did more than anyone to destroy the academic curriculum. He is also credited with helping to found the field of educational sociology.

Finally, these four men helped end the traditional approach to reading in the common schools. From 1836-1920, one of the hallmarks of American education was the McGuffey's Readers series. It sold 122 million copies, second only to the Bible. One of its goals was to develop appreciation for great literature, which it did through excerpts of classics like Aesop, Shakespeare, Hans Christian Andersen, Charles Dickens, Daniel Defoe, and Longfellow. It included patriotic selections from Abraham Lincoln, Benjamin Franklin, and Lord Tennyson. The series was so successful at creating common cultural understanding that "[w]hen Theodore Roosevelt lambasted critics as 'Meddlesome Matties' a generation of Americans recognized the allusion" (Ravitch 22). Many at TCCU denounced the series as jingoistic and irrelevant to modern children, preferring instead the dumbed-down "Dick and Jane" style of readers that used sight words and the "whole-language" approach.

Many Americans who studied in Germany in the late-19<sup>th</sup> century returned to the U.S. and led the progressives' effort to transform American society by remaking schools. Rather than a unified set of principles, they advanced a disparate collection of ideas summarized broadly by Ravitch as follows:

- First was the idea that education might become a science and the methods and ends of education could be measured with precision and determined scientifically. This was the basis of the mental testing movement.
- Second was the idea that the methods and ends of education could be derived from the innate needs and nature of the child. This was the basis of the child-centered movement.
- Third was the idea that the methods and ends of education could be determined by assessing the needs of society and then fitting children for their role in society. This was the basis of the social-efficiency movement.
- Fourth was the idea that the methods and ends of education could be changed in ways that would reform society. Proponents of this idea expected that the schools could change the social order, either by freeing children's creative spirit or conversely by indoctrinating them for life in a planned society. The first version was the faith of the child-centered movement and the second was the basis of the social reconstruction movement. (60)

Though the theories were inconsistent and frequently at odds with one another, and their advocates were often self-contradictory, people who espoused progressive education eventually came to dominate the institutions that trained most of the nation's teachers, notably at TCCU. The philosophical foundation laid by Hall, Dewey, Thorndike, and Snedden over a century ago now forms the basis of teacher education throughout the U.S. Just as the Prussian model shaped American Progressivism, so American progressives now influence the rest of the world. Anyone educated in an American school of education is indoctrinated with the deep unwisdom of Rousseau and Dewey.

### **Japan's *yutori kyoiku***

Japanese teachers and policy-makers, many of whom studied in the U.S., have imported much of the progressive agenda. In the 1970s the phrase “7, 5, 3” was used to describe the ratios of students who understood their classes, i.e., 70% of elementary, 50% of junior high, and 30% of high school students (Nakai). Problems appeared in the schools such as violence, bullying, and nonattendance. Japan's “*gakureki shakai* (educational-background society), exam hell, and the whole system of force-fed education were seen as likely causes for these problems” (Nakai). MEXT devised *yutori kyoiku* in the 70s and 80s to relieve pressure on students. They reduced academic contents and planned to cut the school week. They used the same justifications heard 60 years earlier in the US, namely that students do not benefit from academics, and that “life-adjustment” classes would suit them better. College entrance exams were modified, high school courses simplified, and teaching made more flexible. In April 2002, new guidelines (including the 5-day school week) were enforced as planned. MEXT issued guidelines that called for improved scholastic achievement, but the *yutori* concepts were not mentioned this go-round. This was a policy shift for MEXT, which seemed to step back from its previous embrace of the relaxed approach. Despite hedging its bets publicly, MEXT marched ahead.

The results were quickly apparent. Japan had always prided itself on its performance on international tests of reading, math, and science. Top Japanese students were not the most brilliant in the world, but the rigorous regimen given to all students gave Japan a much higher average than other countries. When academic contents and teaching time were cut, the students affected most were those at the bottom, the very group that had previously out-scored other countries' lowest performers. The latest guidelines that went into effect in April 2012 increased class hours and restored much of the previously scrapped curriculum. Whether MEXT is serious remains to be seen.

### **Conclusion**

Progressive educators dress up their weak curriculum with happy-talk about critical thinking, interdisciplinary problem solving, and diverse global multicultural whatever—all the shibboleths of the Left. But the results prove Rousseau and Dewey were wrong. American progressive

education and *yutori kyoiku* share strikingly similar problems. Take one final example, “integrated learning.” Writing in 2011, Wada and Burnett reported,

The *Sougouteki na Gakusyū no Jikan* or Integrated Learning Lesson was [a] major component of the reform package which unfortunately has been the focus of considerable confusion and debate. While the integrated nature of this component of the curriculum was designed to take the form of a rich-learning activity involving multiple disciplines, many teachers have been unclear on how to actually teach these classes as there is often no textbook, no set form of evaluation and no details recorded on student report cards. Although a very small number of sample examples were provided as a guide by the authorities, many teachers have not been offered the necessary training for this new form of pedagogy to succeed. (72)

This would not have surprised Arthur Bestor, former professor at TCCU, who wrote of American schools in 1953,

What is falsely called ‘integration’ in most secondary schools is not this process at all. It is a futile and fallacious attempt to by-pass the stage of analysis entirely. The original problem or situation is never broken down into its constituent parts, and these parts are not studied separately and systematically. Instead the original problem remains the ‘one great blooming, buzzing confusion’ that it was to begin with, and children wrestle futilely with it year after year through an intellectual infancy indefinitely and artificially prolonged (53).

When students who lack basic knowledge in one area are asked to apply their ignorance to other fields, confusion is all too predictable. Many American and Japanese parents use their wallets to get around dumbed-down public education. In the U.S., there have always been private schools for those with money or connections. In Japan, families rely on *juku* (private cram schools) to prepare their children to enter elite institutions. Of course, this does not help the vast majority of children

who are stuck in public schools that fail to prepare students for anything beyond low-level jobs. The result is a system in which a few lucky students receive a high-quality liberal education, and everyone else receives mush. In other words, it produces exactly the kind of statist society Bismarck had in mind: clever shepherds tending a pliant flock. There is still, however, the problem of culture. Do Americans really want to be herded by their betters? If not, then perhaps schools using more traditional methods may yet prevail. Japan poses a different challenge to progressives. While top-down decision-making is familiar to most Japanese, radical change is not. After all, Confucian and Zen Masters are bywords for tradition. The Empire may strike back.

Elites have pushed progressive education in America, and *yutori kyoiku* in Japan, based on false assumptions about children, learning, and teaching. Under their leadership, academic performance has collapsed in the U.S. and will continue to deteriorate in Japan unless these practices are changed. Japan's decline in scholastic achievement followed a course similar to the decline in American academic performance when progressive "reforms" were put into place. Empowering experts over the objections of parents and teachers, reducing contents, and shortening study time inevitably results in poorer performance and a two-tiered system. It's not a bug, it's a feature.

## Works Cited

Bestor, Arthur. *Educational Wastelands: The retreat from learning in our public schools*. Second Edition, 1985. Chicago: University of Illinois, 1953.

*A Brief Biographical Sketch of G. Stanley Hall*. 23 Oct. 2010. Available at:  
<[http://www.ithaca.edu/beins/gsh/gsh\\_bio.htm](http://www.ithaca.edu/beins/gsh/gsh_bio.htm)>

Coulson, Andrew. "Conflicting Data? *What* Conflicting Data?" *Cato@Liberty* 24 June 2008.  
Available at: <<http://www.cato-at-liberty.org/conflicting-data-what-conflicting-data/>>

Coulson, Andrew. "The Impact of Federal Involvement in America's Classrooms." Testimony to the Committee on Education & the Workforce, U.S. House of Representatives. 10 Feb. 2011. Available at: <<http://www.cato.org/publications/congressional-testimony/impact-federal-involvement-americas-classrooms>>

Cremin, Lawrence A. *The transformation of the school: Progressivism in American education 1876-1957*. New York: Vintage Books, 1961.

Dewey, John. "Liberty and Social Control" (1935/1936) in *Philosophy of education* (originally published as *Problems of men*, 1946). 1958 Edition. Totowa, New Jersey: Littlefield, Adams & Co., 111-125.

Dewey, John. *The school and society*. Twelfth Impression, 1930. Chicago: Chicago University, 1899.

Ebeling, Richard M. "Marching to Bismarck's drummer: The origins of the modern welfare state." *The Freeman*, Vol. 57, No. 10. December 2007, 4-5.

Labaree, David. *How Dewey Lost: The victory of David Snedden and social efficiency in the reform of American education*. Jan. 2010 version of a paper presented in Ascona,

Switzerland, Sept. 2008. Available at:

<[http://www.stanford.edu/~dlabaree/publications/How\\_Dewey\\_Lost.pdf](http://www.stanford.edu/~dlabaree/publications/How_Dewey_Lost.pdf)>

Lorin, Janet. "SAT Reading, Writing Test Scores Drop to Lowest Levels." *Bloomberg.com* 25 Sep. 2012. Available at: <<http://www.bloomberg.com/news/2012-09-24/sat-reading-writing-test-scores-drop-to-lowest-levels.html>>

Lionni, Paolo & Lance J. Klass. *The Leipzig connection: The systematic destruction of American education*. Portland, Oregon: Heron Books, 1980.

Miller, Tiffany Jones. "John Dewey and the philosophical refounding of America." *National Review*, Vol. LXI. No. 24. December 31, 2009, 37-40.

Nakai, Koichi. *The debate over Japan's Academic Decline*. 9 May 2012. Available at: <<http://www.nippon.com/en/in-depth/a00601>>

Paulson, Amanda. "Education report card: Flat reading scores are 'deeply disappointing.'" *The Christian Science Monitor*. 1 Nov. 2011. Available at: <<http://www.csmonitor.com/USA/Education/2011/1101/Education-report-card-Flat-reading-scores-are-deeply-disappointing>>

Paulson, Amanda. "Which is bigger: California or Los Angeles? Most 4<sup>th</sup>-graders aren't sure." *The Christian Science Monitor*. 19 July 2011. Available at: <<http://www.csmonitor.com/USA/Education/2011/0719/Which-is-bigger-California-or-Los-Angeles-Most-fourth-graders-aren-t-sure>>

*PISA Ranking*. 10 July 2013. Available at: <<http://www.docstoc.com/docs/33166653/PISA-Rankings>>

Rahe, Paul A. *Soft despotism, democracy's drift: Montesquieu, Rousseau, Tocqueville, and the modern prospect*. New Haven & London: Yale University Press, 2009.

Ravitch, Diane. *Left back: A century of battles over school reform*. New York: Touchstone, 2000.

Ryan, Alan. *John Dewey and the high tide of American liberalism*. New York: W.W. Norton & Co., 1995.

Stevenson, Harold & James Stigler. *The Learning Gap*. New York: Touchstone, 1992.

Wada, Masato & Bruce Burnett. "Yutori Kyoiku and the uncertainty of recent Neo-liberal Reforms in Japanese Higher Education." *Bulletin of Center for the Research and Support of Educational Practice*, 7, 2011, 69-78.

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*A Development of Management Model Using Business Intelligence Methodology for  
Higher Education Students to Enter the Occupation Internationally*

Ekachai Naowanich, Namon Jeerungsuwan

King Mongkut's University of Technology North Bangkok, Thailand

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Abstract

The purpose of the research is to develop a model of management using the business intelligence methodology to help higher education students to enter the occupation internationally. The study is consisted of two phases. The first phase is to develop the management model and the second phase is to evaluate the appropriateness of the model. The samples are comprised of ten experts selected by simple random sampling. The research instruments are (1) the developed model and the evaluation form of entering the occupation internationally for the higher education students, and (2) the questionnaire for the experts to evaluate the appropriateness of the model. The research result found that the learning management model using the business intelligence methodology is consisted of three parts. The first part is the data sources such as student data, curriculum data, and employment data. The data includes competencies in English, Information and Communication Technology, and occupational skills in order to enter occupation internationally. The second part is the business intelligence process in which the analyzed data or factors are put into. The third part is the display of the reports and the tenor of the business intelligence presented to the university executive for decision support in managing learning facilitators and related factors to help higher education students enter the occupation internationally.

**Keywords:** Business Intelligence, Occupation, Professionalism, Management, Organization

## 1. Introduction

Presently, universities in Thailand are a kind of organizations which is operated in highly competitive atmosphere. It is because there are a lot of universities that open a variety of disciplines to be chosen by students while the number of students who want to enter to the university is decreased. Moreover, many universities become autonomous universities and receive less amount of government support in terms of budget; universities, hence, have a high competition rate in various fields. Therefore, the university administrators have to use ICT as an instrument or contribution in management and decision making which is accurate, fast and effective. According to the National Education Act of 1999 (Ministry of Education, 1999), Section 5 discussing about the administration and management of education in Article 36, paragraph 2 states that educational institutions can be run freely and develop self-management and performance individually. Similarly, the Information and Communication Technology Master Plan for Education, Ministry of Education (2011-2013) addressing the development of strategic ICT systems in mission-4 (Ministry of Education, 2011) also mentions the promotion of management in education field that has an efficient integration and good governance while one of the goals is to manage the education by applying ICT system that works together with the information database in the field of education in order to consider the implementation of policies and other programs/projects for education. Thus, by having an efficient management, the university administrators in different levels will be able to make accurate and fast decisions. This will lead to effective internal management in university. One of the most utilized and productive in business organization for supporting the decision-making is the Business Intelligence (BI) which is a system that helps to collect, connect and present the information in diverse dimensions, so it will provide the answers derived from data analysis and show the tendency that leads to the accurate and fast decision-making opportunities (Vitaya, 2006; Rawewan, & Srisombat, 2011, pp. 160-165). One of the important goals for every university is to produce the graduates who get jobs after their graduation and have international occupational capabilities because they can be referred as qualified products accepted by their workplaces with good cooperation skills in international level.

Stepping in to international occupation is very considerable for this rapidly changing world. To enter international occupation for students means the students' potential capabilities in different disciplines that let them access their professions and work internationally while not counting the academic knowledge and capabilities in their fields such as foreign linguistic skills, information technology, the standardized professional skills in specific areas of study, etc. This research uses Rajamangala University of Technology in Thailand as a case study. Rajamangala University of Technology is an organization that produces a graduate student to a variety of organizations and the labor market (Mariem, 2006; Tithima, 2008), so to develop capabilities in diverse areas within students before their graduation in order to enter the international occupation. Therefore, the administrators, professors, and other stakeholders should realize the factors or issues in any field that the university has to develop or improve within the students of Rajamangala University of Technology in order to enter the international occupation.

It is clear that Rajamangala University of Technology would like to achieve its goal in producing a graduate that can get a job and has international capabilities while the administrators, professors or other stakeholders are able to analyze, plan, and make a

decision that leads to the precise, quick operation to promote the university's vision based on data from information system within Rajamangala University of Technology as well as supportive information from the external sector. As a result, the researcher has adopted an idea to develop management model using Business Intelligence methodology for higher education students to enter occupation internationally with the expectation of the highest benefits for the students and the organization.

## **2. Research Objective**

To develop management model using Business Intelligence methodology for higher education students to enter occupation internationally.

## **3. Hypothesis**

To develop management model using Business Intelligence methodology for higher education students to enter occupation internationally is highly appropriate.

## **4. Scope of the Research**

### **4.1 Variables using in the Research**

4.1.1 Independent variable is management model using Business Intelligence methodology for higher education students to enter occupation internationally.

4.1.2 Dependent variable is the appropriateness of the management model using Business Intelligence methodology for higher education students to enter occupation internationally.

### **4.2 Population and Samples**

In this research, Rajamangala University of Technology of Thailand is used as a case study. The population is administrators, professors in Rajamangala University of Technology, specialists in information and communication technology, and specialists in management.

The samples are consisted of these following:

Three administrators of Rajamangala University of Technology who have experiences in management in Rajamangala University of Technology for more than four years, two professors of Rajamangala University of Technology who have experiences in teaching for more than five years, two specialists in information and communication technology, and three specialists in educational management who have experiences in related fields for at least five years chosen by simple random sampling.

## **5. Research Methodology**

The development of the conceptual framework of management model using Business Intelligence methodology for higher education students to enter occupation internationally can be separated into two phases as follows:

Phase 1 The development of management model using Business Intelligence methodology for higher education students to enter occupation internationally has steps as below:

Study, analyze and synthesize documents and researches related to the Business Intelligence system (Kleesuan, Mitatha, Yupapin, & Piyatamrong, 2009; Falakmasir, Moaven, Abolhassani, & Habibi, 2010; Ouf, & Nasr, 2011; Piedade, & Santos, 2010) and information system for decision-making (Opas, 2004; Taweesak, 2004; Santi & Tedpong, 2009) and studying the structure of the internal and external information systems in order to enter international occupation for students in Rajamangala University of Technology (Rajamangala University of Technology, 2005)

Develop the management model using Business Intelligence methodology for higher education students to enter occupation internationally from the study, analysis and synthesis of the related documents and researches.

Propose the management model using Business Intelligence methodology for higher education students to enter occupation internationally to the advisor for examination and revision.

Create an instrument for evaluating the appropriateness of the management model using Business Intelligence methodology for higher education students to enter occupation internationally.

Phase 2 The evaluation of the management model using Business Intelligence methodology for higher education students to enter occupation internationally is comprised of two steps as follows:

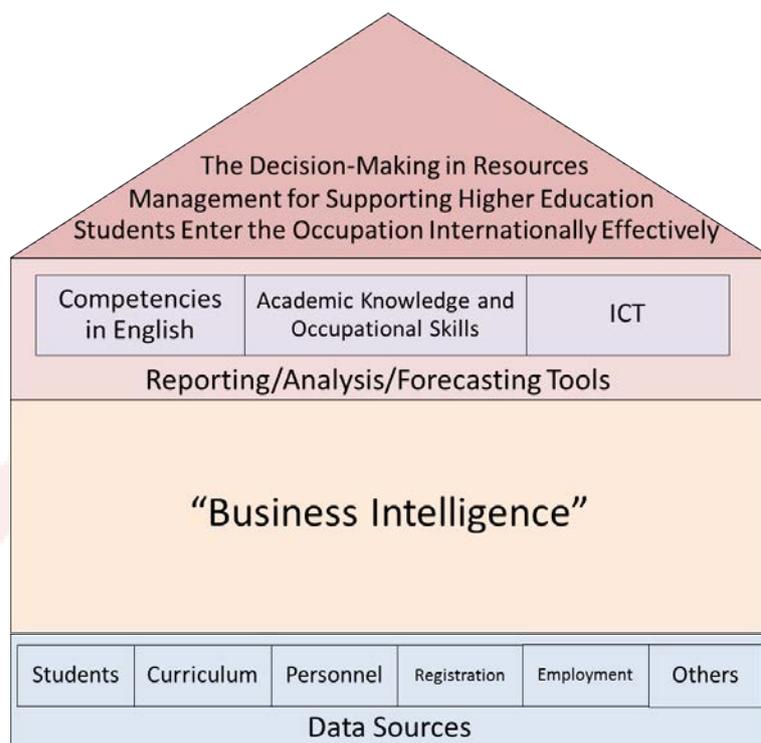
Propose the management model using Business Intelligence methodology for higher education students to enter occupation internationally to the administrators and professors in Rajamangala University of Technology, the specialists in information and communication of technology, and the specialists in educational management.

Analyze the data by using the suitable criteria of the management model using Business Intelligence methodology for higher education students to enter occupation internationally according to the evaluation criteria.

## **6. Research results**

The research process presents the results into two sections as follows:

Section 1 The development of the management model using Business Intelligence methodology for higher education students to enter occupation internationally derived from the analysis and synthesis of the research documents shown in the figure 1 as detailed as below:



**Figure 1** The management model using Business Intelligence methodology for higher education students to enter occupation internationally

The source of data is a part of the main information for accessing the Business Intelligence system which is included of the information about students, programs, personnel, registration, and employment that are internal information in Rajamangala University of Technology and other internal and external supportive information of Rajamangala University of Technology.

The process of Business Intelligence system.

Identify the data source that is consisted of the data from information system related to the access of international occupation of the students in Rajamangala University of Technology that has been used within the university as well as the external information such as statistics from other educational institutions, information from other information system’s projects, reviews and academic writings. Data source has to be conformed to the expected results that specify the data source according to article 1.

The next step is Data Warehouse design in developing the Business Intelligence system which primarily requires some data source from the data warehouse. The Star Schema data warehouse design or the Multidimensional Schema data warehouse design’s data sources can be modified to be suitable and compliant with the pattern of Star Schema data in order to insert the data into data warehouse by using the ETL (Extract Transform Load) process.

Then, there is the documentation that will be stored in Star Schema data warehouse in the form of Multidimensional Model or Cube. This model creates diverse dimensions within the information before being used for creating reports in various patterns according to the design that uses the instrument of the Business Intelligence system in

order to be proposed to the administrators and professors of Rajamangala University of Technology to further consider.

By analyzing and synthesizing literatures, and evaluating the comments of specialists, it is shown that factors affecting the entrance of international occupation of the students in Rajamangala University of Technology includes foreign linguistic skills, information and communication technology skills, and academic knowledge and professional skills. The Business Intelligence system will analyze, present or show the tendency of information related to the development of those three areas of students' capabilities in the various formats of the reports of student that will be proposed to administrators, professors and other stakeholders for assisting the decision-making in resources management; this will support the access of in Rajamangala University of Technology students' international occupation of student in university effectively in the future.

Section 2 The evaluation result of suitability of the management model using Business Intelligence system in order to enter the international occupation for higher education students

The evaluation of the effectiveness of the management model using Business Intelligence methodology for higher education students to enter occupation internationally which is conducted by ten specialists has the interpretation criteria as follows (Prakong, 1999).

4.50 – 5.00 means highest suitable	3.50 – 4.49 is highly suitable
3.49 – 2.50 is moderately suitable	2.49 -1.50 is less suitable
1.49 -1.00 is least suitable	

The evaluation results are outlined in the following table (next page):

**Table 1** The Evaluation Result of the Management Model Using Business Intelligence Methodology for Higher Education Students to Enter Occupation Internationally

Elements of the Model	$\bar{X}$	S.D.	Suitability Level
The principle and the idea used as the basis of the development of the management model using Business Intelligence methodology for higher education students to enter occupation internationally	4.40	.54	High
The purpose of the management model using Business Intelligence methodology for higher education students to enter occupation internationally	4.40	.89	High
The process of Business Intelligence system which is consisted of 4 steps: 1) identifying the related data source, 2) data warehouse's design and implementation, 3) data storage in data warehouse in the multi-dimensional form, and 4) creating the report that will be proposed to administrators, professors, and other stakeholders.	4.60	.54	Highest
The access of international occupation consisted of the students' potential capabilities in 3 sections which are 1) foreign languages 2) information technology 3) academic and professional skills in their educational field.	4.00	.70	High
<b>Total</b>	<b>4.35</b>	<b>.54</b>	<b>High</b>

Table 1 shows that the elements of the management model using Business Intelligence methodology for higher education students to enter occupation internationally is appropriate in high level ( $\bar{X} = 4.35$ , S.D.= .54). When considering each part independently, it shows that the highest appropriateness values ( $\bar{X} = 4.60$ , S.D. = .54) is the process of Business Intelligence consisted of 4 steps which are 1) identifying the related data source, 2) data warehouse's design and implementation, 3) data storage in data warehouse in the multi-dimensional form, and 4) creating the report that will be proposed to administrators, professors, and other stakeholders. The following also have high appropriateness such as principles and concepts which are used as the basis for the

development of the management model and have high appropriateness ( $\bar{X} = 4.40$ , S.D.= .54), the purpose of the management model using Business Intelligence methodology for higher education students to enter occupation internationally ( $\bar{X} = 4.40$ , S.D.= .89), and the enter to international occupation ( $\bar{X} = 4.00$ , S.D.= .70) respectively.

**Table 2** The Evaluation Result of Appropriateness of the Business Intelligence System Processing for Higher Education Students to Enter Occupation Internationally

Process	$\bar{X}$	S.D.	Suitability level
1.The preparation of related information which influences factors affecting the enter to international occupation for higher education students in three sections: 1) foreign languages, 2) information technology, and 3) academic and professional skills in the studied fields is consisted of:			
1.1 Students' information	4.80	.44	Highest
1.2 Programs' information	4.40	.54	High
1.3 Personnel's information	4.20	.44	High
1.4 Registration's information	4.80	.44	Highest
1.5 Employment' information (graduates' information)	4.60	.54	Highest
1.6 Other related information, for example, the information about international professional qualification certificate's examination	4.40	.54	High
2. The process of Business Intelligence system			
2.1 The process of information preparation for inserting data to data warehouse by using ETL (Extract Transform Load) process	4.60	.54	Highest
2.2 The process of data warehouse designed for using Star Schema data warehouse	4.60	.54	Highest
2.3 The process of information modification stored in data warehouse to be in multidimensional (Cube) form	4.60	.54	Highest
2.4 The process of information presentation for decision-making on resources management in order to entrance to students' international occupation based on the information presentation from a variety of instruments derived from the Business Intelligence system's which is consisted of:			
2.4.1 Reporting Tools	4.80	.44	Highest
2.4.2 Analysis Tools	4.80	.44	Highest

2.4.3 Forecasting Tools	4.80	.44	Highest
Total	4.61	.38	Highest

Table 2 shows that the overall evaluation result of appropriateness of the business intelligence system processing for the enter to international occupation of higher education students is appropriate in the highest level ( $\bar{X} = 4.61$ , S.D.= .38). When considering the suitability in each area which is to consider the related information preparation that also influences factors affecting the access to international occupation for higher education students in three sections: 1) foreign languages, 2) information and communication technology, and 3) academic and professional skills, we can see that the suitability level is also in highest level such as the preparation of the students' information ( $\bar{X} = 4.80$ , S.D.= .44), registration's information ( $\bar{X} = 4.80$ , S.D.= .44), and occupational statuses (graduates' information) ( $\bar{X} = 4.60$ , S.D.=.54). The second highly suitable are the preparation of programs' information ( $\bar{X} = 4.40$ , S.D.= .54), Personnel's information ( $\bar{X} = 4.20$ , S.D.= .44), and other related information like the information of international professional qualification certificate's examination ( $\bar{X} = 4.40$ , S.D.= .54) respectively. Furthermore, when considering the appropriateness in terms of the process of the Business Intelligence system, it found out that the value of suitability is also in the highest level such as the process of information preparation for inserting data to data warehouse by using ETL process ( $\bar{X} = 4.60$ , S.D.= .54), the process of data warehouse designed for using Star Schema data warehouse ( $\bar{X} = 4.60$ , S.D.= .54), the process of information modification stored in data warehouse to be in multidimensional (Cube) form ( $\bar{X} = 4.60$ , S.D.= 0.54), and the process of information presentation for decision-making on resources management in order to entrance to students' international occupation based on the information presentation from a variety of instruments derived from the Business Intelligence system which is consisted of the presentation in the form of reporting tools ( $\bar{X} = 4.80$ , S.D.= .44), analysis tools ( $\bar{X} = 4.80$ , S.D.= .44), and forecasting tools ( $\bar{X} = 4.80$ , S.D.= .44).

**Table 3** The Evaluation Result of the Utilization of the Management Model Using Business Intelligence Methodology for Higher Education Students to Enter Occupation Internationally

Utilization of the Business Intelligence System	$\bar{X}$	S.D.	Level of Suitability
The management model using business intelligence methodology for higher education students to enter occupation internationally is suitable for data analysis concerning with the enter to international occupations	4.20	.44	High
The process of management model using Business Intelligence methodology for higher education students to enter occupation internationally	4.60	.54	Highest
The developed management model using Business Intelligence methodology for higher education students to enter occupation internationally is possibly used for enhancing the management and decision-making over resources in order to support students' enter to international occupation genuinely.	4.00	.00	High
Total	4.26	.27	High

Table 3 shows that the evaluation result of the utilization of the management model using business intelligence methodology for higher education students to enter occupation internationally is appropriate in high level ( $\bar{X} = 4.26$  , S.D.= .27). When considering each part independently, it found out that the areas that receive the highest suitability are the process of management model using business intelligence methodology for higher education students to enter occupation internationally ( $\bar{X} = 4.60$  , S.D.= .54). The second and third highest suitable areas are the management model using business intelligence methodology for higher education students to enter occupation internationally is suitable for data analysis concerning with the enter to international occupations ( $\bar{X} = 4.20$  , S.D.= .44), and the developed management model using Business Intelligence methodology for higher education students to enter occupation internationally is possibly used for enhancing the management and decision-making over resources in order to support students' enter to international occupation genuinely ( $\bar{X} = 4.00$  , S.D.= .00).

**Table 4** The Conclusion of the Evaluation Result of the Management Model Using Business Intelligence Methodology for Higher Education Students to Enter Occupation Internationally

Evaluation List	$\bar{X}$	S.D.	Level of Suitability
Elements of the management model using business intelligence methodology for higher education students to enter occupation internationally	4.35	.54	High
The process of the Business Intelligence system for entering international occupations of higher education students	4.61	.38	Highest
The suitability of using business intelligence methodology for higher education students to enter occupation internationally	4.26	.27	High
Total	4.41	.32	High

Table 4 shows that the overall development of the management model using business intelligence methodology for higher education students to enter occupation internationally is highly appropriate ( $=4.41$ , S.D.=  $.32$ ). When considering each part independently, we will see that the process of the Business Intelligence system for entering international occupations of higher education students is the most suitable ( $=4.61$ , S.D.=  $.38$ ). The second and third highest are the elements of the management model using business intelligence methodology for higher education students to enter occupation internationally which is highly suitable ( $=4.35$ , S.D.=  $.54$ ), and the suitability of using business intelligence methodology for higher education students to enter occupation internationally ( $=4.26$ , S.D.=  $.27$ ) respectively.

## 7. Research Discussion

The evaluation result of appropriateness of the management model using Business Intelligence methodology for higher education students to enter occupation internationally by the specialists is averagely in high level ( $=4.41$ , S.D.=  $.32$ ). The development of the management model using Business Intelligence methodology for higher education students to enter occupation internationally is consisted of three sections: 1) Identifying the data source as a part of main data source that will be inserted in Business Intelligence system such as information related to foreign languages, information and communication technology skills, academic knowledge and professional skills in the fields students studying which affects the enter to students' international occupation. 2) Inputting the analyzed information which is a factor affecting the enter to students' international occupation into the process of Business Intelligence system. 3) Reporting the tendencies derived from the process of Business Intelligence system to the university administrators in order to support the management and decision-making over resources management and promote students' enter to international occupation.

## 8. Conclusion

The results of the development of the management model using Business Intelligence methodology for higher education students to enter occupation internationally, there are the management model which develop and decision in resource management within university for supporting the students toward effective International Occupation. The development of the management model also improve and encourage the knowledge and skill sets of students toward effective International Occupation, increasingly.

Within the scope of the development of the management model using Business Intelligence methodology for higher education students to enter occupation internationally, most of the data sources from any university that will be considered to enter to the Business Intelligence system are resemble, but there are some information which impacts the enter to international occupation of the higher education students in each university that are different, for instance, the international professional qualification examination or the foreign language competency criteria, etc. To identify the data source, it is possible to identify different information in addition to other data sources. That should be operated appropriately for each university and lead to the increase of effectiveness of the system's performance.

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## References

Falakmasir, M., Moaven, S., Abolhassani, H., & Habibi, J. (2010). Business Intelligence in E-Learning. Available from: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5542876> [Accessed 20th July 2012]

ICT for Education Master Plan Ministry of Education 2011-2013. (2011) Bangkok: office.

Kleesuan, S., Mitatha, S., Yupapin, P., & Piyatamrong, B. (2009) *Business Intelligence in Thailand's Higher Educational Resources Management* Available from: <http://www.sciencedirect.com/science/article/pii/S1877042810000194> [Accessed 20th June 2012 ].

Mariem, N. (2006) *Factors affecting the Freelance and Occupational Statuses of BBA Graduated Students Year 2002-2004 of Rajamangala University of Technology*. Rajamangala University of Technology.

Ministry of Education. (1999) *National Education Act 1999*. Bangkok: KhuruSapha Printery.

Opas, E. (2004) *Preparation before Being a Programmer and System Analyst*. Se-ed. Bangkok, Thailand.

Ouf, S. & Nasr, M. (2011). *Business Intelligence in The Cloud*. Communication Software and Networks (ICCSN), 2011 IEEE 3rd International Conference on, issue date 27th-29th May 2011.

Piedade, M.B. & Santos, M.Y. (2010) *Business Intelligence in Higher Education: Enhancing the teaching-learning process with a SRM system* Available from: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5556702> [Accessed 20th June 2012 ].

Prakong, K. (1999). *Statistics for Behaviorism Research*. 3rd ed. Published. Bangkok: Chulalongkorn, Thailand.

Rajamangala University of Technology. (2005) *Rajamangala University of Technology Act, 2005* Available from: [http://www.rmutsb.ac.th/university\\_council/knowledge\\_council/index2.php](http://www.rmutsb.ac.th/university_council/knowledge_council/index2.php) [Accessed 20th June 2013 ].

Rawewan, K. & Srisombat, W. (2011) The Development of Business Intelligence's Data Warehouse *Executive Journal*, 31(1),160-165.

Santi, A. & Tedpong, P. (2009) *Analyzing Information for Decision-Making by Business Intelligence*. Seminar 3rd National CS & ICT Conference 2009, Mahasarakarm, Thailand.

Taweesak, N. (2004) *Decision-Making Support Systems*. Available from : [http://www.sirikitdam.egat.com/WEB\\_MIS/107/index.html](http://www.sirikitdam.egat.com/WEB_MIS/107/index.html) [Accessed 20th July 2012].

Tithima, P & et. al. (2008) *Factors affecting the Entrance to Occupation of Students and Satisfaction of BBA Graduated Students, Rajamangala University of Technology Rattanakosin. Rajamangala University of Technology Rattanakosin* Available from :<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=601435> [Accessed 2nd July 2012 ].

Vitaya, P. (2006) *What is Business Intelligence? How does it Help Business Running?* Available from : <http://www.gotoknow.org/blogs/posts/52660> [Accessed 2nd July 2012 ].

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*Citizenship Responsibility Higher Learning: Combining the Spiritual-Cultural,  
Rights-Responsibilities, and Economics of a Civic Development Higher Learning  
through a Sociology in English*

Alan Brady

Kwansei Gakuin, Japan

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## **I. Educational philosophy and practice: socio-educational and socio-cultural threefolding**

Rudolf Steiner's ideas about a threefold social organism (Lamb, 2008; Uhrmacher, 1995), were born out of a conversation Steiner had with Otto von Lerchenfeld, who had asked Steiner what could be done for our global world to experience lasting peace.

Lerchenfeld felt that unless fundamental changes in modern society were made, there would be ongoing social unrest. Steiner's conception of the threefold social organism – rights life, spiritual-cultural life, and economic life all equal but intertwined – was offered as a way to answer Lerchenfeld's question. Referring to the spiritual-cultural sphere in particular, Steiner maintained that a healthy spiritual-cultural life is not interested in merely fostering individualism and self-development which, he says, is the goal of the economic life. A healthy spiritual-cultural life also seeks to foster concern and care for others and the world at large, where people go beyond purely personal development desires to include concern and care for others.

Steiner, however, recognized that humans are of little service to themselves or to others and the world at large if they do not actively strive to develop their latent capacities and also new capacities. A provider of what Steiner calls any type of cultural service, a teacher for, example, “needs to “compete” for the appreciation of potential families who might (wish to) send their children to the school where said teacher is engaged ” (Lamb, 2008: 42). Those conditions absolutely necessary for healthy competition in the spiritual-cultural sphere – which includes education – are: freedom of thought, free appreciation, and freedom of choice. In short, the spiritual-cultural realm is,

balanced by the cultivation of a sense of responsibility,  
tolerance, and love that leads to a concern for others,  
and the development of capacities to be of service  
to society (Lamb, 2008: 42)

Whereas spiritual-cultural life is based on thought development or thinking, economic or business life is, according to Steiner, closely related to the will element in the soul life of the human being. How business is conducted has direct bearing on the evolution of humanity wherever it is, in its spiritual, ethical, and moral sense. The third part of the threefold social organism is what Steiner calls the rights life, and in this realm the main concern is not so much personal development or efficient production. Rather, the main concern is with human relations, how people relate to one another in all types of situations and activities such as fairness, civility, standards of (personal and group) conduct, proscriptions, agreements, and safety and comfort. In a healthy threefold social organism or society, argues Steiner, equality must prevail in the rights realm.

Steiner concludes that in modern society, whether conceived locally or globally, humanity suffers from the reality that it is economic life which has developed at a far more rapid rate than either the spiritual-cultural life or the rights life. The result, says Steiner, is that not only does the economic life have insufficient ethical and legal guidelines, it (the economic life) needs to accept what the other two realms develop in and offer to humanity. It is economic life, Steiner says, which dominates and directs both the spiritual-cultural life and

rights life, and this dominance includes education. As economic interests continue to dominate at an accelerating rate,

the spiritual-cultural life can not be fostered and humans cannot adequately develop the spiritually creative forces and ideas needed to counter the destructive tendencies of the economic life (Lamb, 2008: 44)

Classroom life and study can be thought of as a threefold social sphere which encompasses the economic, the rights-responsibilities, and the spiritual-cultural. Put another way, social life in the classroom involves power relations and rights-responsibilities (political considerations), caring and sharing and cooperative-collaborative endeavors (spiritual-cultural relations), and competitive individual development (economic considerations). In order that there be a healthy threefold social sphere in the classroom, all three intertwined sub-spheres must be equally developed and work together.

Referring specifically to education, the concern of this Asian Conference on Education, Morrison (2008) maintains,

if we ever hope to have schools that are engaging and truly embody democracy, then the classes within them must provide opportunities for students to experience autonomy, freedom, and choice in what is studied. (2008:1)

Morrison goes on to argue that schools and society are reflections of one another. What any society values and sees as ideal often, she says, gets taught in schools. Furthermore, what and how children are taught results in their developing certain ideals and values that are perpetuated in the wider society once these students become adults and go into society as local and global citizens. These values may very well include in this modern capitalistic-bent world of ours, a competitive ethos, a conviction that meritocracy is the norm, a view that instrumental-extrinsic motivations are more important, and an excess valuing of academics (i.e. knowledge and skills) over values/ideals and social or emotional development.

Schools are also, Giroux (1988) maintains, terrains of struggle or places and spaces where contradictory values and ideals compete for prominence. Proponents of a democratizing education argue that people who are given freedom and choice will eventually become better democratic citizens simply because they have learned how to negotiate with others, to identify obstacles and paths of resistance, to know themselves and others.

They are also open to change and listening to others as they all consider themselves to be vital to the development of a vibrant and healthy social threefolding.

Christainsen, Garvin, and Sweet (1991) contend that higher education has become more isolated from the kinds of learning people require for their life competencies and further argue that a disposition to study and learn across the entire curriculum in an integrated fashion must be the rationale of a higher education; if not, they maintain, institutions and practitioners will have failed to serve the higher learning needs of students. The main value then that a higher education can impart to students is this pre-disposition to love learning *across an integrated curriculum* above any ability only or primarily to learn only in

any one or more isolated part(s) of that curriculum. This pre-disposition is far more urgent than that students passively bank knowledge, skills, values, or ideals, or that they (students) are not themselves actively engaged in constructing or reconstructing their learning. Abe, Perrin, and Woolbright (1995) go further in maintaining that a higher education's main role and responsibility is to help students define the important characteristics of adult citizenship.

There is, and has been for a very long time an urgency – though too few people have too infrequently recognized it or advocated for it – for a higher education mission that integrates a language of wider use and communication (LWUC) English, and academic and social development content in the Japanese university context. Brady (1997) argued that,

The continued acceptance and practice of isolating communicative English language teaching and research from native language (Japanese) academic study bodes ill for the future and further development of the university in Japan. (Brady, 1997: 85)

It is the main argument of this paper that an integrated and self-directed, student engaged teacher led and assisted social threefolding which combines the study/learning of and in a language of wider use and communication (i.e. English LWUC) and academic and social development content (e.g. sociology study), can best satisfy the concerns of those educators who hope to have an active and well-educated adult citizenry to help develop and nurture their local and global societies. As Barnett (1997, 2000) contends, a higher education must provide students experiences which encourage them to (1) reflect on their thoughts and actions, (2) reinterpret presenting situations where they see the curriculum not as an imposition but as a set of possibilities and practical hopes framed in large part by themselves, and (3) develop a continuous expression of both a skeptical and questioning outlook geared to the continuous and recursive reappraisal of their own individual and collective learning.

Bisong (1995) believes, and I firmly agree, that English as a LWUC opens up new opportunities for a society and its people. It can, he says, help a society become multilingual and multicultural, and also offer its citizens a richer linguistic repertoire and an expanding consciousness. Beyond the many limitations of English language study which have existed and dominated in Japan for far too long, LWUC English study, integrated with content as the driving force, has the potential to help sociology students develop a more flexible and critically aware approach to their study and learning.

English as a LWUC can also help students, and faculty and the university community as a whole, increase awareness of local and global society and their social roles as Prodromou (1992) argues.

What we teach and particularly the way we teach reflects our attitudes to society in general and the individuals' place(s) in society. It also reflects our educational practice as an implicit statement of power relationships, of how we see authority in the classroom and outside. Just as the mother tongue in Freire's *Pedagogy of the Oppressed* becomes a process of increasing consciousness of one's

society, so too may the teaching and learning of (and in I add) a foreign language. (1992:74-75)

Success in language teaching and learning in Japan, including also most unfortunately at the tertiary level, is too often conceptualized and then practiced – and measured for its success as well – in terms of how well students passively learn or acquire reading, writing, listening, and speaking knowledge and/or skills in their engagement with or use of the language. Language teaching and learning may be primarily measured for its “success” in how well students “master” linguistic language (e.g. grammatical competence). and/or pass competency examinations. If students are lucky enough, they will have teachers who prioritize intercultural communicative competence learning. But as necessary as this aim might be for language engagement and use it is not in and of itself sufficient to help students link their language learning with social change and participation (Brady, 2004, 2006).

A life-long love of and for language study/learning and intercultural communication contributing to a participatory citizenry for constructive social change, can only happen if teachers and the curriculum and syllabus respond to students’ needs to connect the language they study and learn to the real concerns that they have in their lives, which involve school, family and relationships, changing identity formation, curiosity and uncertainty, and worries about the future. This is a responsive view of language study supported by a many applied linguists such as Harrison (1999), Littlejohn (2004), Lange (1994), Brady (2004, 2006), and Brady and Shinohara (2000, 2003).

According to Tanabe (1978) English in Japan operates as a borrowed subject/object language, not as a language of wider use or communication, or as a locally or globally useful means of intercultural communication. Imamura(1978) argues that university faculty engaged in the teaching and researching of English language must re-examine their basic approach to language education, and is concerned with the following five issues:

1. What is language and language study for?
2. Why teach and study/learn language?
3. Which non-native (i.e. non-Japanese) language(s) need be taught and studied in Japan?
4. Who benefits and how do they benefit from such study?
5. How should language be taught?

Suzuki (1978) pointed to a perhaps more fundamental problem with the conceptualiation and practice of English study at university. He noted that there is far too inadequate attention to and concern with language study as (my italics) *educational growth*. The teacher of/in English must:

be aware of the notion that his or her work consists of two basic elements: language and teaching. We English university faculty think only about English ignoring the element of teaching. Since teaching is included in a broader concept of education, it is possible to name our deficiency as lack of attention to education. (1978: 84 )

Mark (1990) has highlighted such a multidimensional view of language teaching and learning – cited in Brady (2006) – which highlights the role of language teachers as educators where,

in the language learning process the teacher and students alike have room for personal growth and betterment in understanding themselves and the world we live in. (Mark. 1990:11)

Thematic content of whatever nature, academic and/or personal, and which serves as the driving force for language study, can interact with various channels of experience (e.g. perception, attitude, information or knowledge, and skills or dispositions), and also with individual and collective social identity (i.e. lifestyle, sense of purpose, past experience(s), etc.). The central concerns of this intersection are autonomy, responsibility, self-esteem, cooperation, and participation. A wider educational growth view and practice of language learning, integrated with and directed by content engagement for participation and social change, takes as its starting point the communicatively-shared and communally-shared development of life-enhancing dispositions such as:

asking questions and being inquisitive,  
guessing, hypothesizing, and being curious,  
being compassionate and showing empathy for others,  
being less judgmental and prejudicial,  
making informed decisions,  
managing time and responsibilities to self and others,  
being more independent and self-reliant,  
being less competitive all the time and more cooperative,  
tolerating ambiguity and difference and being able to risk,  
sharing explicit and implicit understandings,  
being more flexible and adaptable.

## **II. What is or can be a higher education global citizenship integrated language and content development?**

Blanton (1992) argues, and I agree, that education often violates the deepest needs of the human spirit by (1) alienating and boring or dulling teachers and students/learners, and/or (2) by failing to address in any meaningful ways the real issues of importance in our lives. These real issues have been articulated by Splitter (1995) as follows:

- a. Does (my) life have meaning, and if so, what is that meaning?
- b. Do I have gifts that the world wants and needs?
- c. Who and what can I trust?
- d. How can I rise above my fears and prejudices?
- e. How do/can I deal with suffering, my own and others?
- f. How do I keep hope(ful)?

Splitter (1995) argues that educational quality must be defined in terms of the thinking and feeling development of students. Schools, in his estimation are and continue to be agents of manipulation as well as preservers and protectors of the status quo rather than facilitators

for personal and social enrichment and liberation. Most schools, says Splitter, confuse educating with a far more narrow and primarily economic-oriented view of training, an idea that is supported by people such as Cutts (1997), McVeigh (2002), and Refsing (1992) in particular. Teachers concerned with developing a deeper more critical thinking and feeling in students must recognize, he says, that “in the real world outside the classroom thinking among ordinary citizens may be more of a threat than a priority” (1995:1).

There are certain dispositions, according to Splitter (1995) which can guide a philosophy of thinking and feeling for those educators who wish to go beyond training students whether for jobs or to fit into society as it is already constituted, which Forbes (2005) calls responsibility *to society*. These dispositions are:

- a. argumentation skills,
- b. inquiry skills, especially the search for reasons and not accepting what is given and true,
- c. identification, modification, and application of criteria to form judgments and make decisions,
- d. making distinctions to allow people to see the complexity of a situation, event, problem or solution, an act or decision,
- e. the ability to identify relationships to help us make sense of things (i.e. causes and effects, means and ends, parts and wholes),
- f. the exercise of moral imagination by which we think of different ways about doing things.

Splitter’s advocacy of what he calls a “philosophy for thought” needs to be expanded and widened to include spiritual higher learning, especially when that study and learning takes place at/in a Christian or any other faith-created institution such as is the case at Kwansei Gakuin University in the Kansai area of Japan, where this writer teaches and researches in that university’s Sociology Department. How can we teachers find ways in our study with students to explore those deeper dimensions of teaching, learning, and living. By spiritual is meant the never-ending human quest for connectedness with others and the world we see and experience, as well with all that which we can not possibly know or see for certain, something larger and more trustworthy than our own egos, in short, the total mystery of our being alive together and sharing life together.

When we higher education teachers and students enter the classroom we bring our physicality and spirituality with us, says Palmer, so we can choose to either reflect upon or avoid those questions we live with every day, and how we are living them. We teachers, can if we choose, together with students, prioritize dialogue over lecture, collaboration and cooperation over competition, and democracy over authoritative control. But, as Palmer realizes,, interrogating the truths that we together live in class, and which can be extended to our lives outside class as well, can easily conjure up fears that somehow we all need to “fix” one another and solve “problems.” How do or can we get over this reluctance to spiritually-culturally, economically, and politically engage with one another?

One way might be for us as teachers to consensually and cooperatively with students, challengingly but never threateningly, adopt agreed-on study ground rules that once adopted can release us from our fears and anxieties, and at the same time teach us all to live our questions with one another rather than forcing ourselves to have to find “correct” answers to

them. This we can do by dialogically opening up to one another - we to students, and students to us and each other – using life content topics to spur us to ask questions, to guess and predict (if possible) what may or may not be, to make tentative conclusions – not protestations or pontifications – about why things are or might be as they are.

Greene (1993c) believes that to truly have a shared learning experience teachers must make special efforts to listen more to students' voices in order for teachers to discover and act about what they, our students, are thinking and feeling, what most concerns them, what has meaning in life both inside and outside the classroom for them. This prime attention to students' voices, however, can create tensions with systems especially, where the overall agenda of study and learning revolves around system and teacher control, and which focuses primarily if not exclusively on our individual and socially collective responsibilities to society, not for any re-making of society.

Prime attention to students' voices can create empowerment possibilities as well, where, as Banks (1991) points out, knowledge and skills are not neutral. Both knowledge and skills, however we define them, are important purposes or instruments if you like to help people improve the physical quality and spirituality of their immediate classroom society and hopefully by extension, society in the wider more global world. Education, however, must do more; it must light paths for social change. This obligates us as teachers and educators to lead young people to promote constructive change(s) towards more just and compassionate and sustainable approaches to living and learning in a rapidly changing and increasingly complex, puzzling, more globalized, and at the same time more fragmented world.

Citizenship higher education development thus needs to focus on both the moral and civic dimensions of our living in an increasingly connected and globalized world. Citizenship higher education can be accomplished in the context of a university language learning that is explicitly connected to and integrated with meaningful life study content, and which together focuses on culture, communication, interaction, negotiation, and responsibility both to and for the immediate and wider societies. I will further develop this overall argument in due course but must now lay out the parameters of such a citizenship higher education.

This attention to and concern for developing in young adults their local and global citizenship development in class study involves the following:

- a. democracy in real-time and an end to systemic control and unquestioned teacher authority in study and learning,
- b. prioritizing what Bollinger et al. (2003) call a one-world ontology of knowledge and communication,
- c. responsibility in class to (our) society and for (our society),
- d. prioritizing the “phronesis” or process and value of study over its operational (skills) or epistemic (knowledge acquisition) results or product,
- e. a commitment to Splitter's philosophy for thought,
- f. a post-method and post-syllabus approach to higher language learning and educating,
- g. a strong or stronger communicative language teaching (CLT) than now prominently reigns in language pedagogy,
- h. re-conceptualizing and differently practicing an integrated language (sociology) content higher learning.

Murphy (1996) believes that a theme-based integrated content and language approach allows students to become knowledgeable, curious, and inquisitive about things of importance, concern, and interest. As this knowledge base grows, Blanton (1992) argues, vocabulary and other linguistic forms also grow at the same time simply because knowledge of whatever sort has no way of existing or means of expression without language and interactive communication. Lange (1994), commenting on the concept and practice of curriculum delivery, maintains that the curriculum (i.e. the learning plan), and practice or instruction (i.e. the coupling of that plan to students as they learn), are influenced by and influences students' conceptualization(s) of the world and their place in the world. The focus of any language instruction and learning, in his estimation, is to develop competence and confidence to comprehend and use language. Such a focus connects the study of and in language to the content of almost any discipline, as well as the student-learners' personal, social, and political contexts.

Higher educators, particularly those involved in language education, need to constantly wonder why language study and learning is important and what the language requirement is for. Analysis of language and/or any approach which treats language as isolated compartmental subject or object learning, whether "communicatively oriented" or not, is not sufficient to justify the inclusion of a language learning component in a specialized content-area higher education such as sociology. The proper orientation, says Lange (1994):

must be toward a level of language use or proficiency where students use that proficiency to learn about themselves in the world ... it is at this point that language learning becomes an important element in a higher education. The suggested principle only works with cooperation in other areas of the liberal or specialized curriculum to provide for language use  
(1994: 4)

Hallet (1999:24) argues that expanding students' communicative competence when studying (in) a content area and teaching through a language other than the native language equips students with the necessary skills to communicate more confidently and easily about (1) their own culture and society/civilization, (2) history and geography, (3) the socio-cultures of the target language, and (4) universal and global experiences and intercultural and multicultural phenomena. Additional aims and "payoffs" of an integrated content and LWUC university education can be (a) to introduce students to the textual discourses of a particular discipline (e.g. sociology), (b) to help students develop academic literacy skills in the LWUC, and (c) to teach students discipline-specific vocabulary that can and will help them pursue their future careers and also prepare them to continue their studies in the LWUC at a postgraduate level.

Higher education, critically including the language study provision, cannot contribute to citizenry or national development unless it abandons its operation as a passive activity with fixed curriculum, authoritative control structures, and other status quo arrangements that justify a continued banking knowledge transmission path to study and learning. I will now continue this story by using additional social science/sociological and applied linguistics research support to further conceptualize and give hope of actually practicing the above.

### III. Reconceptualizing the practice of a sociology in English: social science and (language) educational concerns.

Social science support for an integrated content-language learning (CLIL) centered on a socially responsible and accountable citizenship development comes from Bauman (1989:179) who argues:

The existential modality of the social (unlike the societal) has been seldom held at the focus of sociological attention. There is no sociological consensus as to the meaning, experiential content and behavioural consequences of the primary condition of being with others'. The ways in which that condition can be made sociologically relevant are yet to be fully explored in sociological practice.

Barnes (2000) maintains that the relationship between the individual, society, and social structure has not been addressed with proper regard for social interaction. Society is often conceived in purely structural "otherness" terms, or in very individualistic terms. Too much attention is given to the subjective and the objective at the expense of the intersubjective. Barnes argues that the central problems of sociology are those of collective or social agency. "Responsibility" has not been a compelling central element in the construction of any major social theory where,

understanding the everyday employment  
of this concept, with its double significance  
- psychologically it implies internal  
capacities, sociologically it implies  
liability and answerability – is also  
(my italics) *the key to understanding  
of the role of 'choice', 'agency', and  
related concepts in everyday contexts.*  
(2000: xii)

Sociological theory and practice, like that in other social sciences, is the scientific study of feelings and ideas in social behavior. Society, says King (2007), cannot be understood as interaction of independent individuals nor in terms of structural, economic, or biological determination. Human consciousness and understanding, he believes, are fundamental to all forms of social life, and people must orient themselves to shared meanings because their actions can be coordinated only insofar as all have a common understanding of what they are trying to achieve. Ongoing classroom communication and class social life as, and in, a one-world ontology can itself become an important content area locus of transformation. Johnson (1997) argues that in a modern society that values individualism and is dominated by it, the idea that a society is just people may seem obvious. This is true of classroom society as well. Yet, this approach ignores the difference between people who participate in social life (e.g. class study), and the many varied relationships that connect participants to one another and to other groups and societies through their participation in a social life system such as schooling. People, says Johnson, often participate in systems without feeling or believing they are a part of them, and that

they in fact make them happen. The “classroom” “social study” system is not simply comprised of an aggregate of individuals.

Class social life is a system with connected individuals and connected groups who participate and relate to each other in a number of ways. People are what make any system “happen,” and without their participation any system exists only as an idea with some physical reality attached. Nevertheless, a system affects how we think, feel, and behave as participants. People make systems happen, and systems lay out paths of least resistance to shape participation. Johnson (1997) says that most of what we accept as reality consists not of things as they really are, but of ideas that we develop about things as we think, feel, or believe they are, where believing is seeing. The classroom is a real social context, and is, according to Andrewes (2005), more than the study of language or content “out there” in the “real world.” The classroom can be used for communication development and knowledge construction where the main role of language, communication, and knowledge-building in social life is neither functional nor strategic, but affective. Classroom social life can be directed towards defining and molding relationships in a community. We always participate in something larger than ourselves (i.e. systems). As social life flows from this relationship, we need to consider that we are all involved, if only indirectly, in any social consequences that result, whether beneficial or not.

Simply making a connection between sociology content and language learning by itself, however, is not sufficient for students to better understand the nature of responsible and accountable social life.

I believe sociology students can better understand “sociology in English” if they are actually involved in experiencing the nature of their own unfolding social life in their learning, rather than looking at social life as an “outside self” subject or object. Sociology in English” should be conceived, and practiced, as a one-world ontology exploration of (1) our knowing about the social world, and (2) what we communicate and how we communicate with each other about social systems and our participation in them. A “sociology in English” is (1) social life in shared and connected participatory communication, and (2) shared and connected participatory communication in social life.

How life transpires inside class has potential to transform the quality of life that goes on outside class when study is focused on the life-world of the community as a whole, not on individualistic “what’s in it for me” concerns. Content and language integrated learning or CLIL is an approach which has gained currency among language educators who seek to connect language learning with content-knowledge acquisition and engagement. The teaching approach, outlined in parts IV and V of this paper, is also a response to what Johnson (1997), Sandelands (2003), Baumann (1989), King (2007), Forbes (2005), and Barnes (2000) feel is most urgent in sociological practice: re-directing it away from the study of social life as the life of interacting individuals, towards a more socially responsible study of the lived nature of cooperative social life itself.

The study of and in modern languages can ideally lead to evolution of “intercultural being” or the understanding of the varied and multiple realities people are all part of (Phipps and Gonzalez, 2004). Study participants can be sensitized to cultural difference which can reduce ethnocentric bias using creative activities conducted in the L1 and/or the L2. The education of genuinely open-minded, culturally-sensitive university graduates, who have had experience(s) being strangers in a foreign language and culture, as well as a deeper

understanding of their own language and culture, is of paramount importance, Bruen (2005) says. On a global scale intercultural understanding between people and nations has not kept pace with scientific developments or advances, Bruen (2005) contends. A case can be made, he argues, for offering as many graduates as possible opportunities to learn another useful language. And I agree with Bruen (2005) that global society needs critical and imaginative thinkers who understand that most arguments are multi-faceted, and who are open to others' views and who realize the world is both complex and wonderful.

Andrewes (2005) maintains that classroom social life, which focuses on language-communication development, and/or knowledge acquisition, does not usually exploit opportunities for participants to develop personal and social relationships to support and promote the social life learning process. CLIL focusing on responsibility *to* and *for* society, can help cement interpersonal relationships within and between connected groups of people. CLIL also builds intercultural knowledge, develops intercultural skills, and provides opportunities to study social life content through different perspectives. Research also shows that CLIL study frameworks diversify methods and forms of teaching practice, and enhance participants' awareness of different ways of (1) understanding the world, (2) what and how we communicate about the world, and (3) our place in the world as connected individuals participating in social systems.

Littlejohn (2001) believes that it is an illusion to think class language study practices have little impact beyond the learning of language. As educators, language teachers are uniquely positioned in helping to shape the views that young people have of themselves in relation to learning in general, and their relationship to and participation in systems of oppressive authoritarianism and control. Language educators can shape how young people see and value themselves as active or passive agents. Language educators need to help students develop a questioning and skeptical attitude, and what they do depends on their own sets of values and priorities, and as Littlejohn argues, their political stance as well. As much as our practices in class emulate or should emulate and reinforce individual and social responsibilities to society, we have an obligation, says Forbes (2005), to make a coherent and principled contribution to shape the future by being responsible *for* society.

#### **IV. An important prerequisite for a value-laden CLIL: The necessity of a one-world ontology of knowing and communicating**

Bollinger, Nainby, and Warren (2003) perceive a conceptual divide between contemporary communication theory and critical educational practice. At present there exist, they argue, conceptually two separate worlds, one the world we communicate with or the entire set of symbols, sounds, gestures, pictures and the things we use to communicate. The second world is the world we talk about, all of the various subjects that move us to talk to one another. Bollinger, Nainby, and Warren believe teachers must work with students to rethink and interrogate how and why we constitute the world as we do. In a one-world ontology the two stages become one where knowledge and reality can be unmasked and recreated simultaneously.

Representational two-worlds ontology models, they maintain, fail to account for the complexity of lived experiences of people in class, where the emphasis remains on systemic meanings rather than minute immediate communicative acts. Building on Freire (1970) and Stewart (1995), Bollinger et. al assert that human conditions are fully constituted in and through social interaction, and can be changed by social

interaction as well. Two-world assumptions can affect exploration with students of the socially-constituted nature of, for example, exploitation and any pedagogical possibilities to create the goal of transforming exploitative conditions. Communication, they maintain, forms the essence of social life, unifying humans and the world in which people live; communication is not a mere tool-instrumental means to achieving human world-shaping.

A one-world ontology, where language and communication have immediate effects on teaching and learning practice(s), can redirect CLIL toward a more exploratory, experiential, non-technical, and non-epistemological, life valuing phronetic approach advocated by Flyvbjerg (2001). But more than an ontological vocabulary is necessary. Young adults in Japan come from pre-university schooling that has, for the most part, been decided for them and where they have had little if any investment in decisions taken on their curriculum. It is necessary to set up teaching and learning structures in class where students have rights and obligations to voice, to question, to actively participate in shared understandings, and to make educated guesses about things they do not know.

What sort of pedagogy then can be generated in the process of class interaction? What kind of thinking, feeling, and behavior changes can be fostered by that engagement? Students in a one-world ontology of study and learning have opportunities to better understand the relationships between (their) communication and the material conditions of their (individual and social) lives, and how their lives are ongoing and sustained by the many choices they make every moment in class and whether they choose paths of least resistance or not. Students also have opportunities to see the social hegemony that is instituted in education and social life.

Students can learn to experience in their here-and-now shared participation in communication and their overall learning the constraints the world has over them and the transformative possibilities they have over the world (Shor, 1996).

## **V. Practicing a CLIL-citizenship development social life learning**

This writer is an English language sociology of education researcher-practitioner at a university in western Japan, Kwansei Gakuin University (KGU). English language study in the Sociology Department where I work is confined to first and second year general education, and is viewed in the Department as peripheral, and at best auxiliary, to study in the specialty-area (native language Japanese) mainstream part of the curricular provision. English language is not institutionally accepted as a medium of sociological practice learning, but remains entrenched as a lower priority, separate and separated subject-object of study. Students are expected to connect English language communication with sociological study on their own without any institutional assistance. Nevertheless, "Sociology in English" is a buzzword in the Sociology Department, though it has more of a public relations' role and responsibility than teaching or researching recognition or acceptance. The Department prides itself on being a "global sociology" higher education entity. Having a small percentage of the department's curriculum provision and research in a language of wider use globally (English) would, therefore, have valid educational significance. I thus decided in my class teaching to make explicit connections between language-communication and social life learning where students actually experience in their

study a "sociology in English" to explore the ongoing living nature of social life as it unfolds in the classroom.

What "happens" in class social study life can change the way(s) in which a system functions and how people choose to participate in that system. Likewise, the way(s) in which that participation happens, and how teachers treat students in class, can dampen or increase students' sense of individual and social agency as they participate in a system. Teaching language has epistemological-knowledge-building and technical linguistic aim(s), and also more general educational objectives such as socialization, cognitive development, and emotional development. Understanding roles, rules, cultural behavior, and structured participation in social life in the classroom can help develop students as explorers of their ongoing participation in social life, and consequently develop their awareness and embrace of interdependence over independence and dependence.

To effectively integrate language, content, and social and civic responsibility learning we must create the atmosphere, procedures, norms, expectations, and demands in classrooms that we see and would like to see outside in the wider more macro systems of social life. Our teaching-learning environment should reflect the values to which we hope the wider more macro society aspires, and we must make a conscious effort to create that valued improvement in our immediate class society. Students should be provided with venues for cooperative as opposed to competitive learning which can heighten their shared participation in schooling as they experience that system in class.

Flyvbjerg (2001) has argued that instead of trying to emulate the natural sciences, the social sciences should be practiced as *phronesis*. *Phronetic* social science focuses on four value-rational questions: (1) Where are we going? (2) Who gains and who loses and by which mechanisms of power? (3) Is this development desirable? (4) What should we do about it? The CLIL-citizenship development study framework in my class instruction is based on *phronesis* as much as it is concerned with experiencing, in shared participation in social life, a sociological imagination. A CLIL-citizenship development is not an end goal in and of itself, but serves to teach class study participants the value of a cooperative and collaborative learning that engages with knowledge and communication of social life.

Building and nurturing sociologically imaginative civil society in the classroom begins with students and I together proposing and agreeing to discuss topics that affect our lives on a daily basis in class and outside class, and which can help us work towards a greater awareness and understanding of the connections embodied in Flyvbjerg's four value-rational questions. A number of class study topics are suggested at the beginning of term, and I ask students' permission to allow me to raise one topic in particular to jump-start our topical dialogue. The first topic we engage in is whether or not we will value study together individually and/or collectively/communally. With students' consent, either by a vote of hands or secret ballot, we start our study with discussion on the merits of cooperative and/or competitive study, and what group study will be like, if we chose to form smaller groups. How many members will each group have, what needs to be done and who will do what needs to be done, for example?

This first topical discussion is held in English in public whole class talk that I lead, but after groups are formed, is conducted in groups in either English or Japanese as class members decide. After/if we have decided to conduct study collectively and

cooperatively – I also take time to advocate the benefits of cooperative learning over competitive learning – we then work our way through other study issues that will help determine where we are and are going, who wins and who loses in where we are going, and what behavior we expect of ourselves in where we seem to be headed in our study.

Among the topics suggested by me or by students are:

1. What communication language(s) can we or should we continue to use and why?
2. What area(s) of social life, besides that in this classroom, would we like to study together as a large group.
3. Do we need to prepare for our study every week, and if so, how? Do we need to review previous study and if so, how?
4. How shall we evaluate teaching and learning? If we have “tests,” why and who makes them? How are they made and taken? What will “test” results be used for? What kind(s) of other evaluation(s) may be necessary and why?
5. In our study of social life, is, for example, history, geography, economics, and anthropology necessary? Why or why not?
6. Who makes decisions, how will they be made, and about what week-to-week?
7. Do we need to have social life study rules, and if so what rules, and who makes them and how? Do we agree to keep to the rules we consensually make or not? If rules are “broken” what do we do? Are there “penalties?”
8. What are some “things” we (ought to) value in our study together? For example, do we value raising questions or not, and if so about what? Do we value listening attentively to another/others when they speak?

The purpose of these start-of-term activities is for us to bond together as connected individuals and groups in our study, and to get some ideas about what aspects of social life in particular we wish to investigate more fully as the term goes on. In that regard, I advocate the benefits of studying one or two areas of social life for the rest of the term rather than jumping from one to another system area topic week-to-week. But this advocacy is not imposed on students. Everything that we discuss or do is reviewed and reflected upon in the shape of reflection notes, prepared first by myself as an imperfect model of what one can recall of a decision discussion, or activity.

After the first, second, or third class meeting reflection notes are voluntarily prepared by students as group notes – if students have chosen to form groups - and/or by individual students where we compare our recall and understanding(s) of what we

have done in our previous social life study. The class is further structured with time allotted to (1) whole-class and group greetings, announcements, and shared small talk, (2) submission of and review of previously agreed upon homework – with sufficient copies to myself and other groups of students, (3) negotiated discussion of new study and/or study already begun, and (4) further study and learning opportunities which recognize our responsibilities both to and for our study-learning society. This last structural arrangement I have labelled the difference between a “set menu” and an “a la carte menu” of study. The former is what we are obligated to study according to the already set departmental and/or course/class mission and guidelines, whereas the latter is what we together can choose to study or do free from constraints placed upon us by, for example, a uniform text, a uniform test or tests, or the institutionally other-directed set goals of our study.

This conceptual and practiced CLIL framework aims for students not only to participate in the planning and practice of the curriculum, but to *take control* of their study and learning. McKinney (2007) observes that it is necessary for study participants to be much more attentive not only to what they study (knowledge), or the skills they utilize to enhance knowledge learning. They need, McKinney argues, to hone in on *how they study and how they value what and how they study through shared dialogue*. Though my attention remains fixed on students as individuals and as members of freely chosen groups, the learning focus, however, is on shared communal learning, and in particular, how we can use the intersection of our shared language and communication and social life knowledge-building to drive and nurture a healthy threefold civil and civic-moral society in class from one week to the next.

## VI. Concluding thoughts

One definition of global citizenship states that if young people need to be empowered as citizens then they need to learn in an environment that actually recognizes them as citizens, and which treats and respects them as citizens. In such an environment it is critical that participants are provided numerous opportunities to practice and develop dispositions to enhance their citizenship responsibilities (Time for Rights, Unicef and Save the Children, 2002). The many decisions taken in class study, choices that are or are not made about, for example, what and how to study, or whether smaller groups and study rules need be formed and how, can and ought to be better understood by connected system participants.

Students need to be more fully aware of who they are, not only as individuals or groups, but more importantly as socially connected individuals and groups, how the world and its social life systems affect them, and also how they can have control over how the world affects them through their active participation in systems.

An integrated CLIL and citizenship approach gives promise of sociological educational practice fulfilling its principal task as argued by Barnes (2000), Baumann (1989), Johnson (1997), Forbes (2005), and King (2007), and is vital to social science as,

1. It brings into the constitutive life of class study lived and experienced issues of, for example, power, territory/dominance, roles, statuses, values, responsibilities to and for society, structure(s), and culture(s) that exist and

are real for students and teachers outside school and class life,

2. It re-affirms the importance of groups, and how people form groups and live in groups. Furthermore, it re-focuses a connection with micro-sociological practice (the interactions between connected individuals in groups, and between groups) with a more macro-view of social life.

Systems do not change unless relationships change, especially where and when people choose or do not choose to take paths of least resistance. Schooling” is as much about what people do as it is about associations we may have with the idea of “schooling” as a social system. What happens in the system (i.e. schooling and the classroom) depends on the situation the participants are in, and also how they choose to participate. People participate in social systems which have cultures containing words and ideas people can use to interpret what they experience and come to know. Humans, argues Johnson, use culture to create or recreate the world(s) they live in.

Class study culture primarily consists of symbols, especially words, contained in a language or languages, and various kinds of ideas about everything from our relations with one another to the meaning of our and others’ lives. Schooling as a social life system is an ongoing process being a work always in progress. Integrated CLIL-citizenship learning can help students see schooling as micro interaction of *connected* individuals and *connected* groups and as macro social systems in which they are part. As schooling unfolds, it emerges from how we choose from moment to moment what we are going to make of it. One-world language-communication-knowledge development, and on-going classroom social life are not subsidiary to knowledge about the world outside the classroom. Student understandings of social life and society are not distinct from how they experience their own immediate “society” as it unfolds.

The interdisciplinary language, education, and social science teaching and study approach put forth in this paper has been well received by students. In end-term surveys of how they view their study and learning, a large majority of students continually report that they do in fact have some better ideas of what “society” and “culture” are, how “structures” and “agency” relate to “culture” and how people are part of systems. Students also say that of all that they have learned in their study, individual *and* social responsibility *to and for their* class study is most beneficial for them. Future practiced research of the employment of a CLIL citizenship learning should now aim to investigate more deeply how participants view this learning process and the learning outcomes of their study.

If we as university language educators choose to focus on helping our students develop a heightened sense of local and global citizenship in a world that is being continuously connected and fragmented at the same time, and also help instill in them moral and civic responsibilities to self and to others, we are obligated to treat them as full citizens with (1) rights and responsibilities, (2) altruistic economic aims, and (3) spiritual and cultural empathy and inclusiveness. Human development and instilling socially beneficial values in young people are the publicly stated goals of Japanese education. LWUC English medium study integrated with and directed by content study has an important role to play in the implementation of this goal. However, to practice citizenship development in the classroom requires the creation and development of a framework for study that can serve as an ongoing resource to create

opportunities for civic dispositions to be (re)learned and practiced regularly. The key to creating and nurturing this framework is cooperative, collaborative, and collective thought and action by and of teachers and students to inquire into, for example, their sources of knowledge and differences in values and ideals. A study framework that prioritizes people over technology or rules or status quo arrangements can contribute to enhancing communal awareness of civic responsibility both on a local and more global scale.

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iafor

## References

- Abe,, H., Perrin, K., and Woolbright, D. (1995) The Evolving of a Curriculum. ON JALT '95, Proceedings of the 1995 JALT (Japan Association of Language Teachers) National Conference, pp. 26-29
- Andrewes, S. (2005). Towards a Post-Communicative Approach? Life beyond CLT. *Modern English Teacher*, 7: pp. 4-9.
- Banks, J. (1991) A curriculum for empowerment, action, and change, in Sleeter, C. (ed.) *Empowerment Through Multicultural Education*, pp. 125-142. Albany, New york: SUNY Press.
- Bauman, Z. (1989). *Modernity and the Holocaust*. Oxford: Polity Press
- Barnes, B. (2000). *Understanding Agency: Social Theory and Responsible Action* London: Sage Publication.
- Barnett, R. (1997) *Higher Education: A Critical Business*. Buckingham: SRHE and Open University Press.
- Barnett, R. (2000) *Realizing the university in an age of suoercomplexity*. Buckingham and Open University Press.
- Bisong, J. (1995) Language choice and cultural Imperialism: a Nigerian perspective. *ELT Journal*, 49(2): 122-132.
- Blanton, L. (1992) A holistic approach to college ESL: integrating language and content. *ELT Journal*, 46(3): 185-193.
- Bollinger, C., Nainby, K., and Warren, J. (2003). Articulating Contact in the Classroom: Towards a Constitutive Focus in Critical Pedagogy. *Language and Intercultural Communication* 3(3): pp. 198-212.
- Brady, A. (1997) English as an additonal language (EAL): lanyage policy and planning at university for non-language majors. *Kwsnsei Gakuin Sociology Department Studies*, Vo. 77: 87-122.
- Brady, A. (2004) Disciplining and Unburdening University English Study: developing a transculturation Of additional Inague use and need. *Kwansei Gakuin Language, Culture, and Communication Studies*, Vo;. 7: 13-26.
- Brady, A. (2006) Beyond the CLT debate in language teaching and learning: dialogue and spirituality

In the communicative classroom, *Kwansei Gakuin Language, Culture, and Communication Studies*,  
Vol. 9: 37-57.

Brady, A. and Y. Shinohara (2000) principals and activities for a transcultural approach to additional language learning. *System*, 28: 305-322.

Brady, A., and Shinohara, Y. (2003) English Additional Language and learning Empowerment: Conceiving and Practicing a Transcultural Pedagogy and Learning. *Asian Journal of English Language Teaching*,  
Vol. 13: 75-94. The Chinese University Press.

Bruen, J. (2005). Educating Europeans? Language Policy and Planning in Higher Education In Ireland. *Language and Intercultural Communication*, 5(3&4): pp. 237-247.

Christiansen, C. R., Garvin, D. A., and Sweet, A. (eds.) (1991) *Education for Judgment: The Artistry of Discussion Leadership*. Boston: Harvard University School Press.

Cutts, R. L. (1997) *An Empire of Schools: Japan's Universities and the Molding of a National Power Elite*. Armonk, New York: M. E. Sharpe Press.

Flyvbjerg, B. (2001). *Making Social Science Matter: why social inquiry fails and how it can succeed again*. Cambridge: Cambridge University Press.

Forbes, S. H. (2005). On Socially Responsible Education. Online document at <http://www.putnampit.com/educate.html>

Freire, P. (1970). *Pedagogy of the Oppressed*. London: Penguin Books.

Giroux, H. (1988) *Border Crossings: Cultural Workers and the Politics of Education*. New York: Routledge Press.

Greene, M. (1993c) The passions of imperialism, multiculturalism, and community. *Educational Researcher*, 22(1): 13-18.

Hallet W. (1999) Ein Didaktisches Modell für den bilingualen Sachfachunterricht. *The Bilingual Triangle Neuspracheliche Mitteilungen*, I, 52: 23-27.

Harrison, D. (1989) Communicating Classrooms: English Language Teaching and World Citizenship. *The Language Teacher*, 23(2): 9-31.

Horio T. (1988) *Educational Thought and ideology in Japan: State Authority and Intellectual Freedom*. Tokyo: Tokyo University Press.

- Imamura, S. (1978) Criticism on TEFL in Japan. In Koike et al. (eds.) *The Teaching of English in Japan*. pp. 15-22. Tokyo: Eichosha Press.
- Johnson, A. G. (1997). *The Forest and the Trees: Sociology as Life, Practice, Promise*. Philadelphia: Temple University Press.
- King, A. (2007). The Sociology of Sociology. *Philosophy of the Social Sciences*, 37: pp. 501-522.
- Lamb, G. (2008) The Threefold Nature of Social Life. *Biodynamics*, Summer, 2008, 39-44.
- Lange, D. (1994) The Curricular Crisis in Foreign Language Teaching. *ADFL Bulletin*, 25(2): 12-16.
- Littlejohn, A. (2001). Language teaching for the future. Online document at [http://www.3telus.net/linguisticissues/language teaching.html](http://www.3telus.net/linguisticissues/language%20teaching.html)
- Mark, K. (1990) A language Teaching Model for the 21<sup>st</sup> Century. *The Language Teacher*, 14(5): 11-16.
- McKinney, K. (2007). The Student Voice: Sociology Majors Tell Us About Learning Sociology. *Teaching Sociology*, 35: pp. 112-124.
- McVeigh, B. (2002) *Japanese Higher Education as Myth*. Armonk, N.Y.: M. E. Sharpe Press.
- Morrison, K. A. (2008) Democratic cClassrooms: Incorporating Student Voice and Choice in Teacher Education Courses. *Horizons*, Fall: 1-17.
- Murphy, J. M. (1996) Integrating Listening and Reading Instruction in EAP (English for Academic Purposes) Programs. *English for Specific Purposes (ESP)*, 15(2): 105-120.
- Prodroumou, L. (1992) English as cultural action. *ELT Journal*, 42(2): 73-83.
- Refsing, K. (1992) Japanese educational expansion: Quality or equality? In R. Goodman, and K. Refsing (eds.) *Ideology and Practice in Modern Japan*, pp. 116-129. New York: Routledge Press.
- Sandelands, L. (2003). *Thinking About Social Life*. Lanham, MD: University Press of America, Inc.
- Shor, I. (1996). *When Students Have Power: Negotiating Authority in a Critical Pedagogy*. Chicago: Chicago University Press.
- Splitter, L. (1995) On the theme of "Teaching for Higher Order Skills". Retrieved May 25, 2004 from [http : : www.Shss.Montclair.edu/inquiry/Summ95/splitterhtml](http://www.Shss.Montclair.edu/inquiry/Summ95/splitterhtml).

Stewart, J. (1995). *Language as Articulate Contact: Toward a Post-Semiotic Philosophy of Communication*. Albany: SUNY Press.

Suzuki, Y. (1978) The Importance of Educational Philosophy. In Koike, et al. *The Teaching of English in Japan*, pp. 71-90. Tokyo: Eichosha.

Tanabe, Y. (1978) English as an International Language: Qualification, Adaptation, and Perspective. In Koike et al., pp. 47-57. Tokyo: Eichosha Press.

Time for Rights, Unicef and Save the Children 2002: Learning About Child Rights and Responsibilities.  
Online document at [http://www.unicef.org/nz/store/doc/1\\_RightsActivities.pdf](http://www.unicef.org/nz/store/doc/1_RightsActivities.pdf)

Transferable Skills in Modern Languages Project (2002-05). Online document at <http://www.skillsproject.tcd.ie>

Uhrmacher, P. F. (1995) Uncommon Schooling: A Historical Look at Rudolf Steiner, Anthroposophy, and Waldorf Education. *Curriculum Inquiry*, 25(4): 381-406.

White, J. (2003). *Rethinking the School Curriculum: Values, Aims, and Purposes*. London: Routledge/Farmer Press.

*A Development of Analytical Thinking Skills of Graduate Students  
by using Concept Mapping*

Sornnate Areesophonpichet

Chulalongkorn University, Thailand

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Abstract

Graduate students need to have analytical thinking skills to complete research and develop new knowledge and innovation by themselves. Concept mapping is an efficient tool for analytical thinking skill development. This research focuses upon developing the analytical thinking skills of graduate students by using concept mapping. It is a classroom participatory action research which collected data in three loops from 2012-2013: Research-Based Learning (R1D1), Mind Mapping techniques (R2D2), and Cmap Software (R3D3). Data is collected by using reflective journals and cmaps from ten graduate doctoral students in the 'Comparative Higher Education' course. Research instruments are in the form of analytical thinking skill analysis, and reflective journals. The results show that teaching and learning processes, by using research-based learning with concept mapping, can help students to develop their analytical skills to a higher level. Using Cmap software can help them to analyze and organize their information from research papers and articles, develop long term memory, and integrate their information in one concept. Moreover, the design of teaching plans and the sequencing of assignment plans both have effects upon the development processes of students' analytical thinking skills.

## Introduction

The development of learners' potential in the 21<sup>st</sup> century not only places great emphasis on fostering students to become academic, knowledgeable and independent, but also on that they become innovative, creative thinkers, effective doers and skillful problem solvers. In addition, their development of work and interpersonal skills are addressed. As a result, the current trends of teaching and learning pedagogies focus upon enhancing students' analytical thinking skill development, which directly leads to the development of critical thinking skills, problem solving skills and creative thinking skills (P 21, 2005). These skills are essential characteristics of graduate students. Analytical thinking skills have become one of the more important skills for students in the 21<sup>st</sup> century; particularly, in Higher Education levels, which aim for students to increase their High Order Thinking Skills (HOTS), so that they can develop themselves, build their own innovation and be effective leaders in society. Therefore, analyzing skills are regarded as essential skills for graduate students.

Teachers' experience and teaching strategies are essential for the development of students' learning processes and analytical thinking skills. Lessons which aim to develop students' analytical thinking skills require teachers to select teaching and learning pedagogies applicable to particular learning content. Teachers are also required to plan lessons and to use appropriate teaching materials, or tools, in order to develop students' analytical thinking skills. The development of analytical thinking skills will take place when students practice and develop their analytical thinking skills through the learning process within the classroom. A number of research studies, found both inside and outside of Thailand, revealed that there were several teaching and learning pedagogies that could develop analytical thinking skills. That is, students' analytical thinking skills could be fully developed with the support of experienced teachers, well-designed lesson plans and effective tools used for analytical thinking skill development.

Concept Mapping is an important tool, used for not only creating learning processes for students but also to evaluate students' overall understanding. Concept Mapping enables students to adopt 'Meaning Verbal Learning', which enhances their learning potential and further develops their analytical thinking skills. Students use concept mapping to sequence knowledge, and to build knowledge structures from most general to more specific content, which in turn leads to comprehensive understanding. In addition, concept mapping helps students to extend and create long-term memory (Novak, 1990; Novak & Wandersee, 1991). Many research studies have pointed out that there has been extensive use of concept mapping, with a diversity of students in different teaching and learning contexts; in different educational perspectives; and with different educational and curriculum development (McClure, Sonak, and Suen, 1999; Weideman and Kritzinger, 2003). Daley (2004) carried out research based upon constructivist teaching methods, by using concept mapping with graduate students. The participants were two groups of graduate students (21 students) who took an 'Adult Education Program'. One group was an experimental group, and the other was a control group. The duration of the study was one year (two semesters). The findings revealed that students used concept mapping as their learning strategies in two ways: (1) they used concept mapping to learn and to review new concepts; they mentioned that they enjoyed using concept mapping to sequence, analyze and understand information, and (2) they used concept mapping to acquire understanding of their own learning processes; concept mapping enabled them to understand how to relate

knowledge and interact with others, in order to develop their own meaning and understand how to create a body of knowledge. It can be said that concept mapping makes a substantial contribution to education.

This research aims to develop the analytical thinking skills of graduate students by using concept mapping. The questions addressed in this study pertained to whether or not using concept mapping as a learning tool, with different variables, would affect the development of graduate students' analytical thinking skills, and how to realistically create teaching and learning pedagogies which are applicable for developing graduate students' analytical thinking skills.

### **Literature and the conceptual framework**

The conceptual framework of this study was based on 'Constructivist theory'. Many educators (Piaget, 1966; Ausubel, 1986; Bruner, 1990 and Novak; 1998) mentioned that constructivist theory could potentially develop students' thinking processes. This process will enable students to build their own body of knowledge by relating new experiences to their prior knowledge. New knowledge is an integration of those previous experiences with new concepts students gain and new learning contexts which they encounter. Students will set up concept mapping as a result of meaningful interpretation within the mind (Sauders, 1992 cited in Daley, B, J, 2004). This action is an important factor for developing students' analytical thinking skills which lead to 'Meaningful Learning' (Novak, 2008; Sunny Cooper, 2009). Meaningful learning will occur when students relate new experiences to their existing ones.

It is essential that students have Analytical thinking development so that they can develop meaningful learning processes. According to Bloom (1969), an analysis may be classified into three parts; (1) Analysis of elements is the ability to classify and analyze significant elements, i.e. to find a summary of content and to differentiate facts and opinions, similarities and differences and causes and effects; (2) Analysis of relationships is the ability to relate concepts and reasons, i.e. to compare and analyze consistent and/or contrary or irrational information, and; (3) Analysis of organizational principles is the ability to search for principles of relationships between elements of information, i.e. to identify key matters by taking into account relevant stories and being able to summarize the relevant information into one concept. The graduate levels need to develop graduate students' analytical thinking skills, so that they can reach higher order thinking skills whilst learning. As the graduate levels mainly offer courses emphasizing the completion of research studies, Research-Based Learning (RBL) is regarded as a fundamental for learner autonomy, in seeking additional knowledge through research methodologies. It is also seen as a tool for developing knowledge seeking processes and self-directed learning, which consists of 7 levels (Figure 1). This study was conducted by using Research-Based Learning at Level 4 (research report), along with concept mapping used to analyze information gained from articles, research papers and articles.

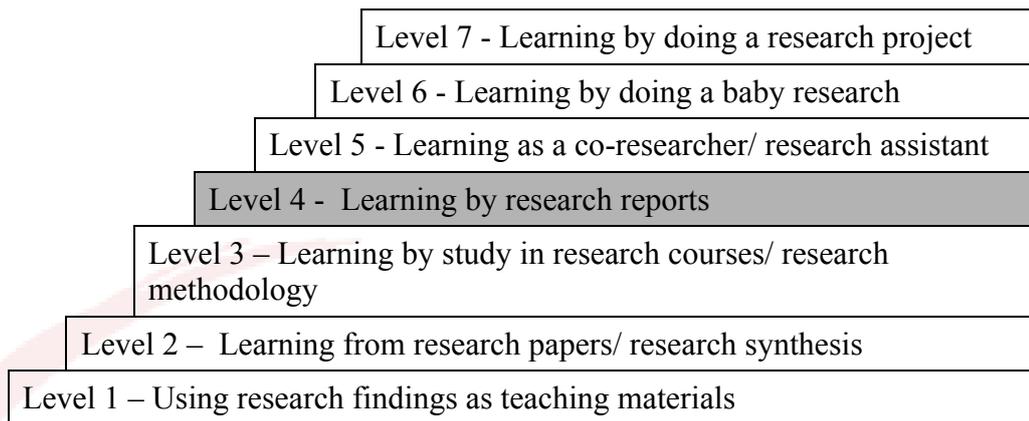


Figure 1. Research-Based Learning (RBL)  
(Pitiyanuwat and Bunterm, 2002)

In addition to analytical thinking skills, a learning tool or technique is another element essential to Research-Based Learning. That is, 'Concept mapping and Mind mapping are effective tools that help develop students' analytical thinking skills.'

### **Concept Mapping**

Concept Mapping is one of the graphic organizers developed from Ausubel's Intellectual Development Theory (David Ausubel, 1963; 1968; 1978) and the Constructivist Theory. Concept Mapping aims to provide Meaning Verbal Learning that will take place when students learn and relate information and/or new experiences to their assimilation. Key features of concept mapping are that the concept mapping is a tool used to sequence knowledge which occurs from analyzing concepts of new knowledge, and relates to each proposition by using 'linking words', or phrases, to represent the meaning of each proposition. Squares or boxes are symbols that express the meaning of each proposition, and they are linked by arrows. Concept mapping systematically reflects the concrete understanding of students. This expression is called 'Semantic Units' or 'Unit of Meaning' (Novak, J. D. & A. J. Cañas, 2008), that is a clear concept which is able to communicate its meaning to others.

Nowadays, there are instant programs developed and based upon concept mapping, which can be used as learning tools for creating systematic concept mapping. The use of these programs is compatible with concept mapping principles. The programs include functions which enable users to insert files, pictures and web links into their concept mapping. It is more convenience for users to manage information in the form of electronic files. For instance, 'Cmap Tools' developed by the Institute for Human and Machine Cognition (download from <http://cmap.ihmc.us>) is an instant program based upon Novak's Concept Mapping, which combines technology and the internet to help users build knowledge structures from their own understanding. However, most of instant programs are commonly developed from 'Mind Mapping' rather than 'Concept Mapping'.

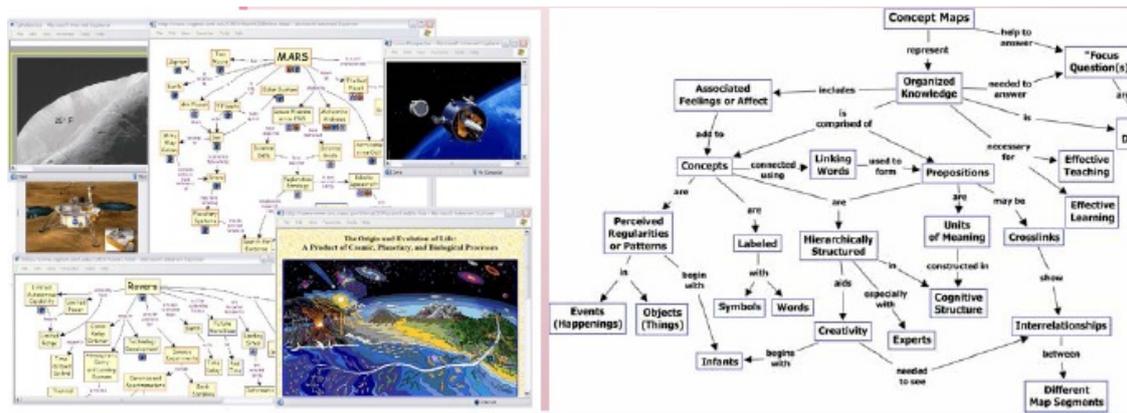


Figure 2. Cmap Tools Software (Novak, J. D. & Cañas, A. J. 2008)

It is apparently obvious that some confusion has arisen between users of Concept Mapping and Mind Mapping, as some users think that they are exactly the same because Concept Mapping and Mind Mapping share similar key features. However, Mind Mapping (Davies, Martin, 2010) focuses upon the recording of ideas, without the need for arranging thinking systems and expressing meaning through words, pictures or symbols. It draws lines from the center, and relates all lines with Nodes, similar to branches of a tree which represent information. Colors are used as mediums to reflect the understanding of segments regarding individual users. On the contrary, Concept Mapping summarizes concepts gained from analyzed information. It focuses upon relating segments within the main domain, thereby presenting relationships and information cross-links which reflect concrete understanding, and can be used to communicate with others.

**Research Methodology**

This longitudinal study aimed to develop analytical thinking skills of graduates. The teacher in this study used research-based learning as a medium of instruction, and used concept mapping as a learning tool with variables contained within three loops, as follows: R1D1; using concept mapping with research-based learning, R2D2; using concept mapping and mind mapping, and R3D3; using Cmap Software to create concept mapping. R2D2 and R3D3 also used research-based learning. A classroom participatory action research was conducted to collect data from graduate students who enrolled on the ‘Comparative Higher Education’ course in 2012-2013. Students were expected to have reading skills and be able to analyze and organize information they read from documents in websites, and from research papers and academic articles. In each semester, students’ analytical thinking skills were evaluated via eight analytical thinking skills forms. Additionally, reflective journals and in-depth interviews were employed to gain more qualitative data. Then, all data was summarized to find students’ analytical thinking skills. Data collected from teachers was that of reflective journals of teaching and learning, which occurred in each research loop. Lesson planning stages, teaching stages and evaluating stages were qualitatively analyzed.

**Data analysis**

The data analysis was divided into two parts; teachers and students regarding research loops. In the student part, students’ analytical thinking skills were individually

evaluated. That is, quantitative and qualitative data were analyzed. Quantitative data included eight pieces of work created by using concept mapping. The analysis of students' work was based upon 'Bloom's elements', which comprised content analysis, relationship of information analysis, and principle analysis. The scoring criteria used in this study were adapted from Novak and

Gowin's Scoring Criteria (Novak and Gowin's Scoring Criteria, 1984). It was used to evaluate particular features of the Cmap product created by graduate students. The researcher did not make comparison of students' scores. Since RBL in this study was reported research where the majority of data was gained from students' learning autonomy, the Cmap products could not be compared to each other. The scoring criteria included: Preposition (1 point), Hierarchy (1 point), Cross-links (2 points/link), Exemplification (1 point), and Understanding the Principle (5 points).

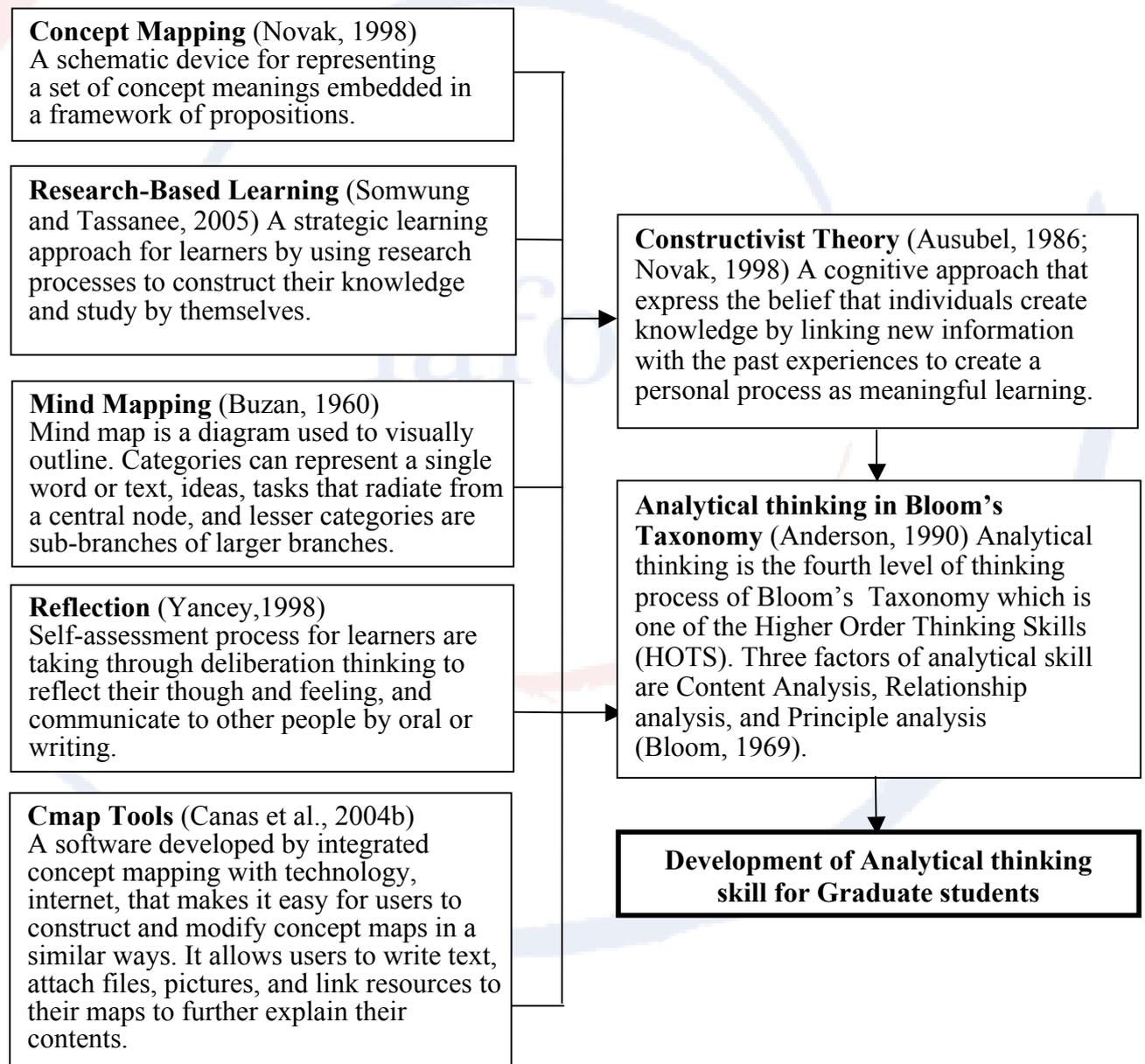


Figure 3. Conceptual Framework

Furthermore, students' analytical thinking skills which occurred from using concept mapping were qualitatively analyzed using content analysis. Data collected from students' reflective journals expressed students' before and after uses of concept mapping in their learning processes, as well as in-depth interviews also being qualitatively analyzed.

## Results

The results of this study were separated into three sections with regard to the research loops, R1D1, R2D2, and R3D3, and included two parts: the evaluation of students' analytical skills in terms of process and product from concept mapping, and; students' reflective thinking from teachers' and students' points of view. The results are described, as follows:

Data was collected from students who enrolled on the Comparative Higher Education Course, an elective course offered for doctoral degree students. This course was taught by one teacher, and there were three students who enrolled in the first semester of 2012, two students in the second semester of 2012, and another five students in the first semester of 2013. Therefore, there were ten graduate students; four of them males and the other six females, and they all aged between 33-48 years old. In this study, all of the graduate students did not know about, nor had they ever used, concept mapping before. However, six of them knew about mind mapping. Half of the graduate students had experienced using mind mapping, and there was only one student who always used mind mapping in the learning process. An evaluation of students' analytical thinking skills from their Cmap products was an evaluation that summarizes particular features of map building, based upon their abilities to analyze and organize concepts and sequence relationships systematically. Table 1 indicates that graduate students had the ability to analyze 'Proposition' at an average of 39.1, with concept hierarchy at 3.25. On the other hand, cross-links appeared to be low, at an average of 1.01. The Cmap represents an understanding of concepts, at an average of 3.6.

Table 1:  
Assessment of critical thinking skills of learners by concept mapping products

Concept mapping Characteristics	Analytical Thinking score													
	Mean (R1D1)				Mean (R2D2)			Mean (R3D3)						Total Mean
	1	2	3	Total Mean	4	5	Total Mean	6	7	8	9	10	Total Mean	
1) Proposition	62.38	38.38	29.5	43.42	43.5	26.75	35.13	69.38	23.63	28.5	36.63	35.5	38.73	39.1
2) Hierarchy	4.75	3.63	3.13	3.84	3.5	2.88	3.19	3	2.25	2.38	2.38	3.63	2.73	3.25
3) Cross links	0	1.88	0.63	0.84	0.75	0.25	0.5	4	0	4.5	0	0	1.7	1.01
4) Exemplification	3.25	0.63	0	1.29	1	0.63	0.82	0.5	0	0	0	0.13	0.13	0.75
5) Understanding the principle	3.38	4	2.88	3.42	3.75	2.63	3.19	4.75	5	2.75	3.5	5	4.2	3.6

The results of the analysis of reflective journals of teacher and students, together with the Cmap products which have effects upon the development of students' analytical

thinking skills; by using Concept mapping and Research-based learning in R1D1, Mind mapping in R2D2, and Cmap Tools Software in R3D3, which are summarized as follows:

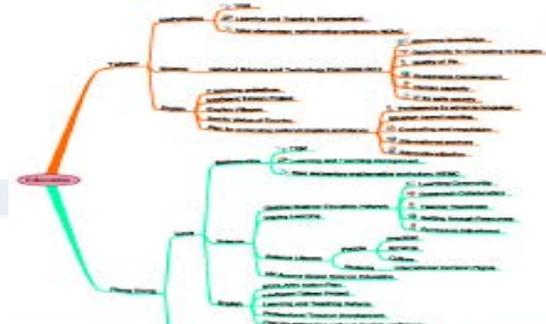
**Teachers:** With regard to reflection, it was found that teachers had to select schooling materials which were not too unsophisticated in content, and were suitable for a period of time that permitted students to gradually develop the analysis process. However, studying sources of information in which the contents were too small, too narrow or had little diversity, resulted in a lack of in-depth information and a lack of synopsis of other concepts, otherwise needed to integrate information building within concept mapping. For example, building concept mapping from only one article could probably not be substantially summarized. The overall image and linkage of knowledge could not be seen as building concept mapping from research documentation, teaching, or study information from multiple sources.

**Students:** It was found that concept mapping was a good tool for learning. It helped to develop the process of critical thinking in students, especially during the working process. It helped students to analyze documents systematically, and reflect upon their understanding of the concepts of learning in each subject, concretely and clearly. Furthermore, the development of building concept mapping in students could increasingly be better formed, in accordance with the understanding of this method. With regard to the reflection results of students, it was found that applying concept mapping was useful, resulted in students having the necessary analytical processes needed to classify information, and it led to the outlook of larger sets of information available for good memorization. The overall image of contents could be more obvious and easier for presenting information. In addition, some students have adopted such techniques to supplement other subjects, as well.

**The problem of usability:** It was found that students who did not previously know of concept mapping developed confusion with mind mapping, as they both had similar processes for creating maps. However, mind mapping was concluded by highlighting the main details of each concept, rather than a summary of concepts and coherence of the concepts. Students who had basic use of mind mapping performed better than those who had never experienced that basis before. In addition, most software which students opted for was typically developed on the basis of mind mapping concepts, more so than concept mapping, and this resulted in students being easily confused between both concepts.



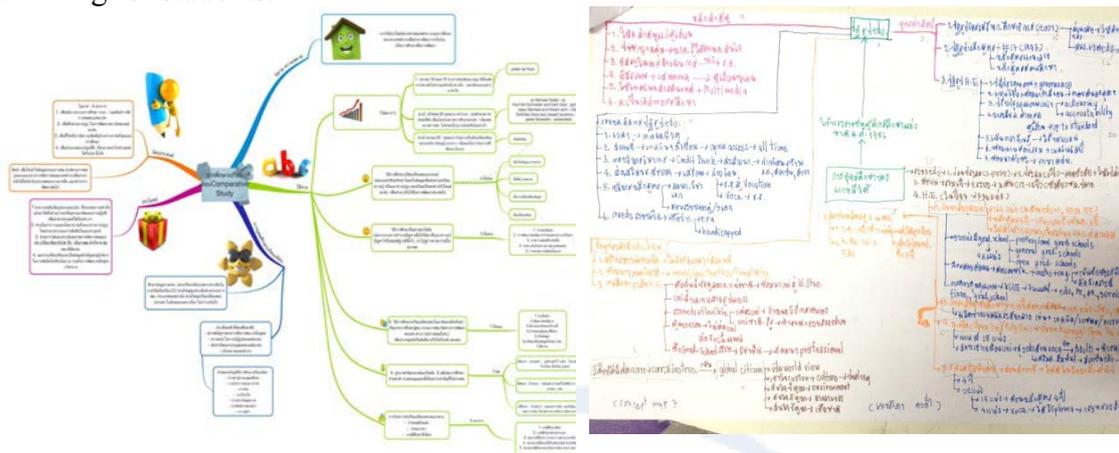
Brainstorming Software  
(<https://bubbl.us>)



NovaMind 5 Software  
([www.novamind.com](http://www.novamind.com))



objective differing from concept mapping, it was a tool that equally developed critical thinking for students.



Imindmap software

Note taking mixed mind mapping

Figure 5. Examples of concept mapping by learners (R1D1)

**R3D3: Using Concept mapping with Cmap Tools Software.** The findings in R1D1 and R2D2 reflected that software had a tremendous impact upon the use of concept mapping, because most programs developed from the concept of mind mapping made students easily confused with concept mapping. Therefore, the research of R3D3 assumed that concept mapping, using software developed according to the concept of concept mapping, was only a single tool used to help develop critical thinking skills of students, and help their understanding of the principles and creation of the map as being the correct map.

The results showed that the Cmap product evaluation, and the reflection of students for using the Cmap tools software as a learning tool, helped students develop critical thinking skills in an efficient way, and made students correctly understand the principles of concept mapping, and thus enabled better development.

**Teachers:** It was found that Cmap tools software, used as a learning tool with complexity of usability, required training to recommend its use and emphasize to students the need to practice with the system and develop expertise. It helped students to become familiar with, and reduce bias towards, the complexity of the program. Moreover, teachers need to immediately provide feedback to students after submitting each new cmap product, so that students would have a clear understanding and subsequently develop the critical thinking process, as required.

**Students:** It was found that during the first use of Cmap tools students spent most of their time completing the first cmap product, and spent less time when they had more expertise. The reflections of students found that concept mapping helps students to use critical thinking for extracting the essence of knowledge, and that they must try to analyze the relationships of the relevant information, resulting in further development of the critical thinking process.

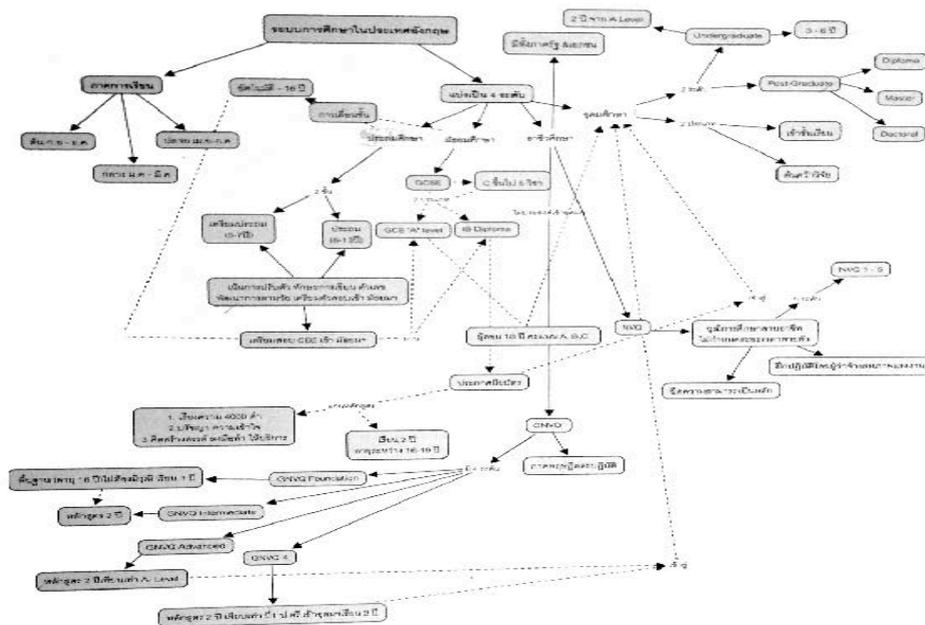
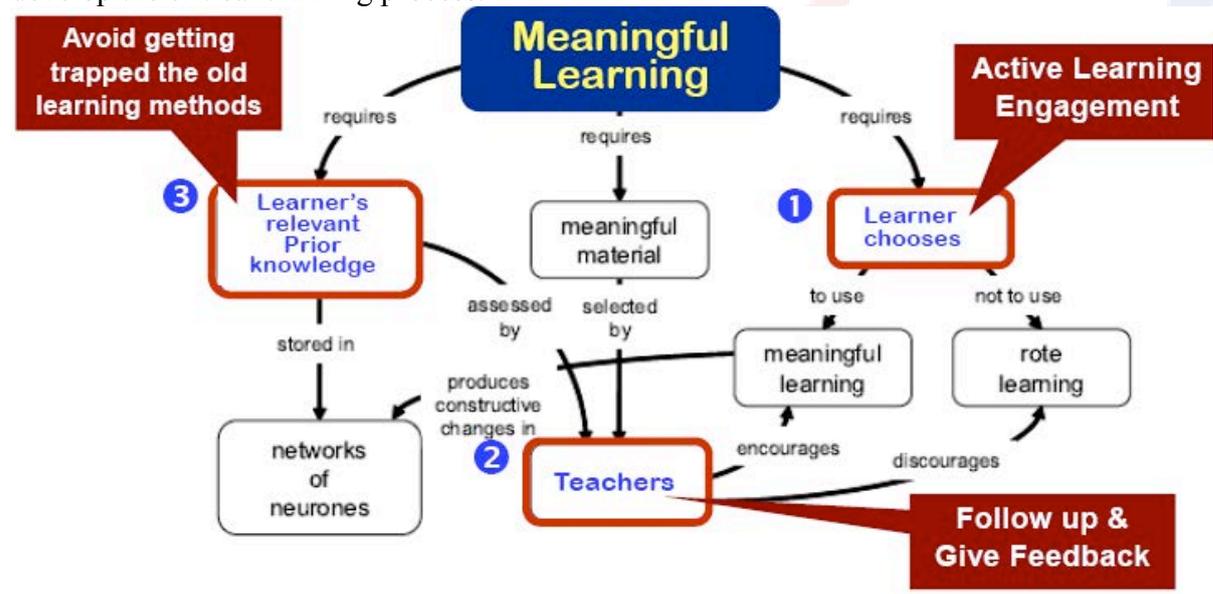


Figure 6. Examples of Concept mapping by learners (R3D3)

**Conclusion and Discussion**

The research results, as aforementioned, reflected that using concept mapping was deemed as a good learning strategy for the development of critical thinking of students, especially at the graduate level, since concept mapping allowed students to practice their ability to solve problems and think critically. Moreover, it helped develop educational achievement by creating positive attitudes for students, in a course that focuses upon content (Daley, BJ, 2004). It helped students to reduce anxiety about remembering the contents and changing their focus to understanding, interpretation of extracting the essence and analysis of information linkage, and understand the principles of knowledge. This would enable students to gradually develop the critical thinking process.



Developed from Novak's Concept map of Meaningful learning (after 1998)

**Development of teaching strategies:** Concept mapping could help improve the teaching quality of teachers to be more effective, because they had to plan their teaching very well. Preparing document materials with synthesized contents helped students, who were inexperienced in using concept mapping, to more easily summarize the subject matter. The priority of contents in the synthesized documents was conducted according to the sequence of profundity as well. It would support students to more easily understand the contents and the method of building concept mapping. However, teachers should realize that understanding the procedures and practices needed to create concept mapping, for students who never had the experience before, would take a longer time to build a Cmap product for each sheet. Nevertheless, the period of time would gradually decrease as the number of applications and the expertise of the users increased. Moreover, the major challenge for teachers in higher education was to change their teaching methods to be appropriate for the methods of adult student learning. Using concept mapping helped teachers to more deeply understand the ‘constructionism’ pattern, whereby it became a tool used to reflect the understanding of students. Furthermore, it encouraged people to change the thinking process of students in the long run (Daley, 2004). In addition, applying technology to create cmaps was deemed as the major challenge for teachers and students, for understanding and using software to create maps suited to the learning objectives and contents, and for teaching the software. This was because software was mainly developed based upon the concept of mind mapping for the purpose of brainstorming, recording and summarizing the content. It focused upon key words of the content, rather than a summary of the essence of the concept and analysis of linkages of the relevant concepts, in order to conclude the overall principle of the contents. Using Cmap Tools was not only to build cmaps as the correct principles of concept mapping, but was also to allow teachers to use other functions of the software for learning activities in the classroom, such as brainstorming, or as a source of self-learning by also attaching files with pictures to link them into created cmaps (Novak and Cañas, 2008). **Developing evaluation strategies:** The results reflected that Cmap products for each sheet could reflect the understanding of students regarding the concrete contents. It also reflected that students had a clear understanding of the contents, and enabled teachers to resolve or explain and help increase the understanding of students for each point. It was deemed that the evaluation of students was obvious and rapid (Novak, and Cañas, 2008). However, it was noticed, in the evaluation of critical thinking skills of students, that they did have an understanding of the contents studied. Thus, it was essential for students to practice and have a clear understanding of the principles of concept mapping beforehand. Thus, they would be evaluated without interference variables, since the major drawback of using this learning tool was the effect caused by the software used to create the cmap software for most students.

**Developing critical thinking skills of students:** The research on analysis from cmap products with the reflection of individuals showed that reflection was the evaluation of critical thinking skills of students in the thinking process. They had the same reflection that, which despite in the beginning they felt they were impractical and uncomfortable with due to unfamiliarity, when they gradually practiced they found that concept mapping helped to develop their critical thinking process, because they had to read the documents at least two times – first, when reading the overall content to understand the contents, and then to read them for a second time to conclude the synopsis of the content. After that, in the relationships of information and conclusions of significant principles, the contents would be sequenced. The development of the

thinking process required time and continuity. Learning for only one semester was not enough, if students used it to learn other subjects and develop their critical thinking and better development, continuously and respectively. However, using concept mapping had to arise from the interest of students. They had to consider naturally active learning engagement as being important, because meaningful learning would occur when students decided to learn by themselves, so that they could finally change the learning method from rote learning to meaningful learning. At the same time, teachers had to monitor the progress of students for creating cmaps, and give immediate feedback so that students could develop the learning process by themselves and to their full potential.

Another important observation in the R2D2 research found that the learning processes of students still adhered to the existing ways of learning, such as note taking. Thus, students could not overcome the original methods of the development of the critical thinking process. These reflected in that the role of teachers was highly critical to the learning processes of students, in terms of teaching, assessment, and the development of the learning processes of students.

### **Recommendation**

The three research results reflect that the selection of good learning tools, such as concept mapping, affect the real learning processes of students. Therefore, schooling in higher education should be further developed, especially in the social sciences, and include the study of utilization from the package program, in order to develop the schooling process for critical thinking in higher education, and for the continued utilization of other functions of Cmap Tools software in higher education schooling.

## References

- Ausubel, D. P., Novak, J. D., & Hanesian, H. (1986). *Educational psychology: A cognitive view* (2nd ed.). New York: Werbel and Peck (reprinted).
- Bloom, B. S. (1969) cited in Smith, Karen (2012). *Bloom's Taxonomy*. Faculty Center for Teaching and Learning, University of central florida. Retrieved 10 January, 2012, from, <http://www.fctl.ucf.edu/teachingandlearningresources/coursestaxonomy/>
- Bond, John. (2006). *Reflective assessment: Including students in the assessment process*.  
The Forum on Public Policy. Retrieved 10 January, 2012, from, <http://www.forumonpublicpolicy.com/archivesum07/bond.pdf>
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Cañas, Hill, and Lott. (2003). *Support for Constructing Knowledge Models in CmapTools*. in *Technical Report IHMC CmapTools 93-02*. Retrieved 10 January, 2012, from <http://ftp.ihmc.us/Publications/WhitePapers/Support%20for%20Constructing%20Knowledge%20Models%20in%20CmapTools.pdf>
- Daley, Barbara. (2004) in A. J. Cañas, J. D. Novak, F. M. González, Eds. *Using concept maps with adult students in higher education*. In *Concept Maps: Theory, Methodology, Technology Proc. of the First Int. Conference on Concept Mapping*. Pamplona, Spain 2004. Retrieved 10 January, 2012, from, <http://cmc.ihmc.us/papers/cmc2004-059.pdf>
- Davies, Martin. (2010). *Concept mapping, mind mapping and argument mapping: what are the differences and do they matter?* High Educ. DOI 10.1007/s10734-010-9387-6. Springer Science+Business Media B.V. Retrieved 10 January, 2012, from, [http://unimelb.academia.edu/MartinDavies/Papers/433992/Mind\\_Mapping\\_Concept\\_Mapping\\_Argument\\_Mapping\\_What\\_are\\_the\\_differences\\_and\\_Do\\_they\\_Matter](http://unimelb.academia.edu/MartinDavies/Papers/433992/Mind_Mapping_Concept_Mapping_Argument_Mapping_What_are_the_differences_and_Do_they_Matter)
- Hay, David; Kinchin, Ian, and Lygo-Baker, Simon. (2008) *Making learning visible: the role of concept mapping in higher education*. Retrieved 10 January, 2012, from, <http://www.each.usp.br/cmapping/pdf/edmtxat07.pdf>
- McClure, Sonak, and Suen, 1999; Weideman and Kritzinger. (2003). *Concept map assessment of classroom learning: reliability, validity, and logistical practicality*. *Journal of research in science teaching*. Vol.36(4). pp.475-492. Retrieved 10 January, 2012, from, <http://suen.ed.psu.edu/~hsuen/pubs/conceptmap99.pdf>
- Novak, J. (1998). *Learning, creating and using knowledge: Concept Maps™ as facilitative tools in schools and corporations*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Novak, J. D. & Cañas, A. J. (2008). *The Theory Underlying Concept Maps and How to Construct and Use Them*. in *Technical Report IHMC CmapTools, Florida Institute for Human and Machine Cognition*. Retrieved 10 January, 2012, from

<http://cmap.ihmc.us/Publications/ResearchPapers/TheoryUnderlyingConceptMaps.pdf>

Novak, J. D., & Gowin, D. B. (1984). Novak and Gowin's Scoring Criteria for Concept Maps. in Concept map rubrics. Center for teaching. Retrieved 10 January, 2012, from, <http://cft.uiowa.edu/files/cft.uiowa.edu/files/Concept%20Map%20Rubrics.pdf>

Novak, J. D., & Wandersee, J. (1991). *Coeditors, special issue on concept mapping*. Journal of Research in Science Teaching, 28(10).

Partnership for 21st century skills. 2005. Learning for the 21st century. Retrieved 10 January, 2012, from, [http://www.p21.org/storage/documents/P21\\_Report.pdf](http://www.p21.org/storage/documents/P21_Report.pdf)

Piaget, J. (1966). *The psychology of intelligence*. Totowa, NJ: Littlefield, Adams.

Rautenberg, Volker. (2009). *Maps of the mind*. <http://www.philomind.de/mapping-of-the-mind/maps-of-the-mind.html>

Saunders, W. L. (1992). *The Constructivist Perspective: Implications and Teaching Strategies for Science*. School Science and Mathematics, 92: 136–141. DOI: 10.1111/j.1949-8594.1992.tb12159.x. Retrieved 10 January, 2012, from <http://onlinelibrary.wiley.com/doi/10.1111/j.1949-8594.1992.tb12159.x/abstract>

Somwung Pitiyanuwat and Tassanee Bunterm. (2002) *Research-Based Learning*. In Paitoon Sinlarat. Research-based teaching. Bangkok. Faculty of Education, Chulalongkorn University. pp.8-19.

Sunny Cooper. (2009). *Theories of Learning in Educational Psychology: David Ausubel : Meaningful Verbal Learning & Subsumption Theory*. Retrieved 10 January, 2012, from <http://www.lifecircles-inc.com/Learningtheories/constructivism/ausubel.html>

Weideman and Kritzinger. (2003). *Concept mapping - a proposed theoretical model for implementation as a knowledge repository*. in A UWC research project in partnership with Cape Technikon. Retrieved 10 January, 2012, from, [http://www.stanford.edu/dept/SUSE/projects/ireport/articles/concept\\_maps/Concept%20map%20as%20knwoledge%20repository.pdf](http://www.stanford.edu/dept/SUSE/projects/ireport/articles/concept_maps/Concept%20map%20as%20knwoledge%20repository.pdf)

*The Strategies of Improving Instruction Qualities in Taiwan Senior High Schools  
from the Perspective of TQM*

Chuang Kuei-Yu\*<sup>1</sup>, Chao Chih-Yang\*<sup>2</sup>, Li Yu-Chang\*<sup>1</sup>, Yang Pao-Chin\*<sup>3</sup>,  
Chen Xiu-Ping\*<sup>4</sup>, Chen Yuan-Tai\*<sup>5</sup>

\*<sup>1</sup>National Chunghua University of Education, Taiwan,

\*<sup>2</sup>Ling Tung University, Taiwan, \*<sup>3</sup>Shin Min High School, Taiwan,

\*<sup>4</sup>National Tainan Girls' Senior High School, Taiwan,

\*<sup>5</sup>National Taichung Girls' Senior High School, Taiwan

0388

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Abstract

The purpose of this study was to find out the strategies of improving instruction qualities in senior high schools from the perspective of TQM. The subject of the study included principals of the core schools in the School Actualization Program, chair people of the board of private high schools, principals of the senior high schools, education authority, parents, teacher representatives, and education experts. A content analysis technique was employed, and several interviews and Focus Group Interviews were then conducted. This study first explored factors that influenced instruction qualities in senior high schools, further analyzed the government subsidy standards and evaluation indicators of senior high schools. This paper finally provided suggestions from the perspectives of education systems, school strategies, and instruction structures.

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## 1. INTRODUCTION

With the arrival of globalization era, comes with intense international competitions. To face the challenges from globalization and technicalization, many countries around the world start to examine their educational policy and propose recommendations for improvement such as: 2001 USA's "No Child Left Behind Act", 2003 Britain's "Excellence and Enjoyment" strategic plans for elementary education, 2004 Britain's "14-19 Education and Skills" whitepaper for adolescent 14-19 years old, and 2001 Japan's "The Education Reform Plan to the 21st Century – The Rainbow Plan". All these recommendations expect to promote students' learning autonomy, to establish education rationales that meet the 21st century standards, and to promote the effectiveness of basic educations. With the arrival of a new era, comes with new concepts and trends. We need to face new challenges, adjust and adapt appropriately. We need to construct high quality school environment, promote instruction qualities in school system, pursuit excellence of the process and end products of education, practice sophisticated education philosophy. Only through the promotion of educational quality, talented individuals can be effectively nurtured, and national competitiveness can be enhanced.

In April 2000, "The United Nations Educational Scientific and Cultural Organization" (UNESCO) announced "Dakar Framework for Action, Education for All: Meeting Our Collective Commitments". In this framework, article six states: "Education is a fundamental human right," "Education is also an indispensable means for the effective participation in the society and economics of the rapid globalized 21st century". It also emphasizes that "Development of education systems should change from elite education to education for all, and from basic education for all to secondary education for all". In order to meet current trends in the world and to promote the quality of national education, Taiwan government plans and implements related programs targeting at senior high schools, these programs include those promoting actualization and homogenization of senior high schools, those promoting and implementing teaching quality of senior high school teachers, and those for the evaluation of senior high schools. And in 2014, twelve-year compulsory education for all will be implemented.

Many scholars have concerns for educational reforms in Taiwan. They especially worry for the upcoming twelve-year compulsory education for all, considering that it may lower teaching quality in Taiwan and weaken Taiwan's competitiveness. Therefore, how to provide sufficient driving forces and protections for senior high schools has become a topic attracting concerns from all sectors. In the educational

field, the concept of total quality management evokes many enthusiastic discussions among scholars in hope to establish education systems with total quality. Therefore, in this paper, we plan to investigate how to apply total quality management strategies to promote teaching qualities. We made some suggestions for future reference.

Based on the above mentioned motivations, this study aimed at investigating those strategies for the promotion of teaching quality in Taiwan's senior high schools. The specific aims are:

1. Investigating factors affecting teaching quality in senior high schools. Summarize and analyze related factors affecting teaching quality in senior high schools.
2. Analyze the evaluation standards for competitive counseling programs for the actualization and homogenization of senior high school. Use total quality management strategies to investigate aggressive strategies to promote teaching quality in senior junior high schools in order to provide education authorities references to promote teaching quality in senior high school.

## **2. RESEARCH METHODS**

In this study, we used content analysis, interview and focus group discussions as research methods. They are described below.

### **1. Content analysis**

Documents from the counseling programs for the actualization and homogenization of senior high schools, and indicators and results of school evaluation were used for analysis and the results were summarized to serve as references for in-depth interview and focus group discussions.

### **2. Interview**

We invited principals from core schools in the actualization counseling programs, chairman of private senior high schools, senior high school principals, directors and scholar experts to participate in "semi-structured interviews" in order to gain insight into current status, problems and factors affecting teaching quality of senior high school, and related factors that affect teaching quality of senior high school. In this study, we conducted 5 interviews in 2012. Data acquired from interview, supported by the results and discussions by literature review, were used to clarify the main themes of our research and served as a foundation to construct focus group discussions used in this study.

### **3. Focus groups discussion**

We invited representatives from educational authorities, parents' groups, teachers' associations, board members of private senior high school, and senior high school principals, high-level supervisors, and teachers awarded as outstanding

teachers and scholar experts to participate in focus group discussions. We conducted 3 forums in 2012, with a total of 50 experts participated, to explore the aggressive strategies to promote teaching quality of senior high schools.

We investigated factors affecting teaching quality of senior high schools and factors that can promote teaching quality of senior high schools. We summarized the opinions gathered from focus group discussions, and conducted qualitative analysis and frequency distribution statistics. We proposed research findings through the comparison of data from content analysis, interviews and focus group discussion, to serve as the basis to construct conclusions and suggestions of our study.

### **3. LITERATURE REVIEW**

#### **3.1 Content of Total Quality Management (TQM)**

Crumrine & Runnrels (1991) considered TQM as a leadership philosophy, and a process allowing everyone in the organization committing to continuous quality improvement. Decisions are made based on facts, and team cooperates to achieve the objective of providing high quality products and services that the customers need.

Kano (1993) considered that total quality management is to first establish the intent and motivation to improve quality within the organization and based on technology. Then the content of total quality management is substantiated through the process of concept change, technological improvements, application of tools to closely integrate intentions and motivations.

Wu & Huang (1995) considered that the meaning of total quality management includes: (1). continuous improvement quality; (2) focus on customer needs, customer-centric; (3). team-oriented, emphasizing full participation; (4). emphasize scientific methods; use statistical methods and data analysis as references for improvement.

De Jager and Nieuwenhuis (2005) attempted to apply the TQM concept in education, and they pointed out that the three key principles are: 1. Leadership; 2. Scientific methods and tools; 3. Problem-solving through teamwork. These three principles links to each other to constitute an integrated system, and at the intersections are "organizational climate", "education and training" and "meaningful data" with the core spirit lying in customer service (as shown in Figure 1).

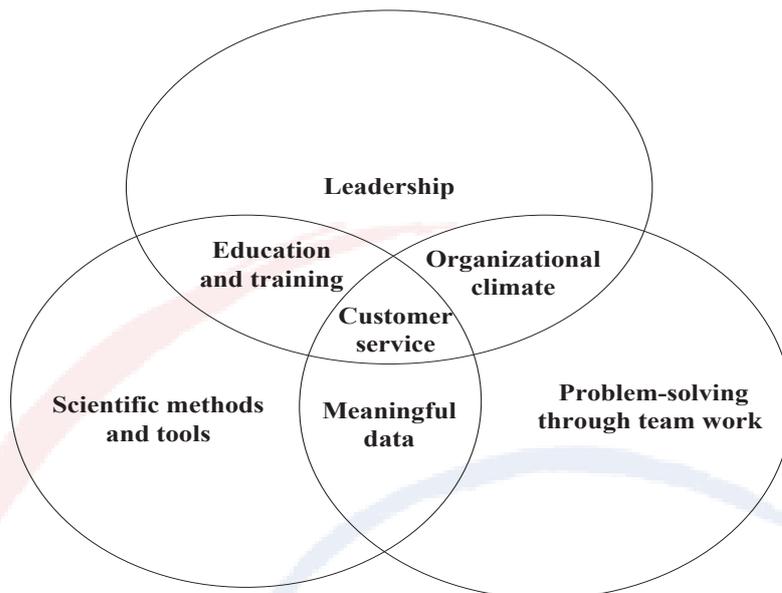


Figure 1. Three key principles for the application of TQM in education.

Source: De Jager, HJ, & Nieuwenhuis, FJ (2005:251-260)

Summarizing the above described statements from scholars, the content of TQM includes several aspects such as high-level management leadership, prevention in advance, sustainable improvements, full participation, customer satisfaction, performance measurement in order to achieve the goals of highest possible quality.

### 3.2 Factors affecting teaching quality

Factors affecting teaching quality include "teaching activities", "resources and facilities", "class size", "student-teacher ratio," "environmental factors", "school operations", "system policy" and "trend of the times". All these factors are likely to affect the teaching quality.

Based on the implementation program for the twelve-year compulsory education, measures for the promotion of teaching quality of vocational and senior high school teachers include the formation of core schools by disciplines and domains, and integrate senior high schools to implement various related services for the promotion of teaching quality. Implementation items are listed below:

1. Strengthen curriculum development mechanisms in each school based on the newly revised implementation guidelines for syllabus.
2. Establish a platform of high quality teaching. Assist discipline and domain specific centers to become the development centers of teaching professionals.

Hoy and Miskel (2001) held an integrated multi-dimensional perspective to discuss factors affecting teaching qualities. They considered school as a system cyclically

interwoven by four factors: input, transformation, output and environment. For the transformation process, four systems are involved: structure, individual, culture and politics.

Chio (2004) based on the perspective of enterprise quality management, clarified that output from teaching systems refers to the combination of products (teaching notes) and processes (methods of product design). In other words, output is the analysis and design of education and training through complete instructional media, curriculum and experimental methods, and to develop and assess associated processes. Output can be generally classified into tangible and intangible output. The former includes teaching materials, assessment methods, academic and other outputs; and the latter includes teaching skills, teaching concerns, and students' achievements.

Hong and (2004) pointed out that teachers are the key factors affecting the quality of teaching. During the teaching process, teachers' teaching design, strategy, assessment, classroom management and knowledge and beliefs are also important factors affecting the effectiveness of teaching.

Wu (1996) considered that to promote teaching quality, it is necessary to meet established teaching standards in five areas including objectives, brainpower, potential, interest and process. Objectives can be classified into cognitive, affective and skill objectives. Brainpower refers to the need to change teachers' teaching methods first in order to develop students' brainpower. Good teaching qualities can be achieved if students' various potentials are inspired. Interest refers to that teaching qualities can only be promoted through teaching contents that can evoke students' learning interests. Process refers to the necessary means used to achieve teaching objectives.

### **3.3 Content of the counseling programs for the actualization and homogenization of senior high school**

Counseling programs for the actualization of senior high school can effectively enhance the energy needed for team advancement in senior high school; assist the achievement of actualization and the development of unique characteristics of schools; increase the percentage of junior high school graduates who enroll to nearby senior high schools and enrolled with exemptions of entrance examinations; realize the enrollment diversification programs for vocational and junior high school and 5-year college established by Ministry of Education; balance the development of senior high schools in many different locales; and steadily implement twelve-year compulsory

education (Ministry of Education, 2011). While the main objectives of homogenization programs for vocational and senior high schools are to emphasize the vertical integration between vocational and senior high schools and junior high schools; to continue the existing horizontal integration of vocational and senior high schools in the community and to extend it to the vertical links; to consolidate the cooperative relationship between vocational and senior high schools with junior high schools to achieve the objective of sharing educational resources such as teacher manpower, curriculum and equipment; to promote competitiveness of vocational and senior high schools in the community; to provide junior high school students in the community with the opportunities for career exploration and to understand the learning content in vocational and senior high schools in advance; to allow students the opportunity of adaptive learning in local vocational and senior high schools to realize the objective of enrollment in nearby schools (Ministry of Education, 2011).

Summarizing the analysis of related factors affecting teaching qualities and the content of the counseling programs for actualization and homogenization, we know that some factors need to be considered in order to promote teaching qualities in senior high school. These factors include the evaluation standards, indicators and weighting for counseling programs for the actualization and homogenization of senior high school. It is also necessary to design fair and reasonable evaluation system.

#### **4 DATA ANALYSIS**

According to study objectives, we used several research methods including content analysis, interviews, and focus group discussions. Results of data analysis are listed below:

##### **1. Factors affecting teaching qualities**

- (1). Workload for concurrent administrative duty is too heavy. The number of teaching hours is too high. These two factors prevent teachers from providing individualized consultation to satisfy students' individual differences.
- (2). Concept of credentialism is too heavily rooted. Curriculum guidelines are not closely followed. These two factors reduce students' opportunities for diversified learning.
- (3). There is discrepancy between the training and needs of teacher manpower. It is recommended to appropriately train teachers for specific or newly emerging disciplines.
- (4). Parents and students have biased concepts just to pursuit high test scores. Education resource is insufficient.

## 2. Strategies to promote teaching qualities

- (1). To ensure and promote teaching qualities, high-quality support system should be established for teaching.
- (2). In order to allow students to maximize their expertise and potential, it is necessary to set up evaluation indicators for teaching; to implement active teaching; to diversify teaching; and to tutor students for adaptive learning.
- (3). Apply total quality management strategies to enhance school's brand image.
- (4). Establish a mutual support platform among schools so that teachers and equipment can be shared. Promote in-service training and exchange of teachers and administrative staffs among schools. Establish mechanisms for schools to jointly hire teachers specialized in highly needed disciplines.
- (5). Through the vertical strategic alliance between high schools and universities, relax the regulations restricting university teachers from teaching in high schools. Further extend the strategic alliance down to junior high school level. For horizontal connection, one flagship university is chosen to form strategic alliance.
- (6). Organize professional community support groups for teaching and teachers. These support groups will provide long-term and regular on-site consultations at schools to revitalize curriculum teaching and to promote teaching qualities.
- (7). We recommend setting up certification for the hours required for teachers' training. This is to enhance teachers' professional development and to enhance teaching qualities.
- (8). For those schools having a total score less than 80 in their assessment, education authorities can hire experts, scholars and principals from core schools to organize an ad hoc group to provide diagnosis and assessment of problems on-site.

## 5. RESULTS

Through the analysis of literature, interview, and focus group discussion, major results from this study are:

1. Programs for the homogenization and actualization of vocational and senior high school
  - (1). Through the competitive programs such as counseling programs for the homogenization and actualization of vocational and senior high school, schools not only can use subsidy to renew teaching resources and equipment, teaching qualities can also be promoted.
  - (2). In order to make project applications and subsidy more objective and fair, it is necessary to establish standards, indicators and weighting for the evaluation of counseling programs for the homogenization and actualization of vocational and senior high schools.

## 2. Factors affecting teaching qualities:

- (1).Teaching is not properly implemented, affecting students' balance development in five domains.
- (2).Teachers' evaluation is not implemented, affecting work efficiency and enthusiasm.
- (3).There is not yet a linkage between the evaluation of teachers' professional development and the appraisal systems for teachers, affecting their professional development and teaching qualities.
- (4).Workload for concurrent administrative is too heavy for teachers, preventing them from providing counseling to students based on the student's individual differences.
- (5).Insufficient subsidy for funding and inadequate educational resources, affecting teaching qualities in private schools.
- (6). Parents and students have biased concepts. They over pursuit for high test scores and performance in academic advancement.

## 3. Theory of total quality management. Strategies to promote teaching qualities:

- (1).Set up quality management plan. Establish standard operation procedures. Use PDCA cyclic quality management system to implement programs for the continuous improvement of quality.
- (2). Leaders should provide open communication channels and integrate the team. Create common vision for the school. Authorize and empower teachers. Establish feedback mechanisms and motivate staffs.
- (3). Create a harmonious school atmosphere and increase interpersonal interaction of the members. Focus on full participation with team cooperation oriented.
- (4). Based on the cyclic PDCA concepts of total quality management, implement quality management, control and check. Create school characteristics and shape high-quality school.
- (5). Periodic inspect teaching environment and equipment. Improve service quality and meet students' learning needs.
- (6). Fully grasp opinions from parents and community members to enhance customer satisfaction and to serve as references for future improvement.
- (7).Develop a complete set of human resource development programs. Schools should value staffs' in-service training, encourage teachers for continuous self-learning and innovation, support teachers to research for new educational concepts and methods, and to enhance teachers' professional competence and knowledge.

## 6 CONCLUSION

Quality improvement is the first priority to superior quality management of education. In United States, “Blue Ribbon School” label is used to encourage schools with successful operation. Within “Baldrige National Quality Program”, “Education Criteria for Performance Excellence” is set up to highlight the emphasis and confirmation of educational qualities. In Britain, “Beacon School” is used as learning example for other schools. In 2005, Britain proposed “14~19 Education and Skills” whitepaper to further specify the content and quality of education. In 1998, Hong Kong set up the “Quality Education Fund” and “Outstanding School Award Programs” was formally launched in 1999 June. The educational reform currently being promoted in Taiwan also aims primarily at promoting education qualities. Education authorities should use “Quality School” certification system to encourage schools so that students can realize their potentials appropriately, parents can identify with school and be rest assured, recognize teachers’ professional devotion, and ensure school’s unique branding.

Based on total quality management perspective, this study made following recommendations for strategies to promote teaching qualities:

1. Planning for school’s vision. All members design plans or programs for total quality management together.
2. Set up standard operation procedure for quality management in order to implement plans or programs.
3. Establish communication channels and mechanisms for proactive services that are based on the service spirits of customer satisfaction-oriented.
4. Based on cyclic PDCA concept, always ready to review and improve in order to maintain superior performance and sophisticated teaching quality.
5. Emphasize the commitment from executive and high-level management. Implement mechanism to provide feedback and evaluation of quality management.
6. Planning a system for staffs training and manpower resources development. Establish quality management for benchmark learning.
7. Fully grasp the needs of customers. Provide aggressive cares and assistance for disadvantaged or low-achievement students to fully take care of every student.
8. Host training courses on total quality management to assist schools in gaining better performance in implementing total quality management.

When confronted with the 21st century high competitions and challenges, many developed countries devote to education reform and manpower development in order to gain a competitive edge, to enhance citizen’s quality, to promote social progress,

and to improve national competitiveness. If Taiwan can properly use main characteristics of total quality management to reshape superior quality school culture, then every school can become a team with vitality to effectively promote teaching quality, to pursuit for education system with better performance, and to bring new opportunities to Taiwan education.

The logo for the International Association for Educational Research (iafor) is centered on the page. It consists of the lowercase letters "iafor" in a light blue, serif font. The text is surrounded by two large, overlapping, semi-transparent circular arcs. The outer arc is a light red color, and the inner arc is a light blue color, matching the text. The arcs are positioned such that they appear to frame the text, with the red arc on the left and the blue arc on the right, creating a sense of depth and movement.

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## REFERENCES

- Ben-Wen Zhang (2009). Key to the maximization of school performance – total quality management. *Friends of elementary educations*, 60 ( 3 ) , 10-16.
- Bi-Shun Hong, Hong-Lin Lu (2004). Teachers' knowledge beliefs and teacher's evaluation. *Education Research Monthly*,127,93 -99 .
- Chi-Yang Chao (2004). Evaluation of teachers' quality and teaching in the vocational education systems. *Education Research Monthly*. 127,74 -84 .
- Ching-Shan Wu, Tian-You Lin (1994). Total quality management and its application in education. *Elementary Education Monthly*,3,1 -28 .
- Ching-Shan Wu, Xu-Jun Huang (1995). New drive for the promotion of education quality: on the topic of total quality management and its application in education. *Education Data and Research*,2,74 -83 .
- Ching-Shan Wu, Tian-You Lin (2003). *Le Cordon Bleu International*. *Education Information and Research*,50,115 -116 .
- Ching-Ji Wu (1990). *Sophisticated educational philosophy*. Taipei: National Taiwan Normal University Bookstore Co.
- Ciampa, D. (1992). *Total quality: A user's guide for implementation*. New York: Addison-Wesley Publishing Co.
- Ching-Ji Wu (2006). High quality school, 2006. In Taipei Teachers' Training Center (ed.): *High Quality School, 2006*, topic on administration (pages 6-13). Taipei: Taipei Teachers' Training Center.
- De Jager, H. J., & Nieuwenhuis, F. J. (2005). Linkages between total quality management and the outcomes-based approach in an education environment. *Quality in Higher Education*, 11(3), 251-260. (ERIC Document Reproduction Service No. EJ721281)
- Deming, W. E. (1986). *Out of the crisis*. Melbourne Sydney: Cambridge University Press.
- Da-Wei Xu (1997). Total Quality Management and its application in the operation and management of schools. *Digest on Educational Data*, 228,139 - 158.
- Hoy, W. K., & Miskel, C. G. (2001). *Educational administration: Theory, research and practice* (6th ed.). New York: McGraw-Hill.
- Horine, J. E. (1993). Improving the educational system through Deming's system theory. *The educational forum*, 58, 30-35.
- Jiu-Yong Dai (ed.) (2005). *Total Quality Management*. Taichung: Chun-Hei bookstore.
- Moo-Kim Chen, Nian-Xiang Yang (November, 2008). Inspirations to principals' leadership and school management from high quality school administrative management.

- Ministry of Education (2013). Implementation program for the even distribution of community educational resources for junior and vocational high school adaptive learning. Retrieved from <http://comm.tchcvs.tc.edu.tw/> on April 25, 2013.
- Ministry of Education (2013). Subsidy programs for optimizing junior high school. Retrieved from <http://12basic.edu.tw/Detail.php?LevelNo=12> on March 25, 2013.
- Ministry of Education (2013). Implementation plan for the junior high school evaluation, school year 102. Retrieved from <http://12basic.edu.tw/Detail.php?LevelNo=17> on April 25, 2013.
- Ministry of Education (2012). Education Statistics of Republic of China, Taiwan. Taipei: Ministry of Education.
- Nian-Xiang Yang, Moo-Kim Chen (2011). Investigation of the construction of quality management indicators for high quality schools. Archive of educational scholarly works (100 year of Republic of China, Taiwan), 3 ( 2 ) ,57 -80 .
- Paper presented at the international conference “Educational management and the strategic alliance between industry and university”, held National Ping-Tung Educational University, Ping-Tung City.
- Sallis, E. (1993). Total quality management in education. London: Kogan Page.
- Si-Dar Wu (2000). Investigation of the construction of total quality management system for vocational high school. Unpublished dissertation. Department of Education, National Kaohsiung Normal University, Kaohsiung.
- Yi-Feng Ruan (2009). Inspirations for promoting educational quality from quality management models from Europe, USA and Taiwan. Quality Monthly, 45 (12 ) ,17- 23.
- Zhe-Bin Huang (2009). Difficulties and the planning and promotion for the implementation of total quality management in schools. Friends of elementary educations, 60 ( 3 ) , 3-9 .
- Zhuo-Xun Wu (1996). Investigation of teaching quality. Journal of Tao-Yuan County Culture and Education (re-issued),2,38 -39 .
- Zhen-Cheng Zhang (1998). Total quality management and school leadership. Secondary Education, 49 ( 1 ) ,35- 40.

*Comparison of Attitudes of the Stakeholders of School Education in Japan and Other Countries towards Areas of Science*

Kseniya Fomichova, Naoya Gomi, Taku Misonou

University of Yamanashi, Japan

0400

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Abstract

This research addresses the attitudes of the stakeholders of the school education (students, parents and teachers) towards learning and teaching science in the multinational context. In particular, it aims to study the perception of areas of science (physics, chemistry, life, Earth and environmental science) in the dimensions of their understanding, personal values (interests, priorities, motivations) and social experience. Also, the survey targets the issues associated with the perception of science fields and scientific literacy in regard to the environmental problems. In particular, awareness and attitudes to the environmental problems in relation to the country of the respondents' citizenship and the global scale are studied. The research is conducted by a questionnaire in several countries (Japan, Malaysia, Ukraine and others) to analyze both public and private sectors of the school education. Although a number of countries, including Japan, are top performers in international contests of science education, the scientific literacy of their citizens of different age groups does not always correspond to their scores, and the attitude towards science is often rather negative. The literacy and the attitude, however, vary depending on science topics and areas of science, as indicated by a number of research reports. Such differences in performance and perception are crucial for the development of education in both formal (primary and secondary) and informal (lifelong learning) perspectives and should not be underestimated. Therefore, this research raises the questions: 'Is there a concept of a relative importance of science fields in the school education globally?' and 'What is the sustainable development for science education?'

**Keywords:** attitude, environmental problems, multinational, school, science education

## Introduction

For recent decades, research in school science education has been substantially focused on perception of educational practices by students and teachers. Some key findings made in this regard and related to the present research might be summarized as follows. 1. Students having a higher academic performance tend to show more positive attitudes towards learning science than low performers (Barrington and Henderriks, 1988). 2. Students in less 'wealthy' economies seem to be more interested in science than students in more 'wealthy' economies (Sjoberg and Schreiner, 2010). 3. While some studies indicate that interest towards science declines with age (Hadden and Johnstone, 1982, 1983; Barrington and Henderriks, 1988; Simpson and Oliver, 1985; Piburn and Baker, 1993), others link it rather to the changes in the curricula (Reid and Skryabina, 2002; Suzuki, 2007). 3. Boys internationally tend to show more positive attitudes towards science, especially physics, than girls (Weinberg, 1995; Skryabina, 2000; Reid and Skryabina, 2002; Sjoberg and Schreiner, 2010). 4. Boys state that science is rather easy for them more often than girls. 5. Boys are more likely to choose physics and chemistry as selective courses in secondary school, while more girls choose biology (Clarke, 1972; McGuffin, 1973; Reid and Skryabina, 2002).

Obviously, international approaches in school science education have a significant variation. One of the most basic differences between systems of education lies in the stage at which school science becomes divided into subjects: physics, chemistry, life science (biology), Earth science (geography), astronomy, ecology, and so on. In some countries this segregation of science is introduced at the primary school level, in others it happens in lower or upper secondary school. While international research provides a wide range of studies, the majority of those concerning the latter system (where science is divided at the later stages), investigates the perception of science as one subject (Martin *et al*, 2008). In such case, the data concerning attitudes towards science in these two groups of countries become incomparable. This research targets to address the issue that was rather not sufficiently highlighted in other studies, i.e. an international comparison of attitudes towards school physics, chemistry, biology, Earth and environmental science in both types of education systems. Another issue that was rather not addressed and is an objective for this study is the analysis of attitudes of three main stakeholders in school education: students, teachers and parents. The primary focus is the differences in perception of science related to the respondents' sex and background (nationality, educational system and so on).

## **Methodology**

The objectives of the research are summarized as follows.

*Objective 1:* to conduct an international comparison of attitudes of male and female students towards areas of school science in regard to a) understanding; b) interest in learning and as a future career; c) perceived level of complexity; d) perceived usefulness of knowledge. The selected countries should include two education systems: 1) the one in which science is studied as a number of subjects from the early stage (primary school or the beginning of lower secondary school), and 2) from the later stage (upper secondary school).

*Objective 2:* to study societal beliefs and values in relation to science education through comparison of students' perception of science with the one of teachers' and parents.

*Methods* for the research are summarized as follows.

1. Analysis of secondary data (systematic review of research reports and other documents).
2. Primary data collection involving questionnaires for students, parents and teachers.

The outline of the questionnaire for students is as follows:

- a) target population: students of the second year of upper secondary schools, 16 y.o.;
- b) number of samples: at least 200 (preferably 100 of each sex) for each country;
- c) schools: public and private, at least three in each country.

Students of the second year of upper secondary schools (age 16) were selected as the target population, because at this level science is divided into a number of disciplines in majority of countries.

For a preliminary stage of analysis, five countries were selected according to the structure of their education system: Japan, Malaysia, Russia, Ukraine, and Sri Lanka. In Japan and Malaysia, science is taught as one discipline up to grade 10. In Ukraine and Russia, it is divided into subjects starting from grade 5. Sri Lanka represents a transitional system that has recently (since 2006) introduced areas of science instead of a unified subject starting from grade 7.

The outline of the questionnaire for teachers is as follows:

- a) target population: teachers of the third year of lower secondary school;
- b) type of the education system: where science is one subject up to grade 10;
- c) number of samples: at least 50;
- d) schools: public and private.

Such target population and the type of the education system were selected, because when science is taught as one area, it is possible to receive teachers' assessment of students' perception of all its areas.

The outline of the questionnaire for parents is as follows:

- a) target population: parents of at least one child who is studying in either lower or higher secondary school;
- b) number of samples: at least 100.

## Results

### 1. Students' attitudes towards areas of science

#### 1.1 Students' own assessment

Students' attitudes towards areas of science (physics – Ph, chemistry – Ch, biology – bi, Earth science – ES, environmental science – EnvS) were evaluated according to the scale from 1 to 4 as follows: 1 (dislike and rather dislike); 2 (indifferent); 3 (little interest); 4 (moderate and deep interest). The number of samples was 200 from each of three countries: Japan, Malaysia, Ukraine (100 for each sex); 100 from Russia (50 for each sex); 50 from Sri Lanka (only female students). The survey covered in total 9 schools: 2 in Japan (JP), 3 in Malaysia (MY), 2 in Ukraine (UA), 1 in Russia (RU) and Sri Lanka (SL) respectively.

The mean was calculated as:

$$\mu = \sum_{i=0}^n p_i x_i,$$

Where  $x_i$  – a value,  $p_i$  – the probability of  $x$ .

The standard error was calculated as:

$$SE_{\bar{x}} = \frac{\sigma}{\sqrt{n}},$$

Where  $\sigma$  – the standard deviation,  $n$  – the size of the sample.

The standard deviation was calculated as:

$$\sigma = \sqrt{\sum_{i=0}^n p_i (x_i - \mu)},$$

Where  $x_i$  – the mean of  $x$ .

The mean value and the standard error are presented in Table 1.

Table 1. Students' perception of science (own assessment)

Country	Boys					Girls				
	Ph	Ch	Bi	ES	EnvS	Ph	Ch	Bi	ES	EnvS
JP	2.839 ±0.10 7	2.925 ±0.10 6	2.903 ±0.11 1	2.527 ±0.10 0	2.688 ±0.10 3	2.151 ±0.09 4	2.538 ±0.09 9	2.914 ±0.09 8	2.516 ±0.09 3	2.602 ±0.09 4
MY	2.939 ±0.11 5	2.939 ±0.11 3	2.948 ±0.10 8	2.604 ±0.10 5	2.570 ±0.10 4	2.753 ±0.11 4	3.124 ±0.10 7	3.216 ±0.10 4	2.839 ±0.11 1	2.925 ±0.10 8
UA	2.950 ±0.10 8	2.790 ±0.11 1	3.120 ±0.09 9	3.260 ±0.10 1	2.850 ±0.10 5	2.610 ±0.10 8	2.780 ±0.10 7	3.710 ±0.07 0	3.180 ±0.09 3	3.310 ±0.09 6
RU	2.800 ±0.14 7	2.700 ±0.13 2	3.320 ±0.09 8	2.790 ±0.16 5	2.800 ±0.14 7	2.430 ±0.15 5	2.620 ±0.16 3	3.440 ±0.09 9	3.090 ±0.09 2	3.050 ±0.12 1
SL	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	3.000 ±0.15 9	3.340 ±0.12 4	3.490 ±0.13 8	n/a n/a	n/a n/a

Mean value ± standard error.

The results of Table 1 are summarized as follows.

1. Boys in each country are almost equally interested in physics, chemistry and biology (Russia is an exception, but only 1 school was analyzed).
2. Girls' level of interest towards physics is lower than towards other areas of science, and biology is the most 'interesting' area of science for them. Girls from Ukraine express an exceptionally high level of interest towards biology.
3. For boys from Japan and Malaysia, Earth and environmental sciences might be the 'least interesting' areas. In contrast, for boys from Russia and Ukraine Earth science might be 'the most interesting' one.
4. Girls from Japan are the 'least interested' in all areas of science.

### 1.2 Teachers' and parents' assessment (Japan's case)

Comparison of students' attitudes towards science with an assessment of those attitudes made by teachers and parents is valuable, because it may identify an 'image' (i.e. perception, including perceived importance and so on) of school science in a particular society. Moreover, some features of this perception might be international and even global. As a preliminary analysis, such comparison was conducted in regard to 4 areas of science (physics, chemistry, biology, Earth science) involving school

teachers and parents of school students in Japan. 78 samples from teachers of grade 3 of 27 lower secondary schools, and 100 samples of parents whose children attend either lower or upper secondary schools were collected. Both groups were asked, what areas of science students tend to 'like' in their opinion. Also, teachers were requested to give an additional assessment by the scale explained earlier (from 'dislike' to 'deep interest').

The results are presented in Tables 2 and 3.

Table 2. Students' perception of science (teachers' and parents' assessment)

Attitude	Boys (teachers, %)				Girls (teachers, %)				Boys (parents, %)				Girls (parents, %)			
	Ph	Ch	Bi	ES	Ph	Ch	Bi	ES	Ph	Ch	Bi	ES	Ph	Ch	Bi	ES
'Like'	44	72	23	6	2	34	83	9	62	70	12	16	6	22	86	12

Table 3. Students' perception of science (teachers' assessment and own assessment)

Attitude	Boys (teachers, %)				Girls (teachers, %)				Boys, %				Girls, %			
	Ph	Ch	Bi	ES	Ph	Ch	Bi	ES	Ph	Ch	Bi	ES	Ph	Ch	Bi	ES
Dislike	13	3	5	2	34	11	2	3	10	8	12	16	1	22	1	6
Indifferent	3	2	7	17	18	7	3	18	28	28	2	28	32	45	4	28
Interest*	45	75	49	37	10	43	72	35	33	37	37	17	25	10	20	32

\* - Includes categories 'moderate interest' and 'deep interest'

According to Tables 2 and 3, teachers' and parents' evaluation in regard to areas of school science that students 'like' and are 'interested in' is somewhat similar. In particular, boys are considered to prefer (to like and be interested in) chemistry over other areas of science, while girls are considered to prefer biology. It is supposed that the 'least favorite' and 'interesting' for boys is Earth science. For girls, it is physics and Earth science. The comparison of students' own assessment with that made by teachers (Table 3) shows a considerable difference between them. In particular, boys tend to have a significantly higher level of interest towards chemistry in teachers' opinion, while in the students' answers there was no noticeable difference in attitudes towards physics, chemistry and biology.

The results of Table 2 may identify a perception of biology and Earth science as fields that boys in Japan ‘do not like’. Therefore, they might be evaluated as rather ‘inappropriate’ for male students in the Japanese society, despite teachers consider biology to be somewhat ‘interesting’ for boys (Table 3). In this regard, questions 1 (Table 2) and 2 (Table 3) should be referred, as the survey’s results depend on how the questions were formulated. Question 1 enquired about areas of science that students ‘like’ in respondents’ opinion. Question 2 presupposed a scale ranging from ‘dislike’ to ‘deep interest’. Presumably, respondents either considered the categories ‘like’ and ‘interesting’ as rather independent, or might have preferred to express a positive opinion concerning the level of students’ interest in science. The latter assumption might find proof in the present survey. When comparing teachers’ and students’ assessment (Table 3), teachers tend to overestimate the level of students’ positive attitudes towards all areas of science.

## 2. ‘Useful’ and ‘useless’ areas of science (students’ assessment)

In order to investigate possible reasons of attitudes towards science, students were asked to evaluate the usefulness of areas of science for the daily life by the following scale: 1) ‘absolutely not useful’; 2) ‘rather not useful’; 3) ‘rather useful’; 4) ‘useful’. The results are presented in Table 4.

Table 4. ‘Not useful’ areas of science (students’ assessment)

Country	‘Not useful’* areas of science									
	Boys, %					Girls, %				
	Ph	Ch	Bi	ES	EnvS	Ph	Ch	Bi	ES	EnvS
JP	32	25	29	31	22	40	37	31	29	18
MY	15	22	13	30	29	24	30	13	24	23
UA	28	37	23	23	21	20	24	3	16	15
RU	57	53	47	41	37	57	48	17	13	13
SL	n/a	n/a	n/a	n/a	n/a	4	9	0	n/a	n/a

\* - Includes categories ‘absolutely not useful’ and ‘rather not useful’

According to Table 4, boys from Russia were the most ‘sceptical’ about the usefulness of science among all groups of students. In contrast, girls from Sri Lanka were the most ‘confident’ in this regard. However, in each of these countries a rather insufficient number of samples was collected. In general, girls’ evaluation tends to fluctuate depending on the area of science to a higher degree than that of boys. The level of students’ interest towards science and the perception of its ‘usefulness’ seem to be rather independent values as the comparison of Tables 1 and 5 indicates. Students may have a negative attitude towards particular areas of science, but

perceive them as ‘useful’, and the opposite.

### 3. ‘Complex’ and ‘simple’ areas of science (students’ assessment)

To investigate a possibility of correlation of students’ interest towards science with other aspects of its perception, the target population was asked to give an assessment of ‘complex’ and ‘simple’ areas of science. The assessment scale was designated as follows: 1) ‘simple’, 2) ‘rather simple’, 3) ‘rather complex’, 4) ‘complex’. Table 5 shows the results in regard to areas of science evaluated by students as ‘simple’ and ‘rather simple’.

Table 5. ‘Simple’ areas of science (students’ assessment)

Country	‘Simple’ areas of science									
	Boys, %					Girls, %				
	Ph	Ch	Bi	ES	EnvS	Ph	Ch	Bi	ES	EnvS
JP	38	47	47	43	45	21	30	51	40	37
MY	36	27	31	47	55	16	25	28	49	45
UA	40	30	65	77	74	22	19	66	65	78
RU	36	14	57	79	57	23	9	73	73	77
SL	n/a	n/a	n/a	n/a	n/a	26	13	24	n/a	n/a

According to Table 5, boys from all countries tend to evaluate physics and chemistry as ‘simple’ more often than girls. Boys from Japan consider all areas of science to be ‘simple’ to a similar degree, while there is a significant difference between areas of science in assessment of other groups of students of both sexes. Boys from Malaysia, Russia and Ukraine and all groups of girls tend to evaluate Earth and environmental sciences as more ‘simple’ than physics and chemistry. Also, boys and girls from Ukraine and Russia characterize biology as ‘simple’. Comparison of data presented in Tables 1 and 5 shows, that the interest towards areas of science may have little correlation with their perceived level of complexity. Students may evaluate some areas of science as ‘simple’, but have a lower level of interest towards them than to ‘more complex’ ones.

### 4. Students’ interest towards careers in science

Students’ attitudes towards careers in areas of science were evaluated by the scale from 1 to 6 as follows: 1 (dislike); 2 (rather dislike); 3 (indifferent); 4 (little interest); 5 (moderate interest); 6 (deep interest). The results are shown in Table 6.

Table 6. Interest towards careers in science (students' assessment)

Country	Interest* towards careers in science									
	Boys, %					Girls, %				
	Ph	Ch	Bi	ES	EnvS	Ph	Ch	Bi	ES	EnvS
JP	24	22	28	9	18	6	14	23	12	15
MY	43	38	33	15	14	29	36	49	28	30
UA	28	34	35	35	23	24	35	72	30	46
RU	25	20	20	17	7	17	17	43	35	22
SL	n/a	n/a	n/a	n/a	n/a	48	59	67	n/a	n/a

\* - Includes categories 'moderate interest' and 'deep interest'

According to Table 6, boys from Japan, Malaysia and Russia express a deeper interest towards physics, chemistry and biology as career options than towards Earth and environmental sciences. Boys from Malaysia are more positive in this regard towards physics, and boys in Ukraine are towards Earth science than boys from other countries. Girls from all countries seem to be motivated to choose a career in biology more than in other areas of science. The 'least interesting' for them appears to be physics. Girls from Japan might be less interested in a career in any area of science than their coevals of both sexes. Girls from Malaysia, Ukraine and Russia are 2-3 times more interested in a career in Environmental science than boys. Girls from Sri Lanka seem to be more interested in physics and chemistry than other groups of girls. This trend might be explained by a higher level of interest in science careers of students from less 'wealthy' economies in general. However, girls from Ukraine taking part in the present survey expressed a higher interest towards biology as a career option than students from Sri Lanka. Also, they showed the highest level of interest towards learning this area of science (Table 1). However, it is unclear, whether this phenomena would be present if an equal number of samples from all participating countries was collected, or in a survey of a larger scale.

Comparison of Tables 1 and 6 shows, that there is a considerable difference in attitudes of boys from Malaysia and Japan towards two blocks of science: 1) physics, chemistry, biology, and 2) Earth and environmental sciences in both categories (learning and career). Students from both countries are significantly more positive towards block 1 comparing to block 2. It is unclear though, if these categories (interest in learning and interest in career) are interrelated in students' perception, and what reasons for them are. While in both systems of education Earth science is considered to be an area of minor importance in comparison to other three, the present study does not determine the correlation degree between this factor and the trend in students' attitudes.

### 5. Country's support of careers in science (students' assessment)

One of the factors of students' motivation when selecting a certain career might be economic benefits associated with it. Therefore, to study possible reasons of students' attitudes towards careers in science, as a part of the present survey students were asked to give an assessment of the salary level of scientists and researchers in their countries of residence. The assessment was conducted according to the following scale: 1) insufficient, 2) rather insufficient, 3) rather sufficient, 4) sufficient. Table 7 shows the percentages of students who consider the salaries of scientists and researchers to be insufficient in their countries.

Table 7. 'Insufficient' science and research salaries (students' assessment)

Country	'Insufficient'* science and research salaries									
	Boys, %					Girls, %				
	Ph	Ch	Bi	ES	EnvS	Ph	Ch	Bi	ES	EnvS
JP	41	40	40	42	43	31	30	33	26	25
MY	30	32	35	34	36	43	37	37	46	48
UA	51	62	56	56	40	62	43	49	53	46
RU	27	20	33	27	47	39	35	22	26	30
SL	n/a	n/a	n/a	n/a	n/a	65	67	61	n/a	n/a

\* - Includes categories 'insufficient' and 'rather insufficient'

According to Table 7, there are no significant differences between areas of science in the assessment of students of a certain sex in each country. There is one exception: evaluation of the environmental science by boys from Russia. However, it may be the result of a smaller number of samples collected from this country in comparison with others. Table 7 shows that boys and girls in each of countries-participants tend to give a rather similar assessment. In general, more students from Ukraine and Sri Lanka evaluate science and research salaries in their countries as 'insufficient' in comparison to Japan, Malaysia and Russia. Comparison of Tables 6 and 7 shows that students' attitudes towards careers in science may have little correlation with the assessment of economic benefits associated with them. In particular, fluctuations among values indicating the interest towards careers in certain areas of science are significant (Table 6), while all areas might be evaluated similarly in terms of science and research salaries (Table 7).

## 6. Science for top and low performers (Japan's case)

There might be certain beliefs associated with science teaching and learning in a particular society and even globally. The present survey addressed one of the most basic and controversial, i.e. whether there are areas of science that top and low performers in science are not supposed to 'like'. If such tendency is present, it might become one of the factors defining the students' choice of science subjects in secondary and higher education. The assessment was made by Japanese school teachers and parents of children attending either lower or upper secondary school. The respondents were asked, whether there are areas of science which students with high and low marks in science tend to like. The results are presented in Table 8.

Table 8. Areas of science that top and low performers in science like (teachers' and parents' assessment, Japan's case)

Attitude	Top performers (teachers, %)				Low performers (teachers, %)				Top performers (parents, %)				Low performers (parents, %)			
	Ph	Ch	Bi	ES	Ph	Ch	Bi	ES	Ph	Ch	Bi	ES	Ph	Ch	Bi	ES
'Like'	66	75	23	6	3	11	78	20	88	66	14	8	10	7	83	33

According to Table 8, the evaluation given by teachers and parents draws up a similar trend. In particular, low performers in science are not considered to 'like' physics and chemistry. However, they are supposed to 'like' biology. In opposite, top performers are supposed to 'like' physics and 'chemistry' to a much higher degree than biology and Earth science. In particular, only 23% of teachers and 14% of parents expressed an opinion that top performers 'like' biology. In regard to Earth science it is 6% and 8% respectively. The reasons of this perception are unclear, but there might be an image of biology and Earth science as areas that 'do not fit' the top performers in school science. Such image might be the result of an assessment of school biology and Earth science as 'simple' subjects in comparison to 'exact sciences' involving accurate quantitative expressions and precise predictions (physics and chemistry). While this part of the survey concerned Japan, such tendency might be a universal one.

## Conclusions

The conclusions are summarized as follows.

1. Male students in all countries expressed a similar degree of interest towards learning physics, chemistry and biology and these areas of science as career options. A significant difference in attitudes is present in case of Earth science between blocks

of countries (Japan, Malaysia and Russia, Ukraine), which represent two different systems of education. Male students from the latter block express significantly more positive attitudes than their coevals from the former one. However, the degree of correlation between the attitudes and the characteristics of the education systems are unclear.

2. Female students in all countries are the 'least positive' towards learning physics, and it as a career option, and the 'most positive' towards biology. Female students from Japan might be the 'least interested' in regard to both categories.

3. According to teachers' and parents' assessment in case of Japan, male students are considered to prefer chemistry rather than other areas of science, while girls are considered to prefer biology. It is supposed that the 'least favorite' and 'interesting' for boys is Earth science. For girls, it is physics and Earth science.

4. Male and female students from Japan are more indifferent toward learning science than considered by their teachers.

5. Students' attitudes towards areas of science and the degree of their 'usefulness' might be rather independent values. This statement might be also correct in relation to perception of science areas as 'simple' or 'complex'.

6. Students' attitudes towards a career in a certain area of science may have little correlation with the economic benefits associated with it.

7. In Japanese society, there might be a belief that students who are top performers in school science do not prefer biology and Earth science. It may be a universal tendency.

## References

- Barrington, B. L. and Henderriks, B. (1988). Attitudes towards science and science knowledge of intellectually gifted and average students in third, seventh and eleventh grades. *Journal of research in Science teaching*, 25, 8, 679-687.
- Clarke, C. O. (1972). A determination of commonalities of science interests held by intermediate grade children in inner-city, suburban and rural schools. *Journal of Science Education*, 56, 125-136.
- Hadden, R.A. and Johnstone, A.H. (1983). Secondary School Pupils' Attitude to Science: The Year of Erosion, *European Journal of Science Education*, 5(3), 309- 318.
- Hadden, R.A. and Johnstone, A.H. (1983). Secondary School Pupils' Attitude to Science: The Year of Decision, *European Journal of Science Education*, 5(4), 429-438.
- Martin, M.O., Mullis, I.V.S., Foy, P., Olson, J.F., Erberber, E., Preuschoff, C., and Galia, J. (2008). TIMSS 2007 international science report: findings from IEA's trends in international mathematics and science study at the fourth and eighth grades, 207–280. TIMSS and PIRLS International Study Center, Lynch School of Education, Boston College.
- McGuffin, S. J. (1973). What Northern Ireland pupils think of SCISP. *Science Education*, 11.
- Piburn, M. and Baker, D. (1993). If I were the teacher... Qualitative study of attitude toward science. *Science Education*, 77 (4), 393-406.
- Reid, N and Skryabina, E. (2002b). Gender and Physics, 2002, *International Journal of Science Education*, 25(4), 509-536.
- Simpson and Oliver. (1985). Attitudes towards science and achievement motivation profiles of male and female science student in grades six through ten. *Science Education*, 69(4), 511-526.
- Sjoberg, S. and Schreiner, C. (2010). The ROSE project. Overview and key findings. Retrieved 29 November 2013, from: <http://roseproject.no/network/countries/norway/eng/nor-Sjoberg-Schreiner-overview-2010.pdf>

Skryabina, E. (2000). Students' attitudes to learning physics at school and university level in

Scotland. PhD thesis, University of Glasgow, Glasgow.

Suzuki, A. (2007). Attitudes of Japanese Students in Relation to School Biology. PhD thesis, University of Glasgow, Glasgow.

Weinberg, M. (1995). Gender differences in students attitudes towards science; A metaanalyses

of the literature from 1970 to 1991, Journal of Research in Science Teaching.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, serif font. The text is enclosed within a large, light blue circular arc that is partially visible. A red arc is also visible, overlapping the blue one from the left side.

*3D Virtual Environments of Royal Temple in Thailand  
(Wat Yannasangvararam) Phase I*

Veena Khongpit, Puchanit Phangphol

Sripatum University Chonburi Campus, Thailand

0404

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Abstract

Thailand has many invaluable cultural heritages found in various areas, particularly historical heritage, arts, architecture, and the way of life, which attract tourism in Thailand at the present. Although, some heritages have not properly been kept in good condition or used for arts and appreciation of intelligence of locality. Wat Yannasangvararam is a Buddhist place with a long history, located in Amphur Banglamung, Chonburi province, Thailand, founded in 1976. His majesty the King Rama IX, the present King of Thailand, has given this temple as the first class of royal monastery of Ratchaworamahawiharn and kept the temple under the royal patronage of the king. This research was to distribute knowledge about Thailand's cultural heritage and develop a model representing historical places in the form of virtual 3D computer graphic model with 3D environmental condition. The 3D computer graphic processes are as follows: 1) Pre-production: problem defines and study, draw maps, determine walking zone in the temple 2) Production Picture: 3D model character, shading and texturing, light and shadow, rendering and interactive and 3) Post-production: research validation by experts. The virtual 3D computer graphic model presented in both Thai and English language, which is compatible with personal computer, mobile phone and tablet, can lead to further education for students, undergraduates and people and conserve Thai culture. The results showed that The idea of creating the first three-dimensional media follows: 1. History of the Wat Yannasangvararam temple. 2. Architecture 3. Wat Yannasangvararam Environment. To lead to the cognitive development on virtual 3D computer graphic. Order to generate awareness to the importance of Wat Yannasangvararam.

## 1. INTRODUCTION

Thailand has a precious cultural heritage. Especially historical legacy of art, architecture and lifestyle was featured to the Tourism of Thailand [1], which refers to the Royal temples are built or renovated by a king or built by a member of royalty or the nobility and dedicated to the king, or even built by any well-to-do person who then requested to dedicate the temple to the king and it was accepted as such. They are divided into first, second and third class temples in a descending order of significance. The temples in each class are graded by a further ranking order which precisely identifies their position in the hierarchical system. This ranking system for royal temples was initiated in 1942 (King Rama VII).

Wat Yannasangvararam was founded in 1976 by Somdet Phra Yannasangvorn the Supreme Patriarch of Thailand, built as a dedication to H.M. King Rama IX, the present reign, for His Majesty's perfection of tenfold virtues of king and all his effort aiming for happiness and elim with generous supports from the Royal Family. Located on a tapioca field surrounded on three sides by hills and mountains and the fourth side by the Gulf of Thailand, Wat Yan is 160 kilometers east of Bangkok and 20 kilometers east of Pattaya Beach Resort on the road to U-tapao airport. During the Rains Residence (July to October) there are about 70 to 80 monks in residence and 40 or so monks at other times. The monks belong to the Theravada Dhammayuti lineage and observe practices of the Thai Forest Traditions which include the daily routine of: 1. going out on alms-round. 2. Eating one meal a day. 3. Putting all the food in and eating from the bowl. 4. Attending morning and evening (6:00 PM) sessions of chanting and meditation. 5. Sweeping the grounds and paths and keeping everything neat and clean. The Wat Yannasangvararam also provides opportunity for lay people to come and stay for individual retreats of long or short duration. However, there are does not major received attention and utilized, such as the awareness of indigenous knowledge. Thus, Researchers have to develop Virtual Environments of Royal Temple in Thailand (Wat Yannasangvararam). Designed specifically to users aware of environment and three-dimensional objects, like that of a real Interaction between user and computer objects. User was receiving information and virtual image including virtual view with normal vision. Useful for users and educational. These can be translated to an abstract and tangible. In addition These media not only serve their users well in providing human knowledge of a wide array of cultural heritages in increasingly robust and cost-effective formats but also create a society of participatory learning and a wide sharing of knowledge.

## 2. LITERATURE REVIEW

The virtual reality systems is an education system based on the Virtual Reality technology that models conventional real-world education by integrating a set of equivalent [virtual](#) concepts for virtual homework, virtual classes, virtual tests, virtual classrooms, virtual museums, virtual library and other external academic resources [2]. Immersion in VR is achieved with the disappearance of an artificial interface, replaced by natural every day's actions present in the real world. This is one of the key aspects of VR that brings together many researchers to support it. Some other advantages of immersion are not so obvious, but very important for justifying the use of VR in education, such as: VR enables first person experiences, which are natural,

unreflect and personal, generating direct, subjective and personal knowledge. VR provides a less symbolic interaction with the environment. Any description of an experience or action is usually transmitted through of symbols, conventions and formalisms, meaning that traditional learning of a concept require previous knowledge. VR have the potential to allow learners to discover and experience objects and phenomena in ways that they cannot do in real life [3] [4].

Virtual Reality (VR) in our understanding, is multimodal interaction with dynamic and responsive computer generated or so-called synthetic environments [5] [6]. The main focus is on interaction, which combines adequate presentation of the environment with its manipulation. Multi-modality defines the more hardware-oriented interface definition as the combination and cooperation of various input and output channels like speech, gesture, sound, position, video, and so on, which distinguishes the interface channels more from the point of media instead of the sensory perception. Dynamic behavior introduces the notion of time into virtual environments. A highly interactive system has to deal with time in general and specifically with variable time frames and their synchronization. Responsive virtual environments should operate in real-time, that is, the response time and update rate of the system is high enough so that the boundary between user and virtual environment, the so called interface, seems to vanish. This property is one of the major differences between VR systems and other 3D systems such as CAD systems. In our experience real-time cannot be quantified in general, it depends on the application domain. Flight simulations have higher requirements (60Hz or above) compared to design evaluation tasks where response rates above 10Hz seem to be sufficient.

These techniques serve one main purpose: the enhancement of human computer interaction. Especially in problem domains of high complexity, the use of immersive virtual environments promises a better insight. Immersion in our opinion is a result of the used techniques and surrounds the user with the computer generated world, which seems to be a different experience compared to classical interfaces. Obvious examples are complex evaluation or planning tasks like architecture or design, medical training, fluid dynamics in engineering or assembly planning.

VR-development-systems made large progress during the last few years. It is not only more powerful hardware, but also higher-level development libraries and toolkits that greatly reduce the effort needed for creating and rendering virtual environments, especially for visual output. For instance, systems such as IRIS Performer [7] automate tasks such as render tree traversal, culling of invisible geometry, display list creation, and multiprocessing, which are all used to consume a large portion of development time.

Virtual environment [8] displays arose from vehicle simulation and teleoperations technology of the 1960s. They are interactive, head-referenced computer displays that give users the illusion of displacement to another location. Different terms have been applied to the illusion. Some, like the oxymoronic "artificial reality" and "virtual reality", suggest much higher performance than current technology can generally provide. Others, like "cyberspace" are puzzling neologisms. Expressions like "virtual worlds" and "virtual environment" seem preferable because they are linguistically conservative, relating to well-established terms like virtual image. In fact, we can

define virtual environments as interactive, virtual image displays enhanced by special processing and by nonvisual display modalities, such as auditory and haptic, to convince users that they are immersed in a synthetic space. Why are these displays useful? Who uses them? How are they developed? The article addresses these and other questions related to this emerging technology.

### 3. THE APPROACH

The 3D computer graphic processes are as follows: 1) Pre-production: problem defines and study, draw maps, determine walking zone in the temple 2) Production Picture: 3D model character, shading and texturing, light and shadow, rendering and interactive and 3) Post-production: research validation by experts. The virtual 3D computer graphic model presented in both Thai and English language, which is compatible with personal computer, mobile phone and tablet, can lead to further education for students, undergraduates and people and conserve Thai culture. See Figure 1.

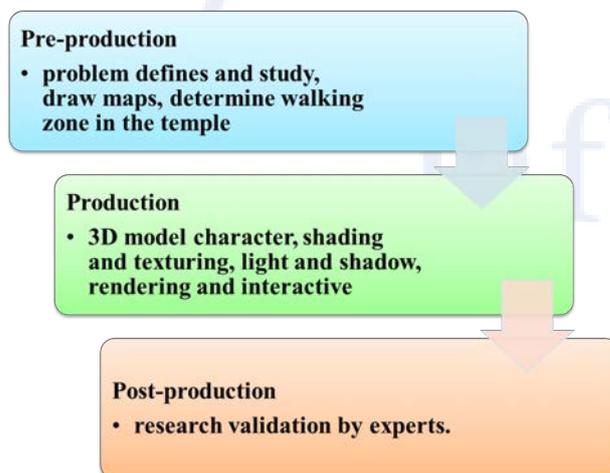


Figure 1. Research framework

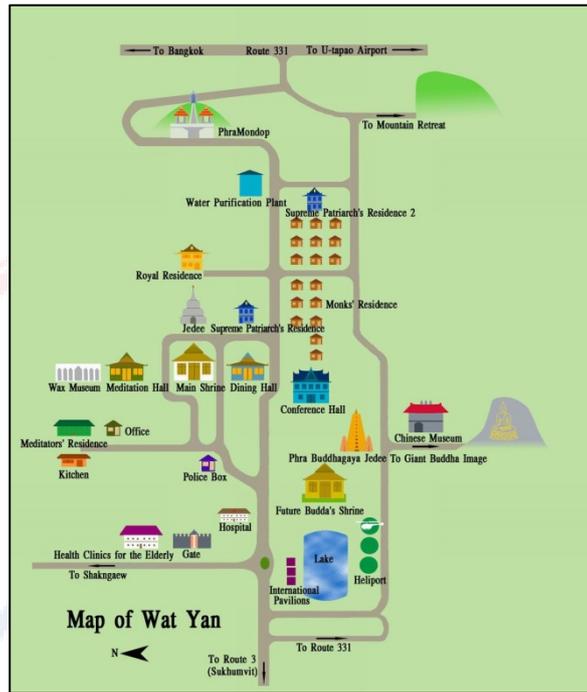


Figure 2. Map of Wat Yannasangvararam



Figure. 3 Picture Turntable



Figure 4. Create 3D Model

#### **4. CONCLUSION AND FUTURE WORK**

The results showed that The idea of creating the first three-dimensional media follows: 1. History of the Wat Yannasangvararam temple. 2. Architecture 3. Wat Yannasangvararam Environment. To lead to the cognitive development on virtual 3D computer graphic. Order to generate awareness to the importance of Wat Yannasangvararam.

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## 6. REFERENCES

- [1] *Royal Temple Tutorial*, <http://www.dhammathai.org/watthai/royalwat.php>. (Access date: 18 April, 2013).
- [2] Dillenbourg, Pierre. (2000). [Virtual learning environments](#). EUN Conference 2000: Learning in the new millennium: Building new education strategies for schools.
- [3] G.Taxen, A. Naeve. (2002). A system for exploring open issues in VR-based education, *Computers & Graphics*, 26, 2002, 593–598
- [4] [Brooks Jr., F. P.](#) (1999). [What's Real About Virtual Reality?](#), *IEEE Computer Graphics And Applications*, 19(6), 16
- [5] J. Bernard, Introducing Immersive Projection Technology to Engineering and Science. In: H.-J. Bullinger, O. Riedel (eds.), 1. International Immersive Projection Technology Workshop, Forschung und Praxis T51. ISBN: 3-540-63339-1, Springer Verlag, Berlin, 1997, pp. 9-11
- [6] H.-J. Bullinger, O.Riedel, R.Breining, Immersive Projection Technology & Benefits for the Industry. In: H.-J. Bullinger, O. Riedel (eds.), 1. International Immersive Projection Technology Workshop, Forschung und Praxis T51. ISBN: 3-540-63339-1, Springer Verlag, Berlin, 1997, pp. 13-25
- [7] J. Rohlf, J. Helman, IRIS Performer: *A High Performance Multiprocessing Toolkit for Real-Time 3D Graphics*. In: Proc. ACM SIGGRAPH, Orlando, 1994
- [8] Stephen R. Ellis, *Pictorial communication in virtual and real environments*, Taylor & Francis, Inc., Bristol, PA, 1991

*3D Animation for Energy Reduction Campaign (Phase 1)*

Chinnawat Prayoonrat

Sripatum University Chonburi Campus, Thailand

0405

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Abstract

Recently, every country has been using technology for manufacturing and agricultural development, including creating various convenient facilities to satisfy human needs. Existing energy has very much been used, for example; electricity, oil, etc. and soon run out. The careless use of energy, lack of knowledge of energy, overusing energy can have devastating effects on ecosystems and human lives such as geography, climate, etc. In order for realizing the value of energy, using energy efficiently, encouraging and educating youth about proper energy uses, this research of 3D Animation for Energy Reduction Campaign is created and distributed to the youth. The animation is created in the form of video format and has animation process as follows: 1) Pre-production: problem defines, story board, turntable animation and backdrop design 2) Production: 3D model character, shading and texturing, light and shadow, rendering and editing and 3) Post-production: research validation by experts. The research of 3D Animation in the form of video format was one of the successful ways to promote uses of energy and energy reduction campaign and it was found that the youth understood and perceived what the animation was trying to tell them very well.

**Keyword:** Energy, Animation

## **1. Introduction**

After industrial revolution, most countries have turned to industrial society. This includes developed countries such as USA, China, Russia, Japan and European countries and developing countries including Thailand. The impact of industrialization has caused the change in environment including geographic, climate, and society. On the other hand, it help creates modern technology and facilities. Some facilities need some sorts of energy as such as electricity, oil, etc. Therefore, energy is very important in human societies. As the demand for energy increase, some sorts of energy might be used up and run out in the future. To reduce the risk or to slowdown the future problems, efficient use of energy and energy reduction should be realized and perceived. [3]

The purpose of energy reduction campaign is to let people realize problems that might happen in the future if the over consuming keeps going. Many types of media have been used for campaign. However, the most attractive media at the present is animation. Animation was originated by the theory of persistence of vision. The persistence of vision is the phenomenon of the eye by which an afterimage is thought to persist for approximately one twenty-fifth of a second on the retina and believed to be explanation for motion perception. Animation creation methods include traditional animation (two-dimensional or hand-drawn animation or cut-out animation), stop motion animation of three-dimensional objects (clay animation), and digital computer animation (images are displayed in a rapid succession) [2]

Therefore, everyone must be responsible for energy reduction and should continuously promote campaign. The advantage of using animation as a media used in campaign is that it is the most appropriate media especially the 3D animation technique, which could illustrate and is very powerful in terms of perception.

### **(Phase 1: Story and Character design)**

## **2. Production Process**

### **2.1 Production Concept**

The purpose of 3D animation is for energy reduction campaign. The story is about electricity reduction in a house. Lighting technique and character over acting movement [1] are being used by the researcher to create this 3D animation. The reason is that the movement of character will be cheerful and is interesting.

### **2.2 Story Concept**

The concept of realization and attitude [4] is used to create story of the animation. The survey was conducted in order to find out a suitable and most attractive story to reflect the need of energy reduction these days. Samples were graduates and undergraduates of Sripatum University Chonburi Campus. It was found that most sample would like to promote electricity reduction campaign and the impact of not having electricity in the future.

### **2.3 Animation and Character Design**

According to character design and 3D animation theory, a young working man is created by using Maya and Photoshop program. The technique of polygon modeling,

UV mapping, and color are also used together with skin surface creation (bump) so that the model is closed to the realistic character.

#### **2.4 Character set up process**

After collecting information, the process of checking software (Maya, After Effect, Photoshop) is then taken places as follows:

2.4.1 Test model movement using Maya program, then create joints and skeleton using invert Kinematic function to control and create smooth movement of skeleton.

2.4.2 Test emotion on the face of the model using blend shape method which could make realistically face express of the model.

2.4.3 Determine bind skin in order to be able to control the movement and the change of shapes and object surface. Smooth bind skin is used so as to make the movement more natural and realistic.

2.4.4 Test movement of the model

2.4.5 Create location and lighting according to the story

### **3. Result of the research (Phase 1)**

#### **3.1 Character**

Energy saving concept, 3D animation theory, and survey results are used to design and create realistic character of the 3D animation as shown in figure 1-2.

#### **3.2 Location**

A condominium room is set as location of the 3D animation to reflect city atmosphere with limited space, as shown in figure 3-4.

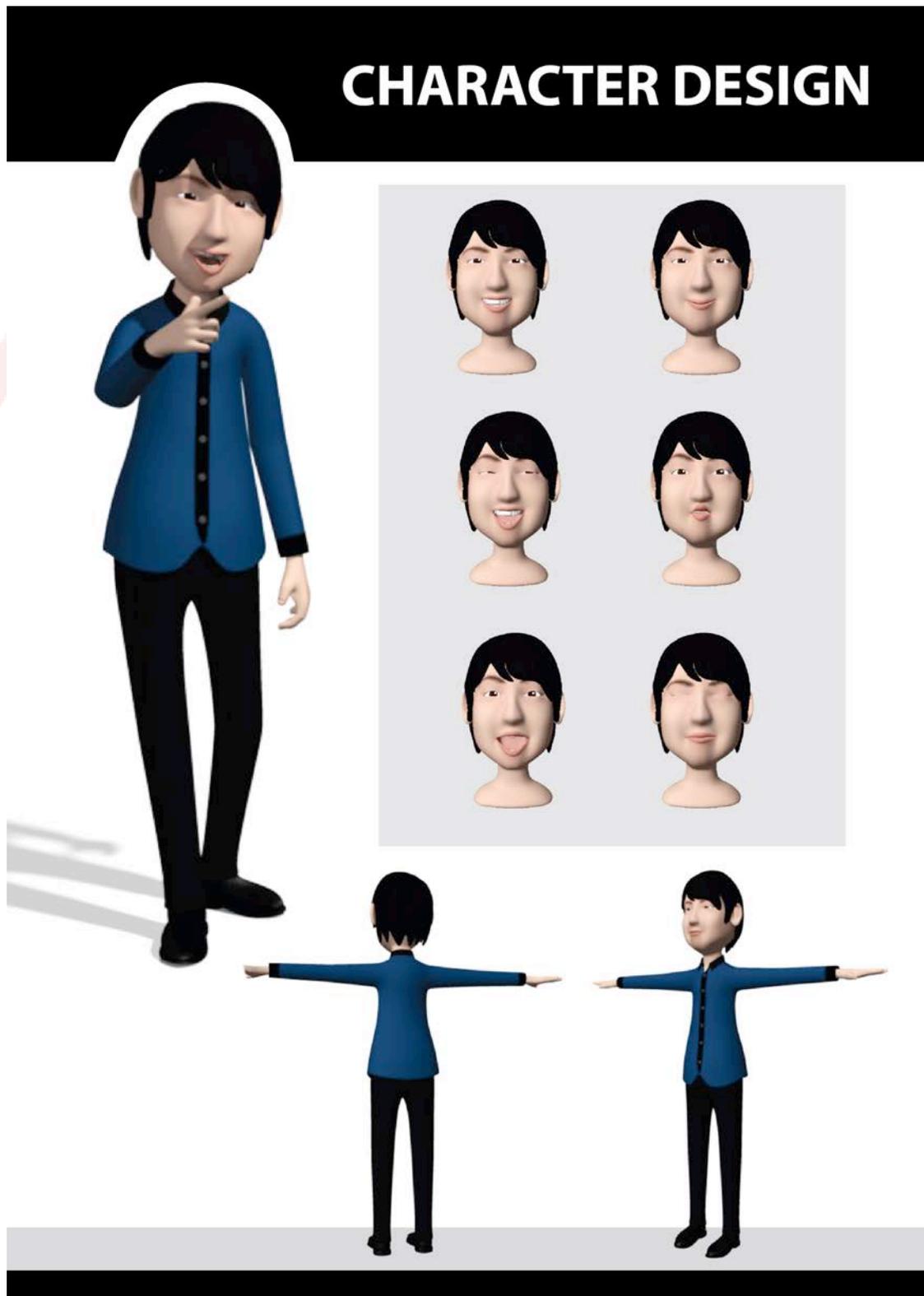
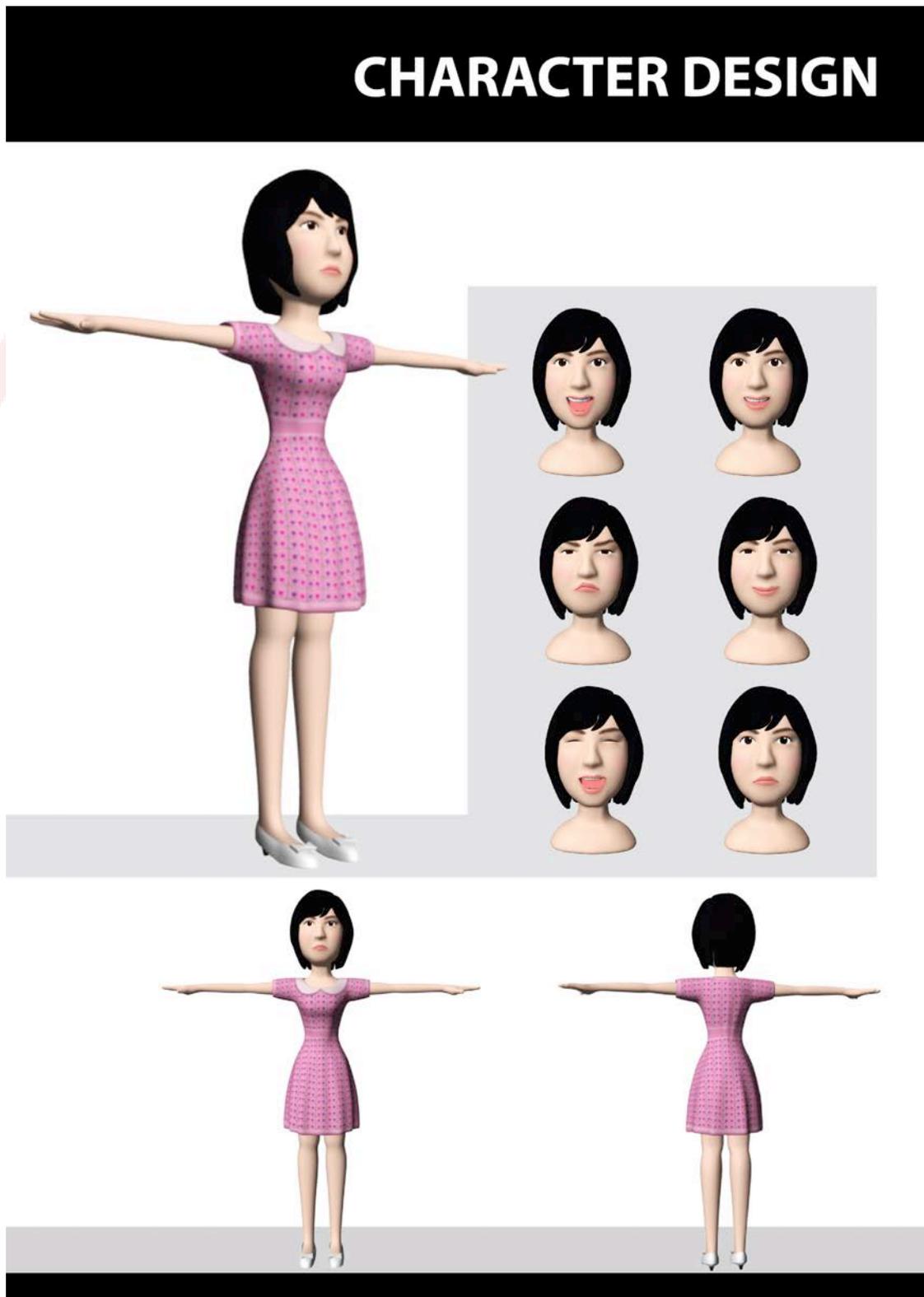


Figure 1 The first character



**Figure 2** The second character



**Figure 3** Location



**Figure 4** Location

#### **4. Conclusion (Phase 1)**

In the phase 1 of creating 3D animation for energy reduction campaign, the concept of realization and attitude is used to create story of the animation, character, and location. The survey was conducted in order to find out a suitable and most attractive story to reflect the need of energy reduction these days.

The next phase of this research (Phase 2) includes (1) making movement for character and setting camera angle (2) image composition and image advance edition using After Effect Program (3) 3D animation rendering (4) edit image using advance technique in Premiere Pro Program and (5) 3D animation video rendering. Finally, the last phase (Phase 3) is to launch the finished animation and assess efficiency of the campaign.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is surrounded by two large, overlapping circular arcs. The upper arc is light blue and the lower arc is light red, both with a soft, feathered edge.

## Reference

- [1] Richard Williams. 2001. *The Animator's Survival Kit – Animated*. United States : Faber and Faber Inc.
- [2] Thammasak Aueragsakul. 2004. *How to make 2D animation*. Thailand : Media Intelligence Technology.
- [3] Prasong Earwcharoen. 2009. *The knowledge and Participation in Saving Electric Energy of Students and Staffs at Rajamangala University of Technology Phra Nakhon*. Rajamangala University of Technology Phra Nakhon.
- [4] Wimonpan Arpavate. 2011. *Awareness Knowledge Attitude and Behavior on Global Warming of Residents in Bangkok Metropolitan Region*. Rajamangala University of Technology Phra Nakhon.

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*Learning and Teaching in Times of Change:  
Reinventing the Aims of Education in Times of Change and Transformation*

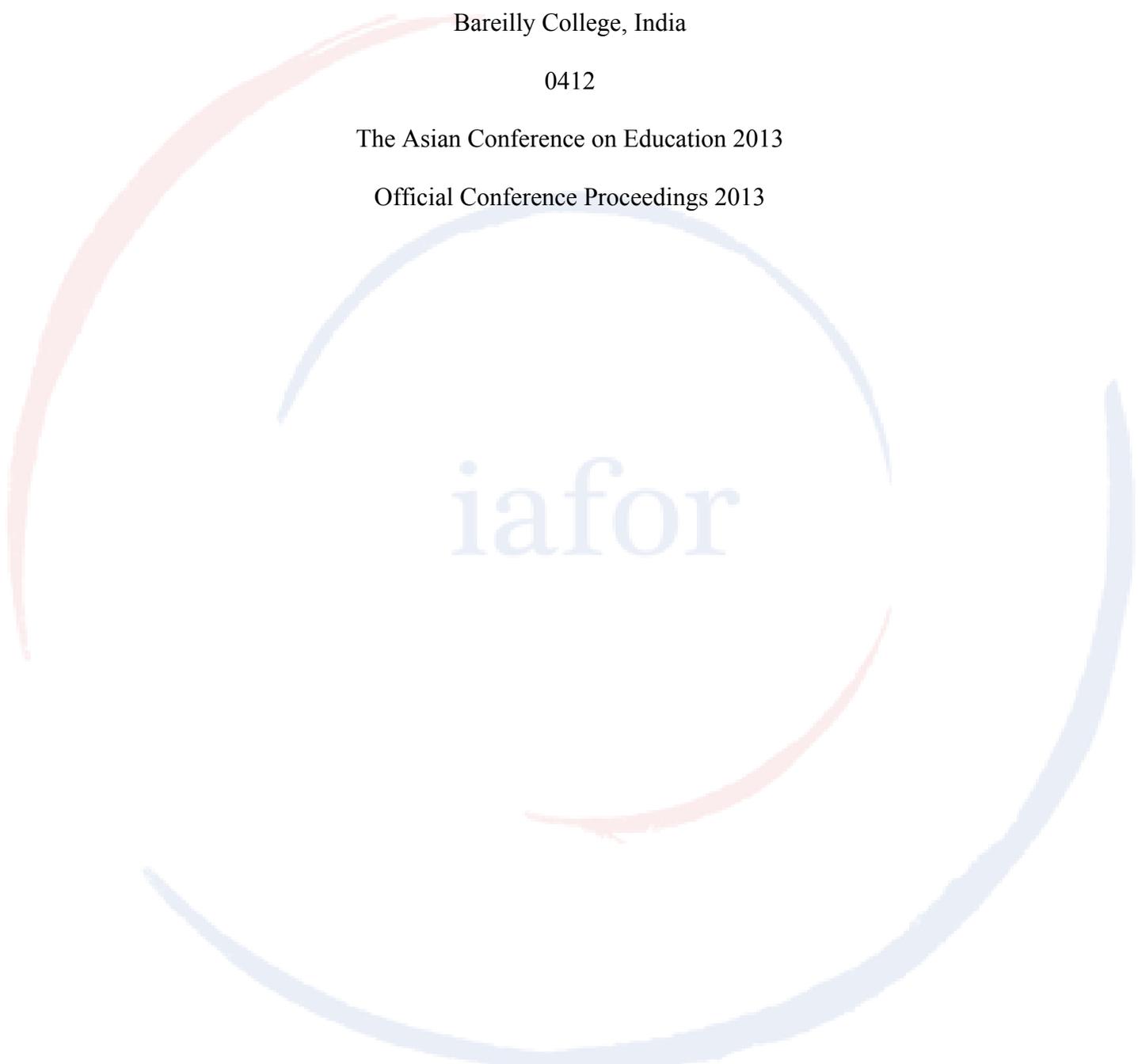
Jyoti Chahal

Bareilly College, India

0412

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In the present times of change and transformation the biggest challenge before us is that the education all over the world has completely failed to make compassionate and responsible human beings. In the recent past there has been tremendous advancement in all the areas of knowledge but " Affective- Domain" of Educational objectives has not received due attention. Education is merely reduced to Information.

Education is a multi dimensional process which aims at all round development of personality. No doubt the advancement in science and technology has made our life comfortable and prosperous but neglect of ethics and aesthetics component of education has resulted into numerous social problems. Globalization today has changed the pattern of social interactions among the people and communities all over the world. People from different cultures, nationalities, religions, political ideologies have come close to each other. We cannot escape this proximity. Issues like co-existence, communal harmony, world peace, global prosperity, survival of races ,power structure etc. have emerged as important issues. We have to learn to deal with sincerity, generosity.

Therefore it has become necessary to educate our young generation all over the world so that they realise the importance of community life, co operation, compassion and willingly participate for the progress, prosperity and peace for self and society. Today the Challenge before us is to train our students for global coexistence.

Professor Baden Offord of Southern Cross University Australia in his address stated that the key challenge for all of us is **co-existence** which is possible if we embrace conviviability (ACA 2013/ACCS 2013 Osaka, Japan)

Globalization has enlarged the area of our interaction with the world. We have come close to each other. We need each other's co operation and assistance for survival and progress. The education must help a student to actualize his potential for self and others. Therefore the aim of education must be to inculcate such qualities among students that they grow up as knowledgeable, compassionate, creative and benevolent human beings. Education must focus at the development of all the desirable Personality-Factors for an all round personality growth in view of globalization. There is a need to find out what personality factors are responsible for developing the qualities like compassion , sociability ,creativity, self actualization, tolerance etc which will help a student to strive for the development of self and society.

The present study is a humble attempt to see how variables like Self Actualization , Altruism and Creativity correlate with various personality factors. It may be classified under ***descriptive research completed with correlation approach***. A ***sample*** of 578 High-school students were drawn using random and cluster sampling procedure.

**STATEMENT OF PROBLEM:** A study of Self Actualisation in relation to Altruism , Creativity and Personality Factors among high school students of Faizabad city, Uttar Pradesh, India.

**DEFINITION OF KEY WORDS:**

**Self-Actualisation :-** It means actualising one's potential, becoming everything one is capable of becoming.

**Creativity** :- Creativity is the ability to produce original ideas , to perceive new and unexpected relationship or to establish a unique and improved order among seemingly unrelated factors. In the present study four abilities ; Fluency, Flexibility , Originality and Elaboration are considered as components of Creativity.

**Altruism** :- The term Altruism refers to the behaviour that has its aim to produce, maintain, or improve physical or psychological welfare and integrity of another person. Altruistic behaviour must be carried out voluntarily, must aim to benefit others and must be carried out without anticipation of rewards.

**Personality Factors** :- In the present study the personality factors based on " Cattle's HSPQ 14 PF TEST" have been used which are given below in Table 1.1

**Table 1.1**

LOW STEN SCORES ( 1 - 3 )	PF	HIGH STEN SCORES ( 8 - 10 )
RESERVE, ALOOF, STIFF, CRITICAL, DETACHED	A	WARM HEARTED, PARTICIPATING
LESS INTELLIGENT, CONCRETE THINKING, LOWER SCHOLASTIC CAPACITY	B	MORE INTELLIGENT, ABSTRACT THINKING
AFFECTED BY FEELING, EMOTIONALLY LESS STABLE, EASILY UPSET, LOWER EGO STRNGTH	C	EMOTIONALLY STABLE, MATURE, CALM, HIGH EGO STRENGTH
UNDEMONSTRATIVE, DELEBRATE, INACTIVE,	D	EXCITABLE,IMPATIENT,DEMANDING, OVERACTIVE, UNRESTRAINED
OBEDIENT, MILD, EASILY LED, SUBMISSIVE, ACCOMODATING	E	ASSERTIVE,COMPETITIVE,DOMINANT AGGRESIVE, STUBBORN
SOBER, TACITURN, SERIOUS	F	ENTHUSIASTIC, HEEDLESS,HAPPY GO LUCKY
DISREGARDS RULE, EXPEDIENT, WEAKER SUPER EGO STRENGTH	G	CONSCIENTIOUS, PERSISTENT, STAID MORALISTIC, STRONG SUPER EGO STRENGTH
SHY, TIMID, SENSITIVE	H	ADVENTUROUS , SOCIALLY BOLD
TOUGH MINDED, REJECTS ILLUSION	I	TENDER MINDED, SENSITIVE, CLINGING, OVER PROTECTIVE
ZESTFUL, LIKES GROUP ACTION	J	CIRCUMSPECT, INDIVIDUALISM, INTERNALLY RESTRAINED
SELF ASSURED, PLACID, SECURE, UNTROUBLED,	O	APPREHENSIVE, SELF REPROACHING INSECURE, WORRYING,GUILT PRONE

COMPLACENT		
SOCIALLY GROUP DEPENDENT, JOINER, FOLLOWER	Q2	SELF SUFFICIENT, PREFERS OWN DECISION, RESOURCEFUL
UNCONTROLLED, LAX FOLLOWS URGES, CARELESS OF SOCIAL RULES, LOW INTEGRATION	Q3	CONTROLLED, SOCIALLY PRECISE, SELF DISCIPLINED, COMPULSIVE, HIGH SELF CONCEPT, CONTROL
RELAXED, TRANQUIL, TROPID, UNFRUSTRATED, COMPOSED	Q4	TENSE, DRIVEN, FRUSTRATED, FRETFUL

**OBJECTIVES OF THE STUDY :-**

1. To study inter- correlation among variables: Self Actualization, Altruism, Creativity and Personality Factors.
2. To study personality patterns of high self- actualize and low self -actualize
3. To study the personality pattern of high altruists and low altruists
4. To study the personality patterns of high creative and low creative

**METHODS : TOOL : Four standardised tools were used to collect data.**

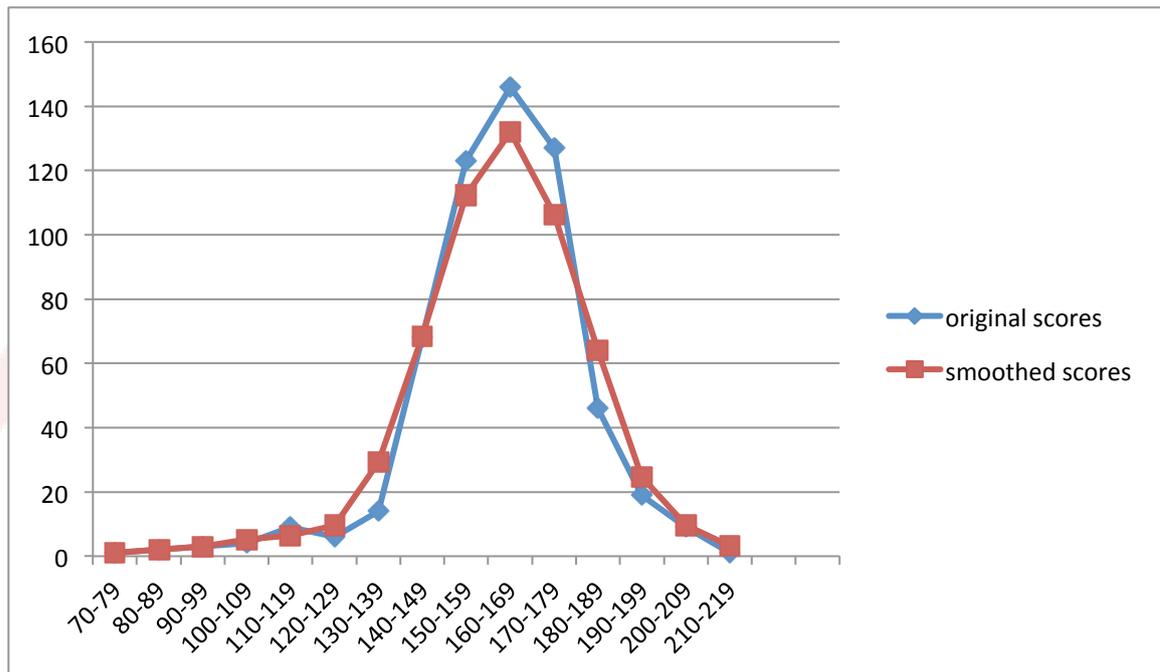
- (i) Self-Actualisation inventory [ Sharma KN 1987
- (ii) The battery of diversion, production, ability [DPA BY K N Sharma, 1987]
- (iii) Altruism scale [ALPS by Rai and Singh 1988]
- (iv) Junior-Senior High School Personality Questionnaire [HSPQ by Cattles]

**Statistical Analysis :** The obtained scores were changed into standard scores with M-50 and SD-10 to bring the score to a common starting and terminal point. To verify the nature of score-distribution **frequency polygon** were plotted with original and smoothed scores and **Descriptive statistics** mean, median, skewness, kurtosis and standard deviations were computed.

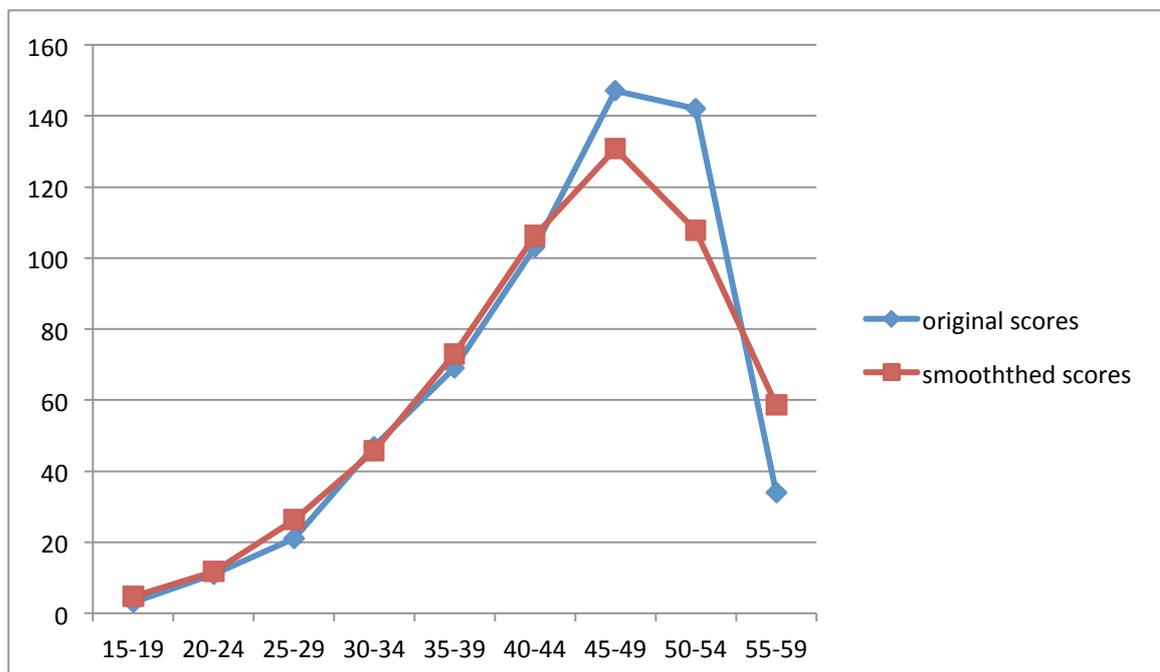
**Table--1.2 Numerical Determinants of normality**

Sr.No.	Variable	Code	Mean	Median	SD	Skewness	Kurtosis
1	Self-actualization	SA	162.43	163.54	18.29	-0.18	0.21
2	Altruism	AL	44.20	45.69	08.32	-0.54	0.22
3	Creativity	CR	200.14	197.74	31.17	-0.23	0.26

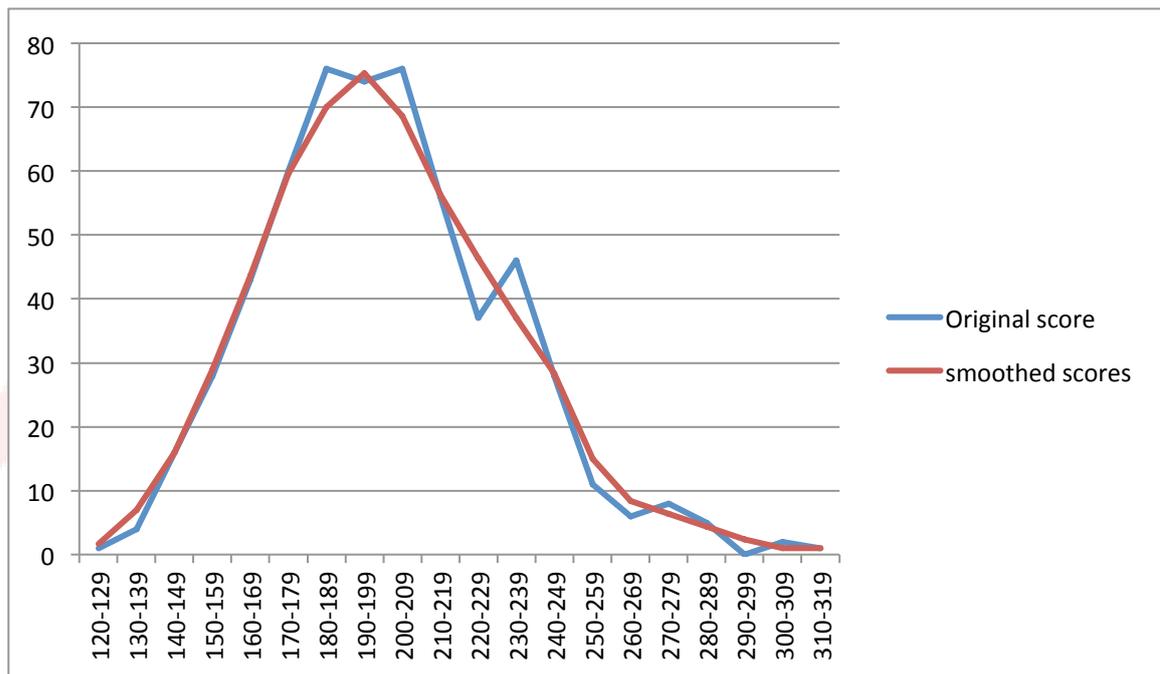
### FREQUENCY POLYGON PLOTTED FOR SELF-ACTUALIZATION-SCORES



### FREQUENCY POLYGON PLOTTED FOR ALTRUISM SCORES



FREQUENCY POLYGON PLOTTED FOR CREATIVITY SCORE



In sample these variables reveal slight deviation from normal. Due to self exposition the scores are obtained on a little higher side of the score continuum. The trend being general it does not affect the results. Therefore in population these variables can be safely accepted as normal.

**To study the correlation** between Self Actualization , Altruism, Creativity and 14 Personality Factors -Product Movement Coefficient of Correlation were computed . Results are displayed below in a correlation -Table 1.3

**TABLE 1.3 VALUE OF CORRELATION BETWEEN SELF ACTUALIZATION, ALTRUISM, CREATIVITY AND 14 PERSONALITY FACTORS**

- Note:-**
1. A value of "r-----.084-----significant at.05 level (df = 576)
  2. A value of "r"---.110-----significant at .01 level (df = 576)

SELF ACTUALIZATION			ALTRUISM			CREATIVITY		
VARIABLE	`r`	LOS	VARIABLE	`r`	LOS	VARIABLE	`r`	LOS
ALTRUISM (AL)	093	05	SELF ACTUALIZATION	093	05	SELF ACTUALIZATION	086	05
CREATIVITY (CR)	086	05	CREATIVITY	248	01	ALTRUISM	248	01
ELABORATION	108	05	FLUENCY	193	01	MORE INTELLIGENT	284	01

WARM-HEARTED (A)	114	01	FLEXIBILITY	231	01	EMOTIONALLY STABLE (C)	137	01
ENTHUSIASTIC (F)	094	05	ELABORATION	218	01	OBEDIENT (B)	092	05
TENDER MINDED (I)	110	01	ORIGINALITY	127	01	CONSCIENTIOUS (G)	234	01
CIRCUMSPECT (O)	102	05	MORE INTELLIGENT (B)	149	01	TENDER MINDED (I)	200	01
SELF SUFFICIENT (Q2)	132	01	EMOTIONALLY STABLE (C)	156	01	SELF ASSURED (O)	125	01
			UNDEMONSTRATIVE (D)	155	01			
			CONSCIENTIOUS (G)	297	01			
			ADVENTUROUS (H)	107	01			
			TENDER MINDED (I)	112	01			
			APPREHENSIVE (O)	169	01			
			RESOURCEFUL (Q2)	188	01			
			CONTROLLED (Q3)	197	01			
			RELAXED (Q4)	129	01			

The observation table suggests :

**1. Self actualization** shares correlation at-

.05 level of significance with variables ;Altruism, Creativity, Elaboration, Warm Hearted, Circumspect.

.01 level of significance with variables; Warm Hearted, Enthusiastic, Tender Minded, Circumspect and Self Sufficient.

**2. Creativity** bears a correlation with ;

Self Actualization .05 level of significance.

Altruism, More intelligent, Emotionally stable, Obedient, Conscientious, Tender minded, and Self assured. .01 level of significance

**3. Altruism** shares a correlation with -

Self Actualization .05 level of significance with variables

Creativity, Flexibility, Fluency, Elaboration, Originality, More intelligent, Emotionally stable, Undemonstrative, Conscientious, Adventurous, Tender minded, Apprehensive, Resourceful, Controlled, Relaxed. .01 level of significance with variables;

**To study the personality differences between high and low---Self-Actualize, Altruist and Creative,** two groups were drawn from the sample. The students

- (1) who scored above a score "Mean+1SD" were grouped as high score and
- (2) who scored below a score "Mean-1SD" were grouped as low score.

To study the significance of difference, **'t' test of significance** was employed.

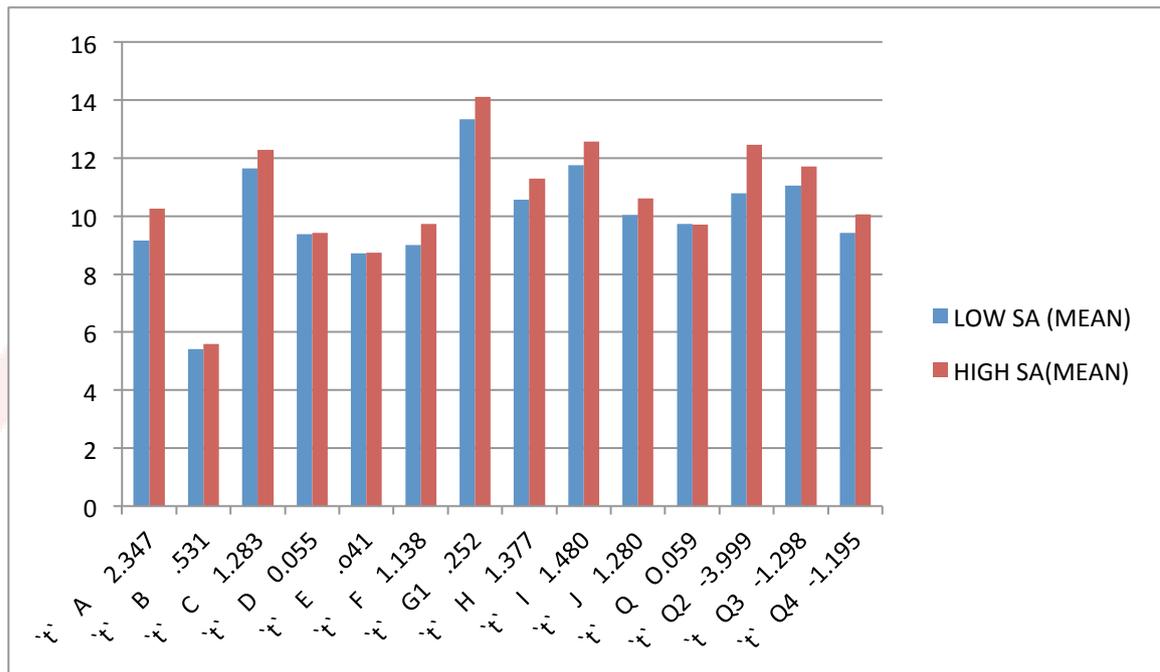
**NOTE -" t " value of** 1.98 is significant at .05 level of significance  
2.355 is significant at .02 level of significance,  
.05 is significant at .01 ( df = 135

**TABLE 1.4**

**MEAN, SD, SE, and 't' for 14 Personality Factors of  
LOW and HIGH SELF- ACTUALIZE**

CODES14P F	MEANS		SD		SE	"t"
	LOW --SA	HIGH--SA	LOW- SA	HIGH-SA		
A	9.15	10.26	2.80	2.73	.473	2.347
B	5.41	5.58	1.96	1.78	.32	.531
C	11.65	12.29	2.78	3.06	.499	1.283
D	9.38	9.41	3.01	3.39	.548	.055
E	8.72	8.74	2.77	2.96	.490	.041
F	9.01	9.72	3.49	3.81	.624	1.138
G	13.35	14.10	3.89	3.07	.599	1.252
H	10.56	11.30	3.17	3.12	.538	1.377
I	11.75	12.57	3.58	2.86	.554	1.480
J	10.03	10.61	2.83	2.46	.453	1.280
O	9.74	9.71	3.12	2.75	.503	.059
Q2	10.78	12.46	2.57	2.34	.420	-3.999
Q3	11.04	11.70	3.13	2.81	.508	1.298
Q4	9.43	10.06	3.25	2.97	.528	1.195

**BAR-GRAPH SHOWING MEANScores FOR PERSONALITY FACTORS OF HIGH AND LOW SELF- ACTUALIZE**



**PERSONALITY FACTORS**

"t"

Level of significance

(A) WARM HEARTED	2.347	.05
(Q2) SELF SUFFICIENT	3.999	.01

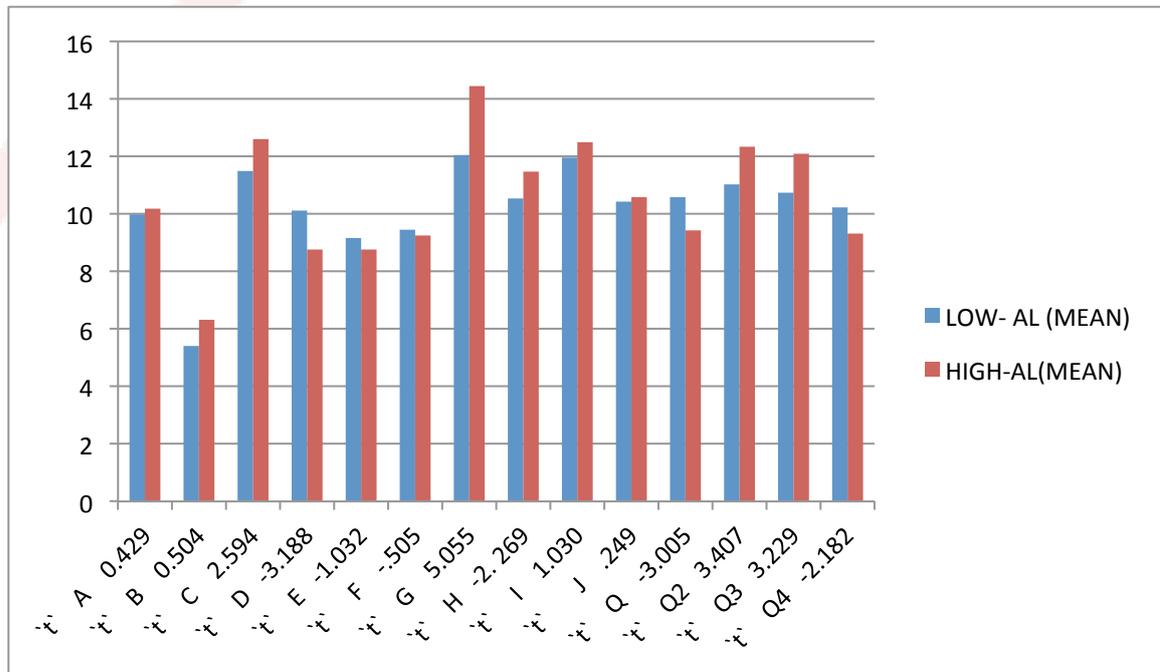
**TABLE 1.5**

**MEAN, SD, SE, and `t` for 14 Personality Factors of LOW and HIGH ALTRUISTS**

CODES14P F	MEANS		SD		SE	"t"
	LOW --AL	HIGH--AL	LOW-AL	HIGH-AL		
A	9.99	11.19	2.69	2.69	.465	.429
B	5.41	6.32	2.07	1.63	.259	3.504
C	11.50	12.61	3.33	2.76	.427	2.594
D	10.11	8.77	2.87	3.04	.420	-3.188
E	9.16	8.76	2.77	2.71	.387	-1.032
F	9.46	9.24	2.96	3.16	.435	-.505
G	12.05	14.44	3.70	3.06	.479	5.055
H	10.55	11.48	2.66	3.06	.409	-2.269
I	11.97	12.49	3.26	3.78	.509	1.030
J	10.43	10.52	2.84	2.29	.360	.249
O	10.59	9.43	3.09	2.41	.386	-3.005

Q2	11.03	12.30	3.05	2.26	.373	3.407
Q3	10.75	12.10	3.27	3.05	.445	3.229
Q4	10.23	9.32	2.99	2.91	.417	-2.182

**BAR-GRAPH SHOWING MEANScores FOR PERSONALITY FACTORS OF HIGH AND LOW ALTRUITS**



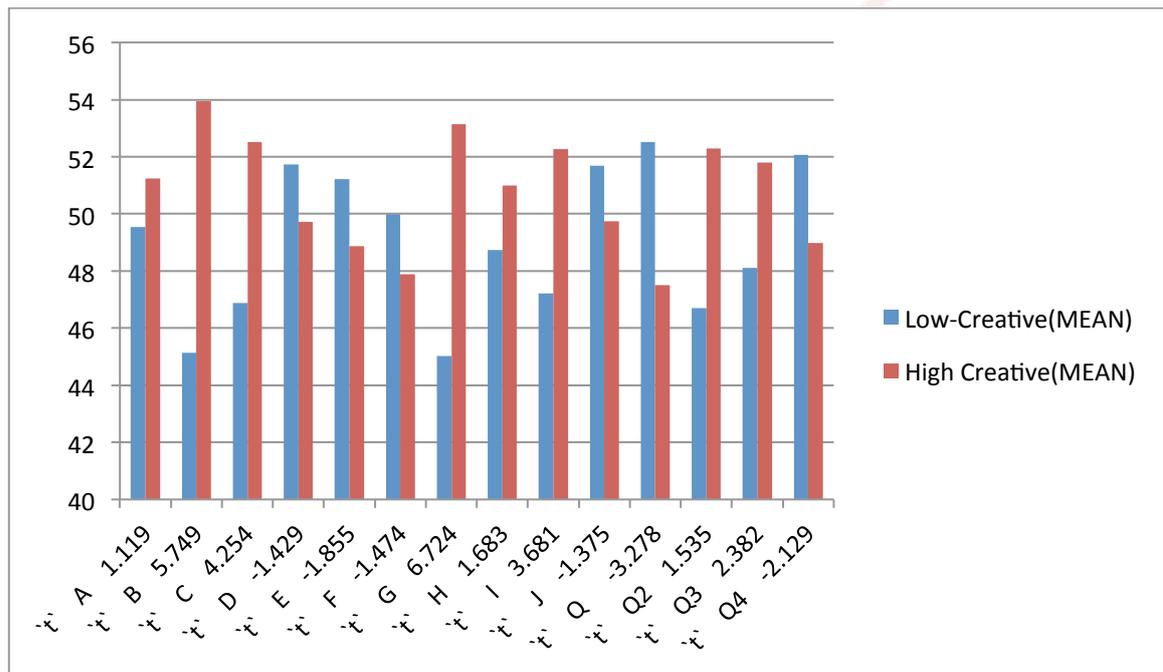
PERSONALITY FACTORS	Level of significance	"t"
( B ) MORE INTELLIGENT		3.504 .01
( D ) UNDEMONSTRATIVE		-3.188 .01
( Q2 ) SELF SUFFICIENT		3.407 .01
( Q3 ) CONTROLLED		3.2299 .01
( C ) EMOTIONALLY STABLE		2.594 .05
( G ) CONSCIENTIOUS		5.054 .05
( H ) SHY		-2.269 .05
( O ) SELF ASSURED		-3.005 .05
( Q4 ) RELAXED		-2.181 .05

**TABLE 1.6**

**MEAN, SD, SE, and 't' for 14 Personality Factors of LOW and HIGH CREATIVES**

CODES14P F	MEANS		SD		SE	"t"
	LOW --AL	HIGH--AL	LOW-AL	HIGH-AL		
A	49.55	51.25	9.96	10.97	1.518	1.119
B	45.14	53.95	11.37	9.51	1.532	5.749
C	46.89	52.51	8.96	9.23	1.321	4.254
D	51.73	49.73	8.75	10.53	1.399	-1.429
E	51.22	48.86	8.81	9.68	1.272	-1.474
F	49.99	47.89	9.56	10.06	1.424	-1.474
G	45.02	53.15	10.41	9.64	1.462	6.724
H	48.74	50.99	9.03	9.38	1.336	1.683
I	47.22	52.28	9.73	9.81	1.375	3.681
J	51.69	49.75	11.50	8.63	1.491	-1.375
O	52.51	47.50	11.60	9.07	1.525	-3.278
Q2	46.71	52.29	10.51	9.90	1.530	1.535
Q3	48.12	51.80	10.71	10.53	1.544	2.382
Q4	52.06	48.98	9.90	10.01	1.446	-2.129

**BAR-GRAPH SHOWING MEANScores FOR PERSONALITY FACTORS OF HIGH AND LOW CREATIVES**



PERSONALITY FACTORS of significance	"t"	Level
( B ) MORE INTELLIGENT	5.749	.01
( C ) EMOTIONALLY STABLE	4.254	.01
( G ) CONSCIENTIOUS	6.724	.01
( I ) TENDER MINDED	3.68	.01
( O ) SELF ASSURED	-3.278	.01
( E ) OBEDIENT	-1.855	.05
( H ) ADVENTUROUS	1.683	.05
( Q3 ) CONTROLLED	2.382	.05
( Q4 ) RELAXED	-2.129	.05

### RESULTS , DISCUSSION AND INTERPRETATION :

**Self Actualization** shares correlation with Altruism and Creativity and Circumspect at .05 level of significance. It has a correlation with variables; tender minded ,warm hearted, Self sufficient at .01 level of significance.

**Creativity** shares correlation with variables ; Altruism, More intelligent, Emotionally stable, Obedient/ Accommodating, Conscientious, at.01 level of significance.

**Altruism** has a correlation with variables; More intelligent, Emotionally stable Undemonstrative, conscientious, Adventurous/Socially bold, Apprehensive, Resourceful/ Self sufficient, Controlled and Relaxed at .01 level of significance.

Low and High SELF ACTUALIZE have significantly different personality patterns.

PERSONALITY FACTORS of significance	"t"	Level
( A ) WARM HEARTED	2.347	.05
( Q2 ) SELF SUFFICIENT	3.999	.01

Low and High ALTRUISTS have significantly differently Personality patterns.

PERSONALITY FACTORS of significance	"t"	Level
( B ) MORE INTELLIGENT	3.504	.01
( D ) UNDEMONSTRATIVE	-3.188	.01
( Q2 ) SELF SUFFICIENT	3.407	.01
( Q3 ) CONTROLLED	3.2299	.01
( C ) EMOTIONALLY STABLE	2.594	.05
( G ) CONSCIENTIOUS	5.054	.05
( H ) SHY	-2.269	.05
( O ) SELF ASSURED	-3.005	.05

( Q4 ) RELAXED -2.181 .05

Low and High CREATIVES have significantly differently Personality patterns.

PERSONALITY FACTORS	"t"	Level of significance
( B ) MORE INTELLIGENT	5.749	.01
( C ) EMOTIONALLY STABLE	4.254	.01
( G ) CONSCIENTIOUS	6.724	.01
( I ) TENDER MINDED	3.68	.01
( O ) SELF ASSURED	-3.278	.01
( E ) OBEDIENT	-1.855	.05
( H ) ADVENTUROUS	1.683	.05
( Q3 ) CONTROLLED	2.382	.05
( Q4 ) RELAXED	-2.129	.05

The discussion that flows from the results of the study emphasizes that:-

SELF- ACTUALIZATION seems to have a correlation with ALTRUISM and CREATIVITY at a level .05, but correlation between ALTRUISM and CREATIVITY at .01 level of significance is much more. This suggests that an Altruist seem to be more creative than a Self-Actualize.

Correlation of 14 Personality Factors with Self Actualization , Altruism and Creativity suggest ;

Self Actualize seem to be altruist, creative, circumspect, self sufficient, warm hearted and tender minded.

Creative seem to be altruist, self actualize, more intelligent, emotionally stable, obedient(accommodating) and conscientious.

Altruist seems to be self actualize, creative, more intelligent, emotionally stable, conscientious, undemonstrative, adventurous (socially bold), apprehensive (guilt prone), resourceful, self sufficient, controlled (high self concept), relaxed (composed).

High Self Actualize are warm hearted( A ) and Self- sufficient ( Q2 ) as compared to Low Self Actualize who are reserve, detached, critical, aloof, stiff and socially group dependent.

High- Altruists have significantly different personality patterns. High - Altruists are more Intelligent (B), Emotionally stable (C), Undemonstrative (D), Conscientious (G), Shy (H), Self assured (O), Self sufficient (Q2), Controlled (Q3), and Relaxed (Q4) as compared to **Low altruists who seem to be** less intelligent, disregard rules, excitable, uncontrolled, socially group- dependent, apprehensive and tense.

Personality -Patterns of High- Creative greatly differ from Low -Creative. They tend to be much more intelligent, emotionally stable, obedient, conscientious, adventurous,

tender minded , self assured, controlled, and relaxed where as Low Creative are less intelligent, emotionally less stable , assertive, shy, timid, tough minded, apprehensive, uncontrolled, lax, careless of social rules, tense and frustrated.

## CONCLUSIONS

On the basis of present study following conclusions are drawn

- (a) Self Actualisation and Altruism have significant positive correlation
- (b) Self Actualisation and Creativity have positive correlation with each other
- (c) Creativity and its dimensions, fluency, flexibility, originality and elaboration share a significant positive correlation with Altruism
- (d) Self Actualisation shares a significant positive correlation with personality factors viz warm hearted, tender minded, self sufficient, enthusiastic and circumspect.
- (e) Altruism shares a significant positive correlation with personality factors - intelligent, emotionally stable and undemonstrative, conscientious, adventurous, tender minded, controlled and relaxed.
- (f) Creativity shares positive correlation with personality factors viz. intelligent, emotionally stable, conscientious, tender minded, self assured, self sufficient, controlled and obedient.
- (g) A significant difference was found between the personality pattern of high self- actualize and low self- actualize, high altruists and low altruists, high creative and low creative.

## IMPLICATIONS OF STUDY :

The present study has revealed some important facts such as:

Self Actualize, Altruist and Creative individuals seem to have correlation with desirable Personality -Factors such as; intelligence, warm hearted, self sufficient, self assured, participating, disciplined, conscientious, controlled , relaxed and composed and Personality -Pattern of Low Self-Actualize, Low- Creative, and Low-Altruists show presence of very undesirable Personality-Factors such as : less intelligent, detached, reserve, aloof, stiff, group dependent, tense, disregard rules, excitable, tough mined, uncontrolled and frustrated. In view of these finds there is a need that :

Low- self- actualize should be referred to guidance and counselling to find out the cause of his reserved and socially dependent behaviour so that suitable remedies may be extended to these students in time.

Personality tests must be administered to students along with the routine health check up in schools to trace psychological stress, delinquent behaviour or deviation from normal personality development so that parents and teachers can help them in time to prevent any unrepairable damage to their personality development.

The present study suggests that creative individuals tends to be self actualizing and altruist. They are intelligent, emotionally stable, conscientious, self sufficient ,controlled and obedient .It implies that development of creative talent among students brings about a desirable change in their personality development. It is recommended that teachers and parents must identify individual creative talent in their pupils/children and provide them all the opportunities to excel. Although schools are providing training to develop creativity but the choice is very limited, hence same type of education is given to develop creative talents. The dimensions of a creative

talent must be tested for all students and suitable opportunities must be provided as per individual interest.

In view of the difference in personality factors of Low and High Altruists, moral and value education must be made compulsory. For a person to be altruistic his personality development has to be more elaborate and most of his personality factors indicate a social character, concern for others, control and self sufficient. Low altruists seem to be less intelligent, disregard rules, excitable, uncontrolled apprehensive and tense. They are prone to become antisocial, angry and frustrated. Therefore moral and value education must be compulsory in schools to develop desirable attitudes and an understanding of social interaction and co-existence.

A minimum common Syllabus of value education based on universal values must be carefully framed and executed all over world keeping in mind the principles of compassion, justice, equality, human dignity, co operation, international understanding.

Every academic degree must be viewed with regard to its aim to achieve an all round personality development and not only the academic development of a student. Such degrees conferred by all those institutions who do not rigorously follow the norm of all- round personality development of a student, must not get international recognition.

Value -Education must be a compulsory paper for Teacher-Training Program.

More research work is needed to explore areas ; aims of education in times of globalization, value formation, social harmony, co existence, trust etc. to understand human behaviour in terms of globalization.

There should be a world regulatory body to monitor and control all those damaging issues in our environment where our pupils are to grow and learn. They have a right to be protected from social evils till they are grown up and mature enough to decide on their own as to what is wrong and what is right.

Aim of education is first to make good, compassionate, responsible human beings and then make them good professionals e.g. doctors engineers, teachers, politicians. Today's education is emphasizing on only knowledge objective, neglecting the development of affective domain of personality. Therefore there is a need to restructure The Aims of Education in the present times of globalization.

## **BIBLIOGRAPHY**

Adler (1934), quoted by Ruch, "Psychology of life" 7th Edition; D.B. Taraporevala, Sons and Company Pvt Ltd, 1970 (p--124)

Bhattacharya, S.B., (1978)," Interaction of Personality and Creativity third Survey of Educational Research, New Delhi-1987. (p.--334)

Bandhopadhyay. R.(1981) "Growth and Development of Moral Judgment in Children". Forth Survey of Research in Education, NCERT, New Delh, 1991. (pp--336-337).

Cattle's R.B. "A Manual for 16 PF Measurement of Personality",1973.

Deshmukh m. n.; (1979),"An Analytic Study of Scholastic Conditions and Practices as contributory factor to creative ability"; Third survey of Educational Research, New Delhi--1986,(p--342)

Khurana.A. (1986)"A Study of self actualization among teachers"; National Psychological Corporation; Agra

Goldstein, (1939), (1940), quoted by Brown and herrnstein Psychology, Matheun &Co. Ltd.London-1975 (pp.--178-179)

Goldstein.K.; The Orgenism; American Book Company; New York; 1939.

Gould, (1939) quoted by stagner,Ross "Psychlogy of Personality" 3rd edition, McGrow-HillBook Company, New York-1961, (p.208)

Joshi, Nav Nalini,(1988)"A Study of Creativity in Relation to Mental Health Anxiety, and Prolonged Deprivation among High School Students";A Dissertationsubmitted to G.N.D.U. in partial fulfilment for the degree of M.Ed.; G.N.D.U. Amritsar.

Maslow, (1950). Self Actualising people ,A Study of Psychological Healt, from Personality Symposia,

Maslow ,(1956), Quoted by floyed ,L. ruch. Psychology and Life .

Mehdi, .B. (1977) " Socio-Psychological Factor in Creativity among School Children ",Third Servey of Educational Research, NCERT, New Delhi-1987

,Rai, S.N. (1988)Singh Sanwat (1988), Manual for Altruism scale (ALTS), National Corporation, Agra-1988.

Rogers , (1951)," Client Centre Therapy, Its Current Practices and Implications, and Theory;"Quoted by Floyed,L.Ruch,-- Psychology of life--; Taraporevala Sons and Co. Pvt Ltd.1970 (p-125).

Saxena,Saroj and Kumar,Rakesh,(1985);" A Study fo Creativity in Relation ti Anxiety"; Psychological Association-volume74-,no.-8, August 1987,Arlington The American Psychological Association Inc. (2028).

Schimitz, H.V.(1972) "Performance of self-actualized College Students in Operant Based Method of Instruction and on indices of study habits, Extracurricular Involvement and teaching and vocational Interest"; Dissertation Abstract International 1972,33, 1, (pp--198)

Sharma K.N.,(1988) "Manual for Self Actualization Inventory (SEAI)", Ankur Psychological Agency , Lucknow-India

Sharma K.N. (1987 , " Manual for the Battery of Divergent Production Ability (DPA), Measures of Creativity ", Ankur Psychological Agency , Lucknow.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, serif font. The text is surrounded by two large, overlapping, brush-stroke-like arcs. The upper arc is a light red color, and the lower arc is a light blue color, matching the text. The arcs are thick and have a slightly irregular, hand-drawn appearance.

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*Learning Differentiation Sub Topic In Mathematics Using An Educational And  
Casual Flash Based Game*

Norhafiza Mohamad, Pusparini Dewi Abdul Aziz

Universiti Kuala Lumpur British Malaysian Institute, Malaysia

0425

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Abstract

Proficiency in Mathematics becomes a critical skill for national growth nowadays. Despite this, there is a worrying decline in mathematics achievement among student population. Four-yearly study; Trends in International Mathematics and Science Study (TIMSS) in 2007, revealed Malaysia fell 10th in 2003 to 20th place in 2007. Among the main factors that may contribute towards this declination is lack of motivation that blocks the opportunity to solve the misconception. Students must be intrinsically motivated to learn about nature of the subject. Yahya, Ramli and Boon (2007) from their study, found a correlation between students' attitudinal commitment and their performance in mathematics. Research has shown that learning is much more effective when the students have fun and make them engaged to the subject. Digital Game Based Learning (GBL) is one such novel field in the learning area that holds considerable promise to engage students. In support to it, over the last ten years the growth in games has increased up to \$7.4billions. The GBL combines motivational aspects of computer games with learning by bringing the fun in a natural way. It's also a platform that able to teach transferable skills, impart values and attitude. In this paper we present the preliminary output from a short term research grant's project to develop an educational, casual web based game prototype named Kalcoolusa using Adobe® Flash Player for the Mathematics subject focusing on the Differentiation sub topic. Further development of the game, additional studies and comprehensive usability testing are planned to obtain more conclusive results. It is expected the game has the potential to improve student learning in that specific topic.

**Keywords:** Digital game based learning, Differentiation, usability testing

## **INTRODUCTION**

The usage of computer games as a learning resource has increased drastically in a variety of contexts, in schools, universities, workplaces and hospital. For example, since “Where in The World is Carmen Sandiego” that taught simple geography whilst playing a mystery game was adapted. Across the world, teachers/lecturers are increasingly becoming interested in the potential role of computer and video games to support the learning. With the advent of new technologies and strong growth in games for over the last ten years; increasing to \$7.4billions, the way in which education and training is delivered has changed considerably. Games are now being considered as a platform that able to not only teaches specific skills, but also potent to teach transferable skills, impart values and attitude. Futurelab (2005) in its handbook agreed that by playing games, the players are equipping their practical competencies and social practices that are needed for 21<sup>st</sup> century workplace, communication and social lives. Apart from that, few studies have shown that playing with computer games can also enhance visual processing skills, including visual attention, and the ability to manipulate objects or mental images. Plus, more complex the game is, the students or players will be more creative and alert as the games normally will require them to learn taking information from multiple sources and make quicker decisions. Game Civilization 1 for instance, the players discover strategies for overcoming obstacles, and construct understanding of complex systems through experimentation in natural and unobtrusive ways.

Already knew that to conquer Mathematics, one should do lots of routine exercises in order to be familiar with rules or formulae apply. The boredom however will start to interrupt when the students find no ‘exit’ or solution to the questions attempt. This happens, when one concentrates on the misconceptions and confusion they have about, e.g. in the differentiation rule, the lack of motivation is blocking the opportunity to solve the misconceptions as being studied by Yahya *et al.* (2007). Found from the study, there is a correlation between students’ attitudinal commitment and their performance in mathematics.

One of the issues raised by the teachers/lecturers in teaching Mathematics is the students are not always motivated to learn about the content and leads to failure This issue is strengthen via the result of four-yearly Trends in International Mathematics and Science Study (TIMSS) in 2007 reveals Malaysia’s placing fell from the 10<sup>th</sup> place in the previous TIMSS 2003 to 20<sup>th</sup> placing. Since the assessment was conducted amongst secondary school students, one of the main issues highlighted by the general public, politicians and academicians alike for the decline was the ongoing controversy as to whether the teaching of science and Mathematics in English at schools should continue or revert to the mother tongue (Malay language). This may or may not be the contributing factor, but the glaring fact of the plummeting performance in mathematics remains.

Therefore, the aim of this short term research grant is to produce an educational aid in order to overcome the problem of understanding the basic rule in differentiation by developing a casual game name “Kalcoolusa” for differentiation topic in mathematics using Adobe Flash. In justifying the game’s effectiveness, it is tested through the usability testing.

## METHODOLOGY

### *A. Game Play Literature Review*

There is numerous number of GBL in teaching Mathematics developed in all over the world. The game play concept for Kalcoolusa is food-time management. The concept portrays in food-time management is completing certain score to be promoted to the next level. Failure of doing that leads to game over or point's deduction. This concept of gameplay imparts the values of efficiency, increase level of alertness and not only delivers specific technical knowledge.

The famous game play under time management (among the earliest too) is on serving the burgers. Big Bobs Burger Joint for instance, the objective of the game is to serve burgers to customers by clicking oven and stove to cook buns and burgers. Shall the burgers are prepared completely; they will be sent to the customers and will be paid. The process repeats until the player accomplishes a level in order to achieve a daily target. Big Bobs Burger Joint has 22 levels that represent 22 days. As the level increases, it's getting tougher as more servings and more dressings are required. Scores (daily collections) are based on money paid by satisfied customers. Any burnt burgers or wrong orders will lead to money deduction. In summary, the player needs to be skillful to provide enough burgers hence meeting the daily target. The same game play is also adapted in Burger Restaurant whereby the players need to meet certain target. However, Burger Restaurant offers better graphic with vibrant colors and livelier game environment.

Another popular time management game is Korean Burger. The objective is to complete random burger orders that come with beverages by putting the ingredients in proper sequence at specific level. Comparing Korean Burger with the Big Bobs, there is timer in Korean styled whereby each order needs to be completed in three minutes. Despite of wrong orders, no marks will be deducted except they will be automatically thrown away. Doing the mistakes, only require players to fight harder against those three minutes.

There is also a similar game to Korean burger but played in French. The player of XXXL Burger needs to complete the burger order by putting the ingredients in the correct sequence (fixed order) according to the containers' color. If the burgers were completed correctly, it will automatically sent to the customers by an invisible machine to earn points. Wrong sequence or late orders will automatically be purged and points will be deducted.

### *B. Prototype Development by Employing Instructional Model for Digital Game Based Learning*

The game development involves with five phases namely analysis, design, development, implementation and evaluation. All the five stages lie in instructional model or instructional design which the 'guru' in developing GBL. There are three basics learning theories under instructional designs; behaviorism, cognitivism and

constructivism. According to Schuman (1996) in his writing explained that behaviorism is based on the thought process behind the behavior. Changes in behavior are observed and used as indicators as to what is happening inside the learner's mind. Cognitivism (Schuman, 1996) is based on the premise that constructs own perspective of the world through individual experience and schema while constructivism focuses on preparing the learner to problem solving in ambiguous situations (Schuman, 1996).

Comparing the three basics, behaviorism is the most closely related to human nature. There were many experiments done by the scholars in relating the theories with human psychology or behaviorism towards game engagement. Pavlov, Thorndike Watson, Skinner etc among the psychologists that studied behaviorism theory. They proved how humans react to the repetitive actions that soon be as a habit and mindset.

Kalcoolusa adopts the basic of behaviorism. The player needs to repeat the same actions accordingly throughout the levels. These actions represent the steps or the rules that should be followed theoretically, one by one in solving differentiation problems. Soon, by following and repeating all the actions/steps in correct sequence, the students are supposed able to solve any differentiation problems encounter. Different time is allocates and it depends on level(s) just to ensure player 'pick-up' or alertness is sharpen. More complicated equations are provided throughout the levels as the player should be more skillful in solving differentiation problems.

### *C. Preliminary Data Collection Through Usability Testing*

Usability testing is a technique used in user-centered interaction design to evaluate a product by testing it on potential users. The test focuses on measuring a human-made product's capacity to meet its intended purpose. Examples of products that commonly benefit from usability testing are foods, consumer products, web sites or web applications etc. Normally the scopes of usability testing are on the usability, ease of use of a specific object or set of objects.

Usability testing is conducted by applying thinking aloud method and semi structured interview. Someren (1994) defined the Think Aloud Method as a method that consists of asking people to think aloud while solving a problem and analyzing the resulting verbal protocols. A simple example in applying this method is when finding a book whereby each step taken should be verbally justified. The vocalizing process is basic idea of thinking aloud method.

The pilot data collection for Kalcoolusa is expected to be done for Diploma and Bachelor students in Universiti Kuala Lumpur British Malaysian Institute. Subjects for the investigation are the students who are taking Technical Mathematics 2 (Diploma) and Engineering Mathematics 1 (Bachelor). As it is advisable for usability testing to be held in a small group to reduce the error, thus each group will consist of 15 students divided into three sessions. For each session, each student will be supplied with digital audio recorder to possible the 'think aloud' method while exploring the game. Upon completion the game, the students need to go through a semi structured interview with an instructor for furthered confirmation on the usability of the game, ease of use and engagement towards the game.

## II. RESULTS & DISCUSSIONS

### A. Kalcoolusa Game Play

“Kalcoolusa” is selected to depict calculus since differentiation is part of its branch. In the game, it refers to a deserted place where a spaceship is landed on. Function of the player starts here. To be home, the player needs to serve local citizens of Kalcoolusa represented with 2D robots. The mission should be accomplished in five days which equals to five levels of the game. Each day has its own minimum target to be achieved. Similar to other games in time management, failing in meeting the daily target will make the player to be enslaved forever in Kalcoolusa. To be free from the all the robots and return to the earth, the player has to complete minimum daily target for each day and at the same qualifies for the next level. Once any levels are failed, they have to start from the zero with no accumulative scores. The educational objective for Kalcoolusa is to learn basic rule of differentiation through behaviorism theory of instructional design. Actual steps in differentiating the equations are visualized through three different thumbnails. These thumbnails are the visual helper by showing items that should be clicked. After playing Kalcoolusa, students should be able to memorize all steps in correct sequence for solving differentiation problems.

First level defines the easiest questions. Plus, the player is given ample time to solve the problems. With the longest time amongst five levels, it actually allows the player to understand the real operations happened in solving the differentiation problems.

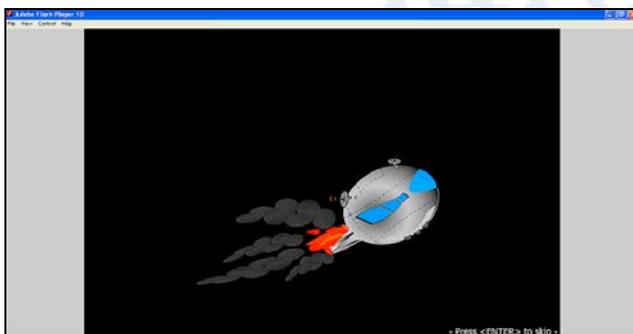


Figure 1: Starting game of Kalcoolusa - a stranded spaceship



Figure 2: Pop-up menu

To create better engagement towards the game, few options are given to the players. They can adjust the loudness of the music, to have low or high graphics as well as having the option to opt to the full screen size. The Options click button is shown in Figure 3.



Figure 3: Options click button

Tutorial is provided in “Help” click-button. This function is to help the player understands Kalcoolusa and familiarizes with the game faster. Help function is crucial as there will be always first time player. Clicking “Help” button will explain to the players on the icons available in Kalcoolusa, how-to-play it and multi styles of the thumbnail that will appear throughout the game. Different thumbnails are applied to differentiate different steps or actions done according to the theory. They also represent the actual steps or changes when differentiation takes place.



Figure 4: Help click button



Figure 5: Level 1

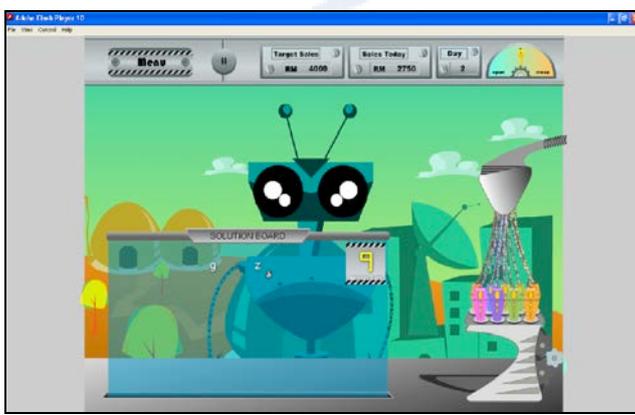


Figure 6: Level 2

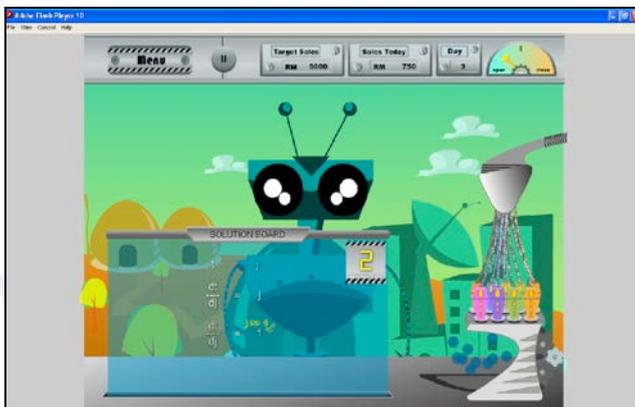


Figure 7: Level 3

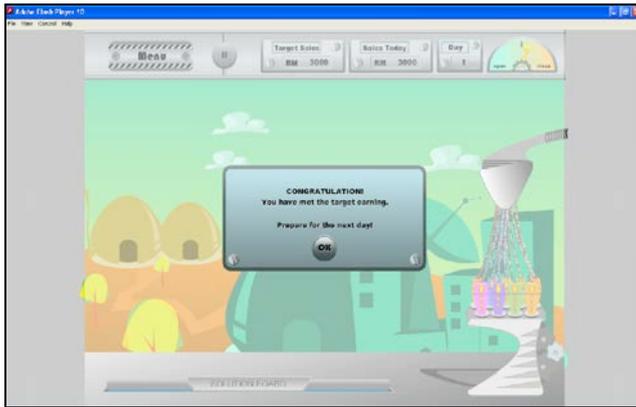


Figure 8: Congratulations page as respective level successfully ends

Although Kalcoolusa applies behaviorism instructional design that focuses on repetitive actions, its educational objective to aid students in understanding the differentiation's rule is still in foreground. To ensure this, via evaluation stage, each thumbnail clicks are supported with explanations of real operation involves in getting the answer. The operations are different and they're based on the equations.

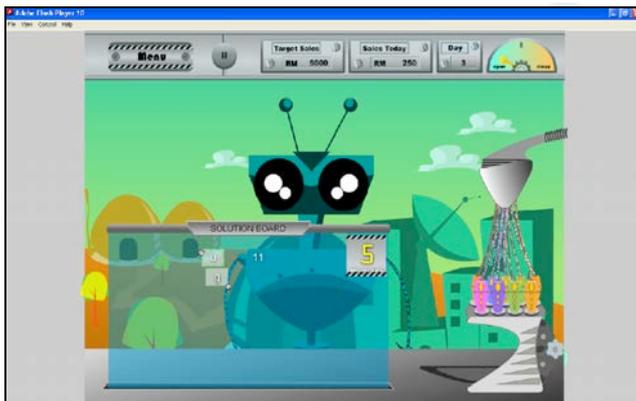


Figure 9a

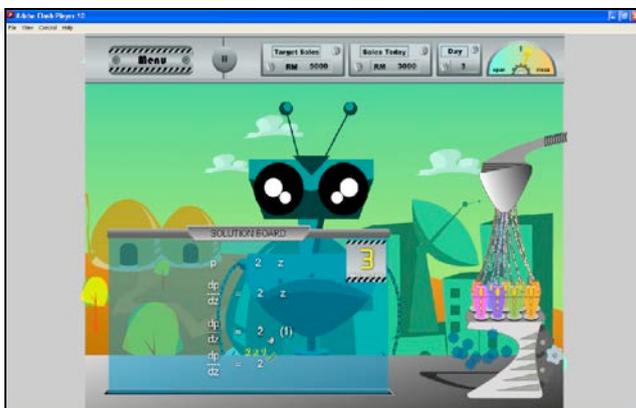


Figure 9b

Figure 9a & 9b: Few real operations show once correct answers obtain

### *B. Discussions*

It may take time to expect the digital GBL to be effectively and widely implemented in the local education system. And definitely there must be arguments raised so that the educational objective is achieved but at the same the fun-style concept is maintained. As stated by Huah, G.L (2007), teachers play a vital role to ensure that they allow for the paradigm shift of the teaching innovation rather than just accommodating the innovation. As Cece (2004) maintains, “a major challenge in professional development is helping teachers unlearn the beliefs, values, assumptions and cultures underlying schools’ standard operating practices”. McDowell and Hannafin deduced that insufficient time for planning as well as inaccessibility to computers or training prevents teachers from integrating technology (Huah, G.L. 2007). Therefore, these external barriers need first be addressed so as to grant more assurance of success. Prensky (2001), the ‘sifu’ of GBL stated in his book that U.S Military has embraced Digital Game-Based Learning with all the fervor of true believers because it works for them. If it was functioned even for a tough world like military, then the educational system should really consider GBL.

### *C. Future Works*

As for future works, a comprehensive usability testing shall be conducted. As being explained in previous chapter, the usability testing will be conducted for 15 students each from Diploma and Bachelor level. Apart from that to ensure the optimum usability, the students selected will be given few differentiation questions that need to answer in certain period of time. After answering the questions, they students will proceed to play Kalcoolusa. Once they complete the game, the students then again need to answer the same questions. This practice can affirm is GBL able to help the students understand differentiation better or not but also time answering for pre-playing game and post-playing game is also monitored. This usability testing will muchly consider on the four factors that made the engagement to the games which are challenge, curiosity, fantasy and control.

The evaluation stage in developing this Kalcoolusa also recognized few items for improvements and shall be included for future works and research. The first item to be improved is to extend the equations to higher level of differentiation and at the same time to increase the difficulty for equations display. The times taken to complete level 4 and level 5 should be prolonged so that the player able to complete that level successfully without needs to repeat the whole level. Another option will be to increase mark of each correct answers obtain to remain time allocates. The chronicle of displaying the process of differentiation should be improved as well to avoid confusion especially for the new learners.

It is newly required in Universiti Kuala Lumpur to have interactive assessment via e-learning or academic portal. Thus, having Kalcoolusa to be part of the assessments can implement the requirement.

#### IV. CONCLUSIONS

In conclusion, the teaching and learning environment and educational approach would require constant research and updates in par with the new epoch of Information and Communications Technology (ICT) development. GBL is a promising new style of learning with lots of potential to be counted in. It can seriously be considered as primer teaching aid apart from conventional method. Therefore, it is necessary to exploit and explore its potential in being an effective learning technology or environment as well as for helping students accelerate their learning and retaining the understanding. However, as highlighted in the discussion, any technological innovation for teaching purposes needs to be accepted by the educators (teachers) before it can be productively used in educational systems; and the same goes for GBL. With further resources and time spend, this research could be expanded into a nation-wide project covering various other topics suitable with to be taught and learned. After all, as Inoue (1999) concluded, “twenty-first-century students must master sophisticated information-age learning media, having access to more powerful learning resources than students of today”.

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## REFERENCES

- [1] Richard Sandford and Ben Williamson. (2005) *Games and Learning: A handbook from FutureLab*, UK
- [2] Yahaya, Azizi and Ramli, Jamaluddin and Boon, Yusof. (2007) *Sumbangan Sikap Terhadap Pencapaian Pelajar Mata Pelajaran Matematik: Sejauh manakah Hubungan ini Relevan*, Universiti Technology Malaysia Institutional Repository Available: (eprints.utm.my)
- [3] P. Gonzales, T. Williams, L. Jocelyn, S. Roey, D. Kastberg, S.Brenwald. (2009) *Highlights From TIMSS 2007: Mathematics and Science Achievement of U.S. Eighth-Grade Students in an International Context*, National Center for Education Statistics
- [4] Brenda Mergel. (1998) *Instructional Design & Learning Theory*, Educational Communications and Technology University of Saskatchewan, Canada
- [5] Maarten W. van Someren Yvonne F. Barnard Jacobijn A.C. Sandberg. (1994) *The Think Aloud Method: A practical guide to modelling cognitive processes*, Department of Social Science Informatics, University of Amsterdam , Academic Press, London
- [6] A CEDAR Project. (1999), *The Think Aloud Method: A Review of Literature*, Department of Educational Technology, San Diego State University
- [7] Huah, G.L (2007) *A Case Study of The Integration of ICT in Teaching and Learning in A Smart School in Sabah*, Proceedings of the 5th Asean/Asian Symposium on Educational Management and Leadership (ASEMAL5)
- [8] Dede, C. (2004) *Enabling distributed learning communities via emerging technologies – part one*, .T.H.E. Journal 32
- [9] Prensky M (2001) *Digital Game Based Learning: True Believers, Digital Game Based Learning in Military*, Chapter 10, McGraw-Hill
- [10] Inoue, Y. (1999) *Effects of Virtual Reality Support Compared to Video Support in a High-School WorldGgeography*
- [11] Michele D. Dickey, “Ninja Looting” for *Instructional Design: The Design Challenges of Creating a Game-based Learning Environment*” Miami University
- [12] Big Bobs Burger Joint. Available at:  
<http://www.cheese-burger.net/burger-games/big-bobs-burger-joint-game.html>
- [13] Cheese Burger Games. Available at  
<http://www.cheese-burger.net/burger-games/burger-building-game.html>
- [14] XXXL Burger Games. Available at:  
<http://www.cheese-burger.net/burger-games/xxxl-burger-game.html>
- [15] Burger Building Game. Available at:  
<http://www.cheese-burger.net/burger-games/burger-building-game.html>
- [16] Busy Burger: Available at:  
<http://www.crazymonkeygames.com>

*Designing a Curriculum for the Advanced Stream of a Foundational Literacies Course*

James Emmet Owens

Kanda University of International Studies, Japan

0426

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Official Conference Proceedings 2013

Abstract

Originally, members of the Basic Skills project at Kanda University of International Studies were given the task of developing a new curriculum for the Basic Reading course. Recent developments, however, have complicated this task. The new course being designed has been renamed 'Foundational Literacies' to better reflect the move away from traditional thinking about teaching literacy and cognitive skills, and instead focus on what is called a 'Multiliteracies' pedagogical approach.

A Multiliteracies pedagogy suggests a new way of looking at the idea of 'literacies' that is more compatible with the modern world, a move away from the traditional one-dimensional view of literacy. It means providing access to what learners really need in order for them both to empower themselves and to become functional, effective and successful members of what is now often labelled a 'post-Fordist' world of 'fast capitalism'. In such a society, a much larger range of skills and the capacity to interact in many different ways with many different people are essential. Older, simpler models of teaching literacy are no longer relevant.

The paper will describe the process we have used so far to begin designing a completely new course, intended for an advanced stream of learners, and a justification for some of the decisions we have made in this process. The project is as yet unfinished, and is undergoing constant re-evaluation, but reading about our process and decision-making may prove useful for other teachers and course designers who currently find themselves in similar situations, or for those who are curious about what a Multiliteracies-focused curriculum may look like.

## **1. Introduction**

Kanda University of International Studies (KUIS), based near Tokyo in Japan, is an institution where learners focus on the study of foreign languages and intercultural communication. The university philosophy has always emphasised the role that individuals play in managing their own learning, recognizing individual differences in learning styles and preferences. An individualized approach emphasizing choice and variety are therefore essential components of the KUIS curriculum.

Freshman students, in addition to other communicative classes, have until now had to take Basic Reading and Basic Writing classes. Whilst these courses had some benefits, they also had many shortcomings, which are explained in more detail in a previous paper (Owens, 2012). Therefore, for a variety of reasons, in 2011-2012 the Basic Skills committee, of which the author was a member, initiated the process of designing a new curriculum for the Basic Reading course, using the Nation and Macalister (2010) model of language curriculum design as a guide. The iterative and collaborative process, including a needs analysis and environment analysis, is described in the aforementioned paper (Owens, 2012).

However, a year into this redesigning process, additional factors created new challenges in the formation of the new curriculum. A program-wide curriculum review, in response to dissatisfaction from multiple stakeholders, including the administration and higher-level students, suggested that the English Department ought to change academic direction. This change was also partly in response to shifting trends in the applied linguistics literature, and in particular the 2006 MLA Journal monograph that called for widespread reform of foreign language education. Kramsch (2006) has suggested moving away from the hitherto focus on communicative proficiency, as a set of discreet and teachable cognitive skills, towards what she has termed symbolic competence. In keeping with this, all of the various course curricula within the English Language Institute (ELI) were to be newly inspired by the 'Multiliteracies approach', a term first coined and advocated by the New London Group (Cazden et al., 1996).

## **2. Multiliteracies**

A Multiliteracies pedagogy suggests a new way of looking at the idea of literacy that is more compatible with the modern world, taking "...a much broader view of literacy than that portrayed by traditional language-based approaches" that takes into account the "...multiplicity of communications channels and increasing cultural and linguistic diversity in the world today " (Cazden et al., 1996:60). It means providing access to what learners really need in order for them both to empower themselves ("students need to develop the capacity to speak up... negotiate, and to be able to engage critically with the conditions of their working lives" (p67)) and to become functional, effective and successful members of what is now often labelled a 'post-Fordist' world of 'fast capitalism'. In such a society, a much larger range of skills and the capacity to interact in many different ways with many different people are essential. Older, simpler models of teaching literacy that focus on the ability to read and write traditional text formats are no longer relevant.

Within this context, The New London Group describe there as being "...twin goals for literacy learning", one of which is to create "...access to the evolving language of work, power and community"; the other goal is "...fostering the critical engagement necessary for them [students] to design their social futures and achieve success" (Cazden et al., 1996:60) where success can be defined in a variety of different ways (career, knowledge, empowerment...etc.).

The use of the word 'multi' in this pedagogical approach is deliberately ambiguous. It refers in one instance to "*social diversity*", and suggests that ideas of there being only "the rules of a single, standard form of the national language" (Cope & Kalantzis, 2012:1) are outdated and no longer useful. However, 'multi' also refers to "*multimodality*" (p.2). We no longer operate in a world of simple text and print: "...the textual is also related to the visual, the audio, the spatial, the behavioural, and so on" (Cazden et al., 1996:64). The new course would have to take both these factors into consideration.

### **3. Satisfying a Range of Aims**

Another complication affecting our curriculum design process relates to the recent decision made by the Japanese Ministry of Education (MEXT) to award generous grants to institutions that are able to send their students away on scholarships to foreign universities in English-speaking countries. In order to satisfy entrance requirements, students need to achieve high scores in certain English-speaking proficiency tests. The most widely accepted, and therefore most useful, of such tests would seem to be the TOEFL test. Students at Kanda University are therefore encouraged to take the traditional paper form of this test as many times throughout the year as they wish, and are obliged to take it in January.

Shortly after Kanda University announced its change of direction to adhere to a Multiliteracies pedagogy, the Basic Skills committee was reformed into a Foundational Literacies committee. The new committee was to design a whole new course, an integrated course replacing both the Basic Reading and the Basic Writing courses. This paper does not have sufficient space to engage in such a debate, but there is general consensus in the world of academic research that integrated courses function much more effectively than separate skills courses: "One of the most consistent implications of two decades of reading and writing relations is that they should be taught together and that the combination of both literacy skills enhances learning in all areas" (Grabe, 2001: 25).

As part of the conditions for the awarding of the MEXT grant, the university administration created smaller, more efficient classes (of roughly twenty students per class where in the past there had been between twenty-five and thirty) and to create a separate advanced stream of six classes (out of a total of roughly eighteen) with a different curriculum to that of the 'mainstream' classes. The students in this top stream would be the intended and most likely beneficiaries of the study abroad programme, though students from all tiers are fully eligible to apply for the programme.

The challenge for this newly created Foundational Literacies Advanced Stream Research Committee was to create a course that could satisfy at least four main aims:

1. To replace an outdated, unpopular Basic Skills course;
2. To make the new integrated course compatible with the aims of a Multiliteracies pedagogical approach to learning (including greater use of both analogue and digital internet-mediated text genres);
3. To ensure the course improves learners' TOEFL scores, without reducing the classes to a 'teaching the test' formula;
4. To make the content more relevant to learners' actual lives and needs both in a Japanese context and also for study abroad.

The next stage in the design process was negotiating and drafting a curriculum plan combining all the target competencies. Therefore all the relevant TOEFL and Multiliteracies competencies, together with those suggested in the CEFR (Common European Framework of Reference for Languages) were listed and codified. The resulting basic plan for a two-semester curriculum can be seen in Appendices A-D.

#### **4. Genre**

From these tables, it can also be seen that the next decision made in the curriculum design process was to make the course genre-based in terms of organisation. This is a popular approach, especially amongst advocates of the Multiliteracies approach to learning, and in this regard the committee was inspired by the curriculum development work taking place at Georgetown University, as described in Byrnes et al. (2006). Again, this paper has insufficient space to list in detail the advantages and disadvantages of such a course, but using genre as an organising principle has many supporters in the recent world of research. For example, Hyland (2007) writes:

Instead of focusing on the process of composition, the content of texts, or the abstract prescriptions of disembodied grammars, genre pedagogies enable teachers to ground their courses in the texts that students will have to write in their target contexts, thereby supporting learners to participate effectively in the world outside the ESL classroom. (p. 48)

Put more simply, and in direct relation to the Multiliteracies theme of learner empowerment, genre-based approaches are useful because genre directly relates “the social purpose of a text to language structure” (Cope & Kalantzis, 2012:126). Therefore, enabling learners to achieve ‘genre consciousness’ allows them to acquire “...the power of choice and the linguistic potential to join new realms of social activity and social power.” (p. 129)

With regard to the use of the term ‘genre consciousness’ above, different academics have opted for different terms in defining what it is they hope students to achieve in studying on such a course. For example, Hyland (2007:154) talks of "genre knowledge", whereas Johns (2008:238) contrasts mere "genre acquisition" with, in her view, the more useful goal of "genre awareness". To avoid getting too involved in the

complexities of this issue, we have for the time being settled on the use of the more neutral term ‘genre consciousness’.

It is our hope, then, in creating this course that learners become familiar with a variety of different genres and the uses of language located in a social context. As part of this, learners should be able to critically analyse texts. This presents quite a challenge in Japan, where critical thinking is generally not taught or celebrated as an educational skill. However, it is an essential skill. In fact ‘critical framing’ is one of the “four curricular components” (Allen & Paesani, 2010: 123) of Multiliteracies pedagogy, the others being ‘situated practice’, ‘overt instruction’ and ‘transformed practice’.

### **5. The New Curriculum**

There are two semesters per year, each of fifteen weeks, in a Japanese university. The Foundational Literacies course consists of two lessons a week, with each lesson ninety minutes long. It runs alongside a ‘Freshman English’ course that will focus on more communicative skills and vocabulary, and students also have access to TOEFL-test-taking classes and workshops/counselling that help prepare them for life abroad in a foreign university. Thus, the Foundational Literacies course has the fortune to focus more specifically, though not exclusively, on reading and writing competencies.

The first week focuses on an Introduction to the course, including the use of a standard exercise to be used as a weekly homework activity. This exercise will form the topic of a future paper, as an explanation of the thinking behind it would take considerable time and space. However, it can be said to be relevant to a Multiliteracies course as it is designed to encourage students to reflect critically on a text, and allow them to respond in a multimodal format (such as the use of digital concept maps) rather than simply writing answers in the traditional manner.

Following the Introduction, the next unit focuses on the genre of Email, chosen as it is the genre students should most be familiar with, given their age and the frequent use of smart phones and digital devices among young people in Japan. This unit runs for 3-4 weeks, followed by a Narrative unit (which is described below in greater detail in order to demonstrate more clearly how we are trying to adapt our curriculum to a Multiliteracies approach) for 5-6 weeks. The first semester finishes with an Essay unit for the final 5 weeks.

This first semester curriculum intentionally moves from more familiar genre types to more literary and then more academic materials, covering what Byrnes et al. (2006) refer to as primary, blurred and secondary discourses. This has the added benefit of gradually familiarising learners with the kind of difficult or unfamiliar texts they are likely to encounter in the TOEFL test.

The second semester’s contents have not yet been fully planned, but, as can be seen in Appendices A-D, the provisional draft involved a first unit that would focus on the genre of Product Review, followed by the genre of News Report, and finishing with a second unit on the genre of Essay.

However, there have very recently been some alterations to this original draft. The institution decided students would take the traditional paper form of the TOEFL test, for financial reasons, while this original draft was created assuming they would be taking the iBT version. Therefore, it was decided that students needed more practice with the type of reading comprehension skills considered useful for the paper-based TOEFL test. Thus, an Information Report unit incorporating such practice was created to replace the News Report. In addition, it was decided that the second Essay unit would be discarded in favour of a Media/Social Media unit. This would allow us to focus on greater use of multimodality and also introduce some critical analysis skills. Additionally, given the popularity and usefulness of media in general, in the worlds of business, socialising, and information sharing, if we really wish to empower students and prepare them for success in the world, the inclusion of such a genre is essential. Some might argue that essay writing is so important as to warrant a greater focus. However, the general aim of our course is to focus on textuality itself, rather than mastery over any one text type. 'Essay' as a unit gets greater focus in the second year curriculum. In the freshman year the course is designed to introduce some foundational principles of text organization, style, and rhetoric as related to different rhetorical situations and contexts. We do not believe that "essay" necessarily has a certain unquestionable value. This is still an issue under discussion, however. As this is the first year to implement the new curriculum, there will be a significant amount of changes, trial-and-error, continuous evaluation and redesign.

A decision was reached to make the whole course digital-based. To standardise the course, all students in the advanced stream are required to purchase iPads, and all the material for the course is available online or in the form of iBooks. Some screenshots from the webpages can be seen in the Appendices.

### **6. Example Unit: Narratives**

In order to demonstrate more clearly the contents of our course and how they hopefully conform to our aims and make use of the "four curricular components" mentioned above, this paper will explain in more detail one of the sample units from the first semester: the Narrative unit.

Aside from an assignment and vocabulary test, there are ten lessons that make up the Narrative unit (numbered in Chinese characters in Appendix E). Alongside these lessons, students can make use of the forums (as seen in the appendix) to discuss the work and help one another outside of the classroom.

The first lesson (Making a Narrative) introduces the genre of Narrative, and familiarises learners with the standard five-part model that many narratives follow: introduction, scene setting, complicating action, further action(s) and a resolution with a reflection (or ending and evaluation). Students see this simple model in action and are invited in groups to make their own simple narratives that conform to the model (situated practice). Language work is also essential, so in the next lesson, students work on compound sentences and the use of transitions, while also being introduced

to more narratives in the form of travel blogs, and in the third lesson they look at natural-sounding patterns of writing given and new information.

The fourth lesson reviews the five-part model of narratives, and asks groups to look at different fairy tales and folk stories from various different cultures around the world and apply the model (see Appendix F), before forming new groups and comparing their narratives (overt instruction). The fifth lesson then looks at a Japanese folk story as learners attempt to apply the model again. The intention is that students will notice by comparison that Japanese fairy tales do not necessarily include a clear reflection/evaluation, and learners are encouraged to discuss why this might be. What does it suggest about, or how does this relate to, Japanese culture? (critical framing).

In the next lesson, learners look at a news narrative, and again apply the five-part model, while also noticing any differences/similarities between news narratives and other types of narrative we have encountered so far. In each of the lessons, students are asked to reflect on the type of vocabulary used in each genre (for example the old-fashioned 'literature' words that are used in fairy tales, and the intentional combination of both formal and informal vocabulary in news stories) and asked why these 'choices' are made by the author. Learners are constantly required to analyse language choice and think critically and independently.

The seventh lesson makes use of the transformed practice component. Students have two options: they can either, in groups, rewrite one of the fairy tales as a news narrative, or perform the opposite task, changing the news story into a fairy tale. This is an effective way of allowing learners to show how they have achieved 'genre consciousness' whilst allowing them to be creative. They are also asked to then reflect on their own vocabulary use, on their language choices as writers, just as they did when reading the other narratives. In the next lesson, they present their finished work to each other in groups, followed by some more language work (use of connectives and writing longer sentences).

The ninth lesson looks at a personal narrative. Again, learners apply the five-part model, then reflect on both the abstract and descriptive vocabulary used in the narrative, once again in the context of author choice. They are then set the task of writing a personal narrative with a similar theme (a life-changing moment). This leads into the final lesson, where critical analysis is the focus as they look at constructed narratives. Learners again read, in different groups, various supposed 'personal narratives' from people claiming to have experienced life-changing moments. After they have applied the five-part model and discussed their narratives in different groups, reflecting on field, tenor and mode, and authorial intention, they are made aware that all the narratives come from the same website, promoting the sale of a product that promises to change people's lives. Then they discuss the same questions in the context of this additional information (Appendix G).

## **7. Conclusion**

The above description of one sample unit hopefully gives some indication as to how we have attempted to follow the Multiliteracies pedagogical approach to create a course that sufficiently challenges and empowers our learners, in response to recent ideas in the field of applied linguistics research. This is an exciting period of change at Kanda University, as we go about changing and updating all our ELI curricula. There will no doubt be problems and changes, as we constantly re-evaluate and redesign our course, but we hope that it will meet with success. There are many institutions currently updating their courses to better reflect newer attitudes in the world of language teaching. As such, our attempts are one such example, and this paper will hopefully help any teachers or course designers who are attempting similar processes.

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## References

- Allen, Heather Willis & Paesani, Kate (2010). Exploring the feasibility of a pedagogy of multiliteracies in introductory foreign language courses. *L2 Journal, Vol 2* (2010), 119-142.
- Byrnes, H., Crane, C., Maxim, H., & Sprang, K. (2006). Taking text to task: Issues and choices in curriculum construction. *ITL: International Journal of Applied Linguistics, 152*, 85–110.
- Cazden, C. B., Cope, N., Fairclough, J. Gee, M., Kalantzis, G., Kress, A., Luke, C., Luke, S., Michaels, and M. Nakata. (1996). A pedagogy of multiliteracies: designing social futures. *Harvard Educational Review, 66*, 1 Spring 1996, 60-92.
- Cope, Bill & Kalantzis, Mary (2012). *Literacies*. Melbourne: Cambridge University Press.
- Grabe, W. (2001). Reading & writing relations: L2 perspectives on research and practice. In B. Kroll (Ed.), *Exploring the dynamics of second language writing*. New York: Cambridge University Press, 242-262.
- Hyland, Ken (2007). Genre pedagogy: language, literacy and L2 writing instruction. *Journal of Second Language Writing, 16*, 148-164.
- Kramsch Claire (2006). From communicative competence to symbolic competence. *The Modern Language Journal 90*, (2006), 249-252.
- Johns, Anne M. (2008). Genre awareness for the novice academic student. *Language Teaching 41:2*, 237-252.
- Nation, I.S.P. and Macalister, J. (2010). *Language Curriculum Design*. New York: Routledge.
- Owens, James (2012). Designing a curriculum: How are we doing it? In: *The Proceedings of The 2012 International Conference and Workshop on TEFL and Applied Linguistics*, Department of Applied English, Ming Chuan University, Crane Publishing, 208-216.
- Paltridge, Brian (2002). Genre, text type, and the English for Academic Purposes (EAP) classroom. In: Johns, Ann M. (ed.), *Genre in the classroom: Multiple perspectives*. Mahwah, New Jersey: Lawrence Erlbaum Associates Publishers, 73-90.

**Appendix A – Draft Plan for Writing, Semester 1 - By completion of Writing Semester 1:** *Students can write straightforward connected texts on a range of familiar subjects within a field of interest, by linking a series of shorter discrete elements into a linear sequence.*

<b>CEFR: B1</b>	<b>TOEFL skills</b>	<b>Multiliteracies</b>	<b>Unit</b>	<b>Course Assessment</b>
Can write email/formal letters conveying degrees of emotion and highlighting the personal significance of events and experiences and commenting on the correspondent's news and views.	Main points, supporting details	Can communicate in ways which conform to conventions or textual genres ( <i>of: Email, narrative, short essay</i> ). Understand authorial purpose in a text. Awareness of rhetorical moves. Politeness in text.	Email/Formal Letter	Email
Can write straightforward, detailed descriptions on a range of familiar subjects within his/her field of interest. Can write accounts of experiences, describing feelings and reactions in simple connected text. Can write a description of an event, a recent trip – real or imagined. Can narrate a story.	Compound and Complex sentences. Subordinating clauses. Transitions.	Can use multiple modes to create meaning in a narrative. Can rewrite a story to fit another genre/rhetorical situation.	Narrative	Narrative of Experience
Can write short, simple essays on topics of interest. Can summarize, report and give opinion about accumulated factual information on familiar routine and non-routine matters within their field of interest.	Create an argument, Topic sentence, Main Idea, Support, Conclusion. Cohesion. Noun clauses for summary	Understands relationship between purpose, context and form	Short Essay	Short Essay: Summary

**Appendix B - Draft Plan for Writing, Semester 2 - By completion of Writing Semester 2:** *Students can write clear, detailed texts on a variety of subjects related to his/her field of interest, synthesizing and evaluating information and arguments from a number of sources.*

<b>CEFR: B2</b>	<b>TOEFL skills</b>	<b>Multiliteracies</b>	<b>Unit</b>	<b>Course Assessment</b>
<p>Can write clear, detailed descriptions on a variety of subjects related to his/her field of interest. Can write a review of a film, book or play.</p>	<p>Adjectival phrases State an opinion and support a position.</p>	<p>Identity and voice in writing. Is able to create persona for giving a credible review.</p>	<p>Product Review</p>	<p>Review</p>
<p>Can write clear, detailed descriptions of real or imaginary events and experiences, marking the relationship between ideas in clear connected text, and following established conventions of the genre concerned.</p>	<p>Academic vs. phrasal verbs. Main ideas and support.</p>	<p>Understands and demonstrates constraints of media on text design.</p>	<p>News report</p>	<p>News report</p>
<p>Can write an essay or report which develops an argument, giving reasons in support of or against a particular point of view and explaining the advantages and disadvantages of various options. Can synthesize information and arguments from a number of sources.</p>	<p>Create an argument, support a position. Cohesion: reference, ellipsis, pronouns. Transitions, conjunctions. Nominalization.</p>	<p>Academic vs. informal register.</p>	<p>Short Essay: Point of view</p>	<p>Short Essay: Point of view</p>

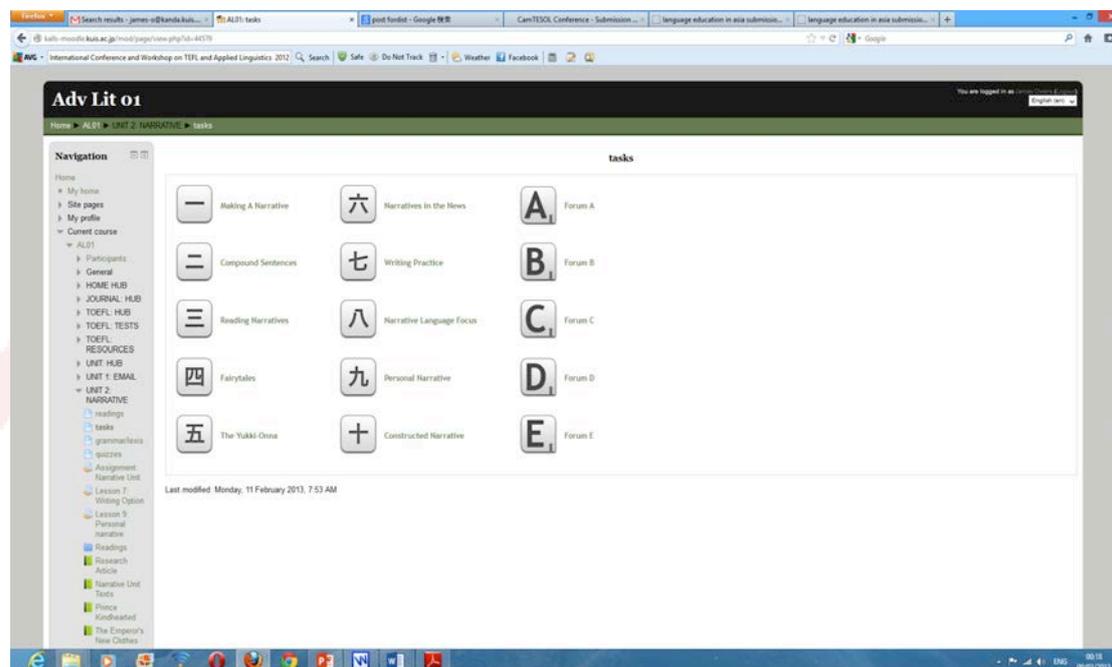
**Appendix C - Draft Plan for Reading, Semester 1 - By completion of Reading Semester 1: Students can read straightforward factual texts on subjects related to his/her field and interest with a satisfactory level of comprehension.**

<b>CEFR: B1</b>	<b>TOEFL skills</b>	<b>Multiliteracies</b>	<b>Unit</b>	<b>Course Assessment</b>
Can understand the description of events, feelings and wishes in personal letters/email well enough to correspond regularly with a pen friend. Can find and understand relevant information in everyday material, such as letters, brochures and short official documents.	Reading for main idea, authorial purpose. Identifying main ideas.	Rhetorical moves and document design.	Email/ formal letter	Mid-term quiz
Can scan longer texts in order to locate desired information, and gather information from different parts of a text, or from different texts in order to fulfill a specific task. Can recognize significant points in straightforward newspaper articles on familiar subjects.	Skimming and Scanning for main idea. Understanding inference.	Understanding different narrative structures. Grammar of storytelling.	Narrative	
Can identify the main conclusions in clearly signaled argumentative texts. Can recognize the line of argument in the treatment of the issue presented, though not necessarily in detail.	Logical argument and point of view.	Voice and point of view. Rhetoric of persuasion.	Short Essay: Summary.	Final Quiz

**Appendix D - Draft Plan for Reading, Semester 2 - By completion of Reading Semester 2:** *Students can read with a large degree of independence, adapting style and speed of reading to different texts and purposes, and using appropriate reference sources selectively. Has a broad active reading vocabulary, but may experience some difficulty with low frequency idioms.*

<b>CEFR: B2</b>	<b>TOEFL skills</b>	<b>Multiliteracies</b>	<b>Unit</b>	<b>Course Assessment</b>
Can read correspondence relating to his/her field of interest and readily grasp the essential meaning.	Understanding purpose and identifying main point.	Document design. Rhetorical moves and textual organization.	Product review	Mid-term quiz
Can scan quickly through long and complex texts, locating relevant details. Can quickly identify the content and relevance of news items, articles and reports on a wide range of professional topics, deciding whether closer study is worthwhile.	Understanding vocabulary in context.	Understanding social nature of text types. Understanding visual aspects of texts.	News report	
Can understand articles and reports concerned with contemporary problems in which the writers adopt particular stances or viewpoints. Can understand lengthy, complex instructions in his field, including details on conditions and warnings, provided he/she can reread difficult sections.	Finding factual information. Determining purpose. Understanding negative facts. Following logical argument. Inferences.	Recognizing and noticing formal aspects of academic register.	Short Essay: point of view.	Final Quiz

## Appendix E – Narrative Tasks/Lessons Page



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## Appendix F – Applying the 5-Part Model to a Narrative

### Exercise 1:

Can you identify the 5 parts to this story (main idea, scene setting, complicating action, further action, result and evaluation)? Use the questions below to help you:

#### Analysis of the Narrative

1 What is the main theme of this narrative?

2 Scene-setting

Who are the main [characters](#)?

Description of main [characters](#):

Where is the story set? How do you know?

When is the story set? How do you know?

**3 What is the complication in the story?**

**4 Main events (further actions):**

a)

b)

c)

d)

e)

f)

**5 Resolution: How does the story end?**

**Reflection:**

Discuss with your group your opinion of the subtext. (It is fine for you and your classmates to have different interpretations of this).

1. What is the deeper meaning of the story?
2. Does it make you think?
3. Is there a 'moral' message for the reader?

## Conclusion:

1. Did you and your group members disagree about the reflection/evaluation?
2. What different or similar ideas did you have about the deeper meaning of the [fairy tale](#) narrative that you read?

## Appendix G – Final Task for the Constructed Narrative Lesson

### Part 6: The Secret

Read the following then look at the task below it.

#### The Secret

‘The Secret’ is a controversial film and book, both created by Rhonda Byrne. The book has sold about 20 million copies worldwide, and has been translated into 46 different languages. It has been followed up with other similar books such as ‘The Power’ and ‘The Magic’.

All the books and films centre around a belief system created by Byrne and her colleagues, an odd mixture of modern popular psychology ‘self-help’ guides, and superstition and religion (some would call it a cult rather than a religion or philosophy). Its followers believe that if you force yourself to think positively and write down and visualise your thoughts, some spiritual power in the Universe will give you what you wish.

It has attracted a lot of controversy and criticism. Some people note that it has made Ms. Byrne and her company a very rich lady, and that the only people it has really made happy are her and her rich colleagues. It also seems to target very vulnerable people, people who need real counselling and real material help, and fool them into thinking their own misery is their own fault, and into buying books and movies from the website.

On the website, there appear hundreds of ‘stories’ and personal narratives from people who claim The Secret has changed their lives forever. Many suspect these ‘stories’ are not real stories at all, but created artificially in order to encourage people to buy their products, or that the writers have been brainwashed and tricked into thinking ‘The Secret’ has changed their lives when it hasn’t. Byrne and her company reject these accusations.

### Discuss:

Now you have read some information about *The Secret*, get back into your original groups and discuss the questions below again (from Part 4: Discuss) regarding the narrative you read. Have you changed your mind about any of the answers? Make sure to take notes on answers that your group formulates.

1. Who do you think is writing this? Why do you think so?
2. Why is the author writing this?
3. Where might you see this type of narrative?
4. What [audience](#) is he/she writing for?
5. The author has written in a style that is deliberately 'familiar'. Why has the author written in this way?
6. How is this similar or different to the personal narrative we read last lesson (*A Time for Change*)?

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*Title: How Labor Market Perceptions Affect Undergraduates' Preparation – Gender Differences Included*

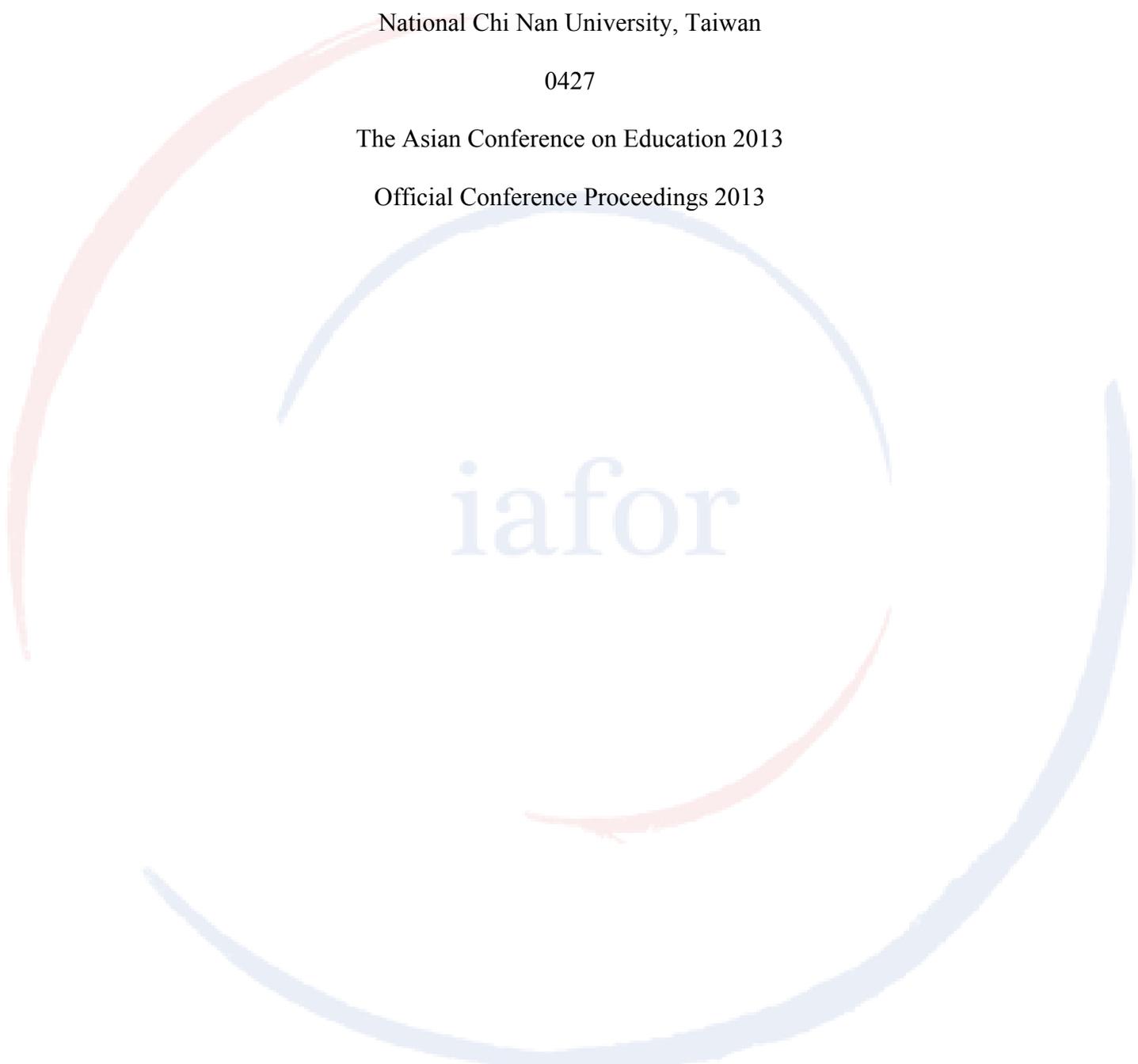
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## **1. Introduction**

### *1.1 Graduate labor market and job preparation*

Youth unemployment issue has drawn increasing attention in Asian and European countries (Kim and Lee, 2006; Postiglione, 2011; Wolbers, 2007). Studies regarding higher education showed that credential inflation results in unprecedented number of undergraduates as well as a severely competitive graduate labor market. Results drawn from graduate labor market outcome reveal that the transition from education to labor market is getting harder and harder for current graduates and the hurdle to get a traditional 'graduate job' is higher and higher (Bai, 2006; Brynin, 2002; Dolado et al., 2000; Kanellopoulos, 1996; Kim and Lee, 2006; Li et al., 2009; Plumper and Schneider, 2007; Salas-Velasco, 2007; Walker, 2007; Wolbers, 2007). Meanwhile, research revealed that without experiencing difficulties in finding a job, undergraduates could misapprehend their labor market future and thus fail to well prepare for it. Gedye, Fender, and Chalkley (2004) showed that undergraduates are optimistic about private rate of return from higher education credential and thus underestimate the obstacle in getting a satisfied job compared to graduates who already entered to the labor market. Furthermore, graduates in this study based on their own labor market experiences emphasized that the need for higher education institutions to equip their students for the labor market. The abovementioned research results suggest that the graduate's viewpoint toward higher education institutions' job preparation changed as they enter the labor market. The possible explanation could be that while they are still in college, they do not perceive the need to prepare for future job due to their labor market misunderstanding. The remained question would be if undergraduates acknowledge a fierce competitive labor market awaits them upon graduation, would this perception affect their job preparation during college years? To fulfill this gap, this research would like to examine the association between undergraduates' observation regarding the graduate labor market and their job preparation while studying in college.

Research demonstrates that instead of equalizing the quality and reputation of all universities, higher education expansion has sorted higher education institutions into different echelons, with prestigious research intensive universities on the top and non-prestigious teaching-only ones at the bottom (Ding, 2007; Kim and Lee, 2006; Strathdee, 2009; Wu, 2009; Yogev, 2007). Studies further disclose that graduates from top universities enjoy higher rate of private return from college credentials than otherwise. Income disparities between prestigious and non-prestigious university graduates are well documented (Bai, 2006; Ding, 2007; Kim and Lee, 2006; Pretorius and Xue, 2003; Rosado and David, 2006; Thomas and Perna, 2004). It seems that a college credential values differently according to its accredited university. However,

the aforementioned research results are all drawn from the labor market outcomes, none of them is from the undergraduate's assessment regarding credential currencies. Does current undergraduate sense the college credential currency differences among various universities? Do they recognize that the credential inflation has led to different extent of devaluation for varied college credentials? In addition, how do they associate the competitive graduate labor market with the credential currency value?

Studies revealed that skill development courses and certificate related programs are favored by undergraduates during economic recession (Postiglione, 2011; Wu, 2011). As the college degree becomes normalized, undergraduates detect the need to add additional values to their credentials (Tomlinson, 2007, 2008; Wu, 2011). Research revealed that those undergraduates who utilize course taking to increase their ability are more likely to be employed (Li et al., 2008), though might not help rise starting wages (Li et al., 2009). In addition to course arrangement, research show that a growing number of undergraduates utilize paid employment to increase their employability, including regular and professional working skills (Beerkens, Mägi and Lill, 2011; Howieson et al., 2012; McInnis and Hartley, 2002). Clearly, undergraduates try to expand their working ability and skills through course taking and paid employments. In addition to course taking and paid employments, this study incorporates an Asian cultural element, cram schools, as a mechanism that undergraduates apply to enhance their working ability, since Asia countries have long history of using cram schools to prepare for all kinds of tests related to educational attainments and public service jobs (Dawson, 2010; Kwok, 2004). Nowadays, labor with flexibility has an edge in current market. Second profession development adds to one's labor flexibility to secure a job or find a new one. Further, due to rapid changes in the industries and job contents, labors in nowadays are expecting to develop a second profession. The competitive labor market both shape the rate of return of a college credential and penetrate the credential devaluation in the society. This study is designed to examine if undergraduate's perception of graduate labor market has impacts on their assessment toward credential devaluation and their strategies to deal with it. This research would like to examine the associations among competitive labor market, credential devaluation, second profession development and credential value addition. It is possible that undergraduates apply strategies that add additional values to their diplomas because they acknowledge increasing difficulties in getting a job. As a significant number of youths possess higher education credential, the distinction function of it diminishes. Obviously, finding a job, especially a traditional 'graduate' position, is getting harder and harder for newly graduates. Therefore, students need to equip additional capacities in order to increase the chances to outperform others with similar educational attainments.

### *1.2 Women's participation in Taiwan's higher education*

Though some studies showed that higher education expansion has raised the female's participation in higher education (Berggren, 2006; Rosado and David, 2006), a number of studies further demonstrated that they tend to go to non-elite institutions (Berggren, 2006; Grubb and Lazerson, 2005; Walker, 2007). This is also the case in Taiwan. The government statistics showed that in the bachelor level, the woman's participation rate in top six Taiwanese universities is 44.86% compared to 48.94% in the overall universities in 2011, revealing that in Taiwan female undergraduates center on the non-elite universities (Ministry of Education, 2012). Since females tend to go to non-elite universities, would this tendency affect their credential currency evaluation? Could it be possible that majority females go to non-elite universities because they hold relatively equalized credential currency values? In other words, is it possible that males acknowledge that elite university credentials devalue less than non-elite ones; therefore, majority males go to elite universities? This research attempts to investigate if gender differences exist in college credential currency assessments.

Females less likely than their male counterparts attend graduate schools in Taiwan. Statistics from Taiwanese government showed that from year 1996 to 2011, women's participation rate in bachelor credential have been over 48% every year (Ministry of Education, 2012). In addition, woman participation rates in graduate school increased gradually from 28.86% in 1996 to 43.28% in 2010. Evidently, more and more women try to obtain a master credential. This could imply that as a bachelor credential has become a normalized standard, women also see the need to attain further education. However, their participation in post-graduate degrees are not compatible with their male counterparts. The government statistics also revealed that the women's participation rate in Ph.D. program has rose from 19.20% in 1996 to 28.91% in 2010 (Ministry of Education, 2012). Clearly, males maintain their dominant role in Ph.D. programs. In sum, more males attain post-graduation credentials than females. It meant that more females enter the labor market earlier than their male peers. The question is does the earlier labor market entry than males affect women's learning during college years? Would female undergraduates thus sense higher needs to prepare for their future jobs compare to their male counterparts while in college? In other words, would female undergraduates have higher sensitivities to graduate labor market as opposed to males?

### *1.3 Research questions*

1. Could gender differences be found in job preparation, credential devaluation and labor market conceptions?
2. How undergraduates' perception regarding current graduate labor market affected their credential currency assessment, second profession development and credential value addition?

## **2. Methods**

Current research was funded by Taiwanese National Science Council (NSC-101-2410-H-260-044-). Two elite national universities, two non-elite national universities, and two historical private universities were surveyed in this study. As for the two elite national universities, one has high prestige on her humanities and social science departments and the other has high reputation on her outstanding technical and engineering disciplines. As for the other two non-elite national universities, one is newly established on the purpose of stimulating local economic development and the other one has not only long history with huge alumni network, but also a reputation on agricultural education. Both private universities are comprehensive historical ones that also have large numbers of alumni. Two of the six universities were located in northern metropolitan area, and another two were sited in central metropolitan area in Taiwan. As for the last two universities, one is located next to the oldest Science Park, and the other is in non-metropolitan area in central Taiwan. From September 2010 to January 2011, data were collected on students who enrolled in general studies courses because students in these courses come from various university departments and thus increase sample representativeness for the sampled universities. More than 240 undergraduates in each university were surveyed to obtain a representative sample for the university. The total sample size consisted of 2407 students, including 1260 females, 1135 males, and 12 unidentified.

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Insert table 1 about here

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Independent t-test was initially used to examine gender differences in undergraduate's assessments regarding current graduate labor market, the ways to develop second profession, credential devaluation and credential value addition. Next, structural equation modeling (SEM) was utilized to investigate the associations among four latent variables: labor market, credential devalue, second profession, and credential

addition. SEM was chosen because it not only helps investigate the direct as well as the indirect effects among the four aforementioned latent variables, but also because it helps evaluate the construct validity. Randomly missing data were imputed using full-information maximum likelihood (FIML) estimation. Because Chi square is sensitive to sample size, researchers recommend goodness-of-fit indices as the criteria for evaluating the SEM model (Bentler and Bonett, 1980; Kline, 1998; Marsh and Grayson, 1990). Goodness-of-fit indices help locate and evaluate a best-fitting solution (Loehlin, 1998). Several fit indices have been applied as standards for choosing the best-fitting model. The present study used the Bentler–Bonett Normed Fit Index (NFI), Tucker–Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA) to account for goodness-of-fit and model parsimony. The commonly recommended level for RMSEA is 0.05 or lower (Loehlin, 1998), the level for TLI is 0.90 or higher, and the level for NFI is 0.80 or higher (Kline, 1998).

The constructs and item content were presented in table 1. The subscale titled ‘labor market’ surveyed whether undergraduates think that current graduate labor market is highly competitive and the available job positions for college graduates are shrinking. ‘Second profession’ focused on second profession development via part-time jobs, course taking, and cram school attending. The construct named ‘credential devalue’ asked if a diploma valued differently according to accredited universities and the credential devalued lesser if the accredited universities and departments are better. The latent variable ‘credential addition’ asked if undergraduates believe that a minor subject, double majors or taking certificate programs added to their credential value. Responses to all of the items were given on the six-point Likert scale, with 1 meaning “strongly agree” and 6 denoting “strongly disagree.” Because all of the items included in the SEM model were closed questions, there were few missing data. After list-wise deletion, the sample size consisted of 2369 students, representing less than 3% missing data in the sample.

### **3. Results**

#### *3.1 Results from independent t-tests*

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Insert table 2 about here

The means for males and females on C1 were 1.66 and 1.60. The independent t-test revealed that no statistically significant mean difference was detected in this item,

meaning that both genders held consonant viewpoint toward graduate labor market competitiveness. Since both means were under 2, it meant that male and female undergraduates both agreed that current college graduate labor market is highly competitive. The means for males and females on C2 were 2.25 and 2.14, and the mean difference had reached statistically significant. The result demonstrated that female undergraduates that compare to male undergraduates, female ones tend to be more pessimistic on job vacancies for college graduates. Female undergraduates were more likely believe that the job openings for college graduates had diminished.

As for the three items related to developing a second profession, gender differences were discovered. The means for the female undergraduates on S1, S2 and S3 were 2.61, 2.23, 3.19 respectively, and for the male ones on three items were 2.77, 2.46, and 3.34 respectively. The independent t-test results on those three items showed averagely, females scored statistically significantly lower on S1, S2 and S3 than their male peers. Since females scored significantly lower on the three ways to development a second profession during college years, revealing that female students had higher willingness than their male counterparts in developing a second profession. That is, females were more likely to make use of part-time employments, course taking and cram school to expand their professions, which might in turn increase their employability and likelihood of getting employed upon graduation. Evidently, females were more active in building their labor flexibility during college years using on-campus and off-campus resources.

Regarding the three items, A1, A2 and A3, gender differences were also identified in the three strategies regarding credential value addition. The means for the female undergraduates on A1, A2 and A3 were 2.23, 2.03, 2.23 respectively, and for the male ones on three items were 2.36, 2.20, and 2.34 respectively. The independent t-test results on those three items showed on average, females scored statistically significantly lower on A1, A2 and A3 than their male counterparts. Again, female undergraduates had statistically significantly lower means than their male peers on the three items, including minor subject, double majors and certificate programs. The significant mean differences revealed that females agree more than males that a minor subject, double majors and certificate programs could add additional values to their college credentials. Since getting a minor subject and double majors and attending certificate programs need to take additional courses, the results not only demonstrated that male undergraduates put less credits on these three methods than female ones in enlarging their credential currency values, but also implied that female undergraduates are more likely than males one to make use of course arrangement as an instrument in enhancing future employability.

Gender differences also found in the three items related to credential devaluation caused by higher education expansion. The means for the female undergraduates on V1, V2 and V3 were 2.02, 2.33, 2.53 respectively, and for the male ones on three items were 1.92, 2.13, and 2.40 respectively. The independent t-test results on those three items showed that females scored averagely statistically significantly higher on V1, V2 and V3 than their male counterparts. The significant mean differences indicated that compared to their male counterparts, females held a more equalized viewpoint on credential currency values accredited by various universities after higher education expansion. Male undergraduates were more inclined to believe not only that a credential devalues less if it is accredited by a prestigious university or a top ranking department, but also that obtaining a credential from elite universities value differently from obtaining a credential from non-elite ones. The results implied that male undergraduates held larger discrepancies in college credential currency than females.

### *3.1 Results from structural equation modeling*

The chi square of the SEM model was 192.67, with 38 degrees of freedom and a significant p-value of 0.00. Because chi square is sensitive to sample size, TLI, NFI, and RMSEA were used to evaluate the proposed SEM model. Results from the SEM model showed that TLI, NFI, and RMSEA were 0.96, 0.97, and 0.041, respectively. All indices show that this model gave a good fit to the data (Hu and Bentler, 1999; Browne and Cudeck, 1993) and further explanation is thus possible. All of the factor loadings in the current model were above 0.44, indicating good construct validity.

Results from SEM revealed that the structural coefficient from 'labor market' to 'credential devalue' was 0.30, indicating that undergraduates' observation regarding credential devaluation was significantly influenced by their perception about graduate labor market. That is the more competitive students perceived labor market was, the more they believed that a credential issued by elite universities or respected departments devalued less than otherwise. Clearly, the way undergraduates assess credential currency was affected by their graduate labor market awareness. As they sensed increasing competitiveness and shrinking positions in the graduate labor market, they acknowledged credential currency devalue and the extent a credential devalued depend on accredited universities or departments.

The structural coefficient from 'labor market' to 'second profession' and 'credential addition' were 0.25, meaning that students who observed a congested labor market were inclined to develop a second profession via part-time jobs, course arrangements

and cram schools. In other words, undergraduates utilize pay employments, course taking and capital investment to increase their future employability in order to enlarge the chance to get employed in a perceived cut-throat graduate labor market. In addition, the structural coefficient from 'labor market' to 'credential addition' 0.16, indicating that as undergraduates realized a competitive graduate labor market awaiting upon graduation, they would try to increase their credential currency through course arrangements. The course arrangements include a minor, double majors or certificate programs. All of them require additional course taking. Put it differently, undergraduates recognize course taking is a way to increase credential currency values. Evidently, the aforementioned three positive structural coefficients demonstrated that undergraduates' future labor market perceptions have impacts on their credential value assessments and corresponding coping strategies. Competitive labor market initiates undergraduates' motivation to prepare for it. Evidently, if undergraduates were aware of a cut-throat labor market, they would take actions to cope with it while still studying in college.

The 0.14 statistically significant structural coefficient from 'credential devalue' to 'credential addition' showed that the more undergraduates believed credential devalue unequally, the more they believed a minor, double majors and certificate programs would increase their credential currencies. This result implied that as students acknowledged that the diploma rated differently according to accredited universities, they would try to enlarge their credential currencies via other arrangements. The result suggested that those students who applied strategies to increase their credential currencies are those who sensed increasing difficulties in getting a job and decreasing college credential currencies. Further, the statistically significant structural coefficient from 'second profession' to 'credential addition' was .36, confirming a positive association between these two latent variables. That is, those undergraduates who observed the need to develop a second profession also tended to see the need to increase credential currency values. Moreover, the insignificant structural coefficient from 'second profession' to 'credential devalue' revealed that undergraduates' differentiated credential devaluation was not influenced by their profession expansion.

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Insert figure 1 about here

## **Discussion**

Results from independent t-tests demonstrated that female undergraduates sensed more need to develop a second profession and add additional value via course taking to the attained credentials. In addition, female students stood a more pessimistic viewpoint toward graduate labor market than their male counterparts, since they agreed more that job positions for college graduates decreased. As both to nurture a second profession and to increase credential currency are future job related, the results could indicate that compare to their male peers, females have higher needs to increase their employability. The higher needs to increase employability through credential value addition and second profession development could be due to that they tend to enter the labor market earlier than male students, for their lower percentage in pursuing post-graduate degrees. Regarding credential devaluation, male undergraduates held a more differentiated viewpoint than females. Males tended to agree more that college credentials value differently according to accredited universities. Also, males tended to agree more that credentials from elite universities and prestigious department devalue less than otherwise.

Results from independent t-tests revealed that gender differences were found in credential value assessments, implying that male students were more sensitive to higher education stratification, since they were more inclined to agree that the better the university or the department is, the less the credential devalued. On the contrary, female undergraduates held a relatively more fairness standpoint than their counterparts in credentials' currency value could be misleading, as discerned credential values are confirmed by previous research (Bai, 2006; Ding, 2007; Kim and Lee, 2006; Pretorius and Xue, 2003; Rosado and David, 2006; Thomas and Perna, 2004). Furthermore, the females' relatively equalized viewpoints toward credential currency could partially explain why they center on non-elite universities after higher education expansion (Berggren, 2006; Grubb and Lazerson, 2005, Walker, 2007). If they believe that credentials value similarly between prestigious and non-prestigious universities, then to them, graduating from elite and non-elite universities will not make a sensible difference. This misunderstanding could lead to future labor market disadvantages, since research found that elite university graduates are more welcome by elite employers (Morley, 2007). Future research could explore the possible gender related contexts or education that contribute to this gender credential value difference. Further research could investigate the factors that contribute to the differences. In addition, females' higher willingness in developing a second profession and adding additional currencies to their credential suggested that female undergraduates could have higher employment pressure than males. It could due to that a glass ceiling effect on educational attainment that prevents females pursuing post-graduate credentials, so

that they tend to enter labor market earlier than their male counterparts. If the case stands, then gender inequity has thus persisted through levels of educational attainment, rather than through bachelor credential participation rates after higher education expansion.

Results from SEM model demonstrated that how undergraduates recognized the labor market situation influenced their credential valuation and their strategies to prepare for it. Results revealed that those undergraduates who recognized a competitive graduate labor market were not only more likely to think that credential devalued differently according to universities and departments, but also more inclined to develop a second profession and add value to their hard diploma. The above results proposed that those undergraduates who pay attention to current cut-throat graduate labor market are those who actively take actions to prepare for it. If the case stands, then arising students' awareness regarding current congested graduate labor market could be the incentives for them to apply strategies to cope with it and thus really make a good use of universities' resources in preparing for a job. The universities and the government could thus educate these youths the labor market realities during college years rather than let the students find it out by themselves after entering it.

Results from SEM model further revealed that the need to enlarge college credential currency is influenced by undergraduates' perceived degree devaluation and labor market competitiveness. Manifestly, a tough graduate labor market along with shrinking college credential currency push undergraduates to take actions add additional values to their attained degree in the hope to maintain the distinguished function of the degree. In order to be employed upon graduation in an outnumbered graduate labor market, undergraduates sense the need to do a lot of things, including taking additional courses and part-time employments, associated with employability enhancement. Contemporary undergraduates are distancing from traditional ones for they are facing enlarging pressure in getting a secured job that signals independent from their family. Future research could further investigate other factors that affect undergraduates' future job preparation especially during economic recession.

## Reference

- Bai, L., 2006. Graduate unemployment: dilemmas and challenges in China's move to mass higher education. *The China Quarterly* 185, 128–144.
- Beerens, M., Mägi E., Lill, L., 2011. University studies as a side job: causes and consequences of massive student employment in Estonia. *Higher Education* 61, 679–692
- Bentler, P.M., Bonett, D.G., 1980. Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin* 88 (3), 588–606.
- Berggren, C., 2006. Labour market influence on recruitment to higher education—Gender and class perspectives. *Higher Education*, 52, 121-148.
- Brooks, R., Everett, G., 2009. Post-graduation reflections on the value of a credential. *British Educational Research Journal* 35(3), 333-349.
- Brynin, M., 2002. Graduate density, gender and employment. *British Journal of Sociology* 53(3), 363–381.
- Dawson, W., 2010. Private tutoring and mass schooling in East Asia: reflections of inequality in Japan, South Korea, and Cambodia. *Asia Pacific Education Review* 11, 14–24
- Ding, X., 2007. Expansion and equality of access to higher education in China. *Frontiers of Education in China* 2 (2), 151–162.
- Dolado, J.J., Felgueroso, F., Jimeno, J.F., 2000. Youth labour markets in Spain: education training, and crowding-out. *European Economic Review* 44, 943–956.
- Gedye, S., Fender, E., Chalkley, B., 2004. Students' undergraduate expectations and post-graduation experiences of the value of a credential. *Journal of Geography in Higher Education* 28(3), 381-396.
- Grubb, W. N., Lazerson, M., 2005. Vocationalism in Higher Education: The Triumph of the Education Gospel. *The Journal of Higher Education* 76(1), 3-25.
- Howieson, C., McKechnie, J., Hobbs S., Semple, S., 2012. New Perspectives on School Students' Part-time Work. *Sociology* 46 (2), 322-338.
- Kanellopoulos, C.N., 1996. Recent developments in Greek education. *International Journal of Educational Development* 16(1), 65–77.
- Kim, S., Lee, J.-H., 2006. Changing facets of Korean higher education: market competition and the role of the state. *Higher Education* 52, 557–587.
- Kline, R.B., 1998. *Principles and Practice of Structural Equation Modeling*. The Guilford Press, New York.
- Kwok, P., 2004. Examination-Oriented Knowledge and Value Transformation in East Asian Cram Schools. *Asia Pacific Education Review* 5(1), 64-75.
- Li, F., Morgan, W.J., Ding, X., 2008. The expansion of higher education, employment and over-education in China. *International Journal of Educational Development*

- 28, 687–697.
- Li, F., Ding, X., Morgan, W.J., 2009. Higher education and the starting wages of graduates in China. *International Journal of Educational Development* 29, 374–381.
- Loehlin, J.C., 1998. *Latent Variable Model: An Introduction to Factor, Path, and Structural Analysis*. Lawrence Erlbaum Associates, New Jersey.
- Marsh, H.W., Grayson, D., 1990. Public/catholic differences in the high school and beyond data: a multigroup structural equation modeling approach to testing mean differences. *Journal of Educational Statistics* 15(3), 199–235.
- McInnis C., Hartley, R., 2002. *Managing Study and Work: The Impact of Full-time Study and Paid Work on the Undergraduate Experience in Australian Universities*. Canberra, Australia: Department of Education, Science and Training.
- Ministry of Education, 2012. *Number of Students at All Levels – By Gender*
- Executive Yuan, 2009b. *Earnings and Productivity Statistics in May 2009*. Available from: <<http://eng.stat.gov.tw/ct.asp?xItem=24857&ctNode=3274/>>.
- Morley, L., 2007. The X factor: Employability, elitism and equity in graduate recruitment. *Twenty-First Century Society Journal of the Academy of Social Sciences* 2(2), 191-207.
- Plumper, T., Schneider, C.J., 2007. Too much to die, too little to live: unemployment, higher education policies and university budgets in Germany. *Journal of European Public Policy* 14(4), 631–653.
- Postiglione, G. A., 2011. Global recession and higher education in eastern Asia: China, Mongolia and Vietnam. *Higher Education* 62, 789–814.
- Pretorius, S.G., Xue, Y.Q., 2003. The transition from elite to mass higher education: a Chinese perspective. *Prospects* 33(1), 89–101.
- Rosado, D.L., David, M.E., 2006. ‘A massive university or a university for the masses?’ Continuity and changes in higher education in Spain and England. *Journal of Education Policy* 21(3), 343–365.
- Salas-Velasco, M., 2007. The transition from higher education to employment in Europe: the analysis of the time to obtain the first job. *Higher Education* 54, 333–360.
- Strathdee, R., 2009. Reputation in the sociology of education. *British Journal of Sociology of Education* 30(1), 83-96.
- Thomas, S.L., Perna, L.W., 2004. The opportunity agenda: a reexamination of postsecondary reward and opportunity. In: Smart, J.C. (Ed.), *Higher Education: Handbook of Theory and Research*, vol. XIX. Kluwer Academic Publishers, New York, NY, pp. 43–84.

- Tomlinson, M., 2007. Graduate employability and student attitudes and orientations to the labour market. *Journal of Education and Work* 20(4), 285–304.
- Tomlinson, M., 2008. ‘The credential is not enough’: students’ perceptions of the role of higher education credentials for graduate work and employability. *British Journal of Sociology of Education* 29(1), 49–61.
- Walker, P., 2007. System transition in Japanese short-term higher education: what future for the Japanese junior college in crisis? *Compare* 37(2), 239–255.
- Wolbers, M. H. J., 2007. Employment Insecurity at Labour Market Entry and Its Impact on Parental Home Leaving and Family Formation: A Comparative Study among Recent Graduates in Eight European Countries. *International Journal of Comparative Sociology* 48, 481-508
- Wu, C. C. (2011). High graduate unemployment rate and Taiwanese undergraduate education. *Journal of Educational Development* 31, 303-310.
- Yogev, A., 2007. The stratification of students in Israeli universities: persistent outcomes of an educational expansion policy. *Higher Education* 54, 629–645.

The logo for the International Association for Frontiers of Research (iafor) is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is partially enclosed by a large, light blue circular arc that starts from the bottom left and curves towards the right. A smaller, red circular arc is also visible, partially overlapping the blue one.

*Teaching and Managing a Project-based English Course to the College Students in  
Diverse Levels of English Proficiency*

Yoshihiko Yamamoto, Syuhei Kimura

Ritsumeikan University, Japan

0429

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Abstract

It is generally recognized in Japan today that having high -level English skills is certainly a big advantage for college students to open up their future career. Japanese colleges are facing increasing societal demand for a better English curriculum that fosters both communicative and academic English skills. The project-based English course, which is practiced at the College of Sport and Health Science of Ritsumeikan University, focuses on development of academic communication skills. In this course students practice the communicative academic skills of English such as, 1: how to deliver a group-based oral English presentation including a debate and panel discussion, 2: how to write an academic paper in English, 3: how to develop research skills based on their own interest. Although it is shown by the distribution of their TOEIC IP scores that there are English proficiency gaps among the students, the questionnaire survey reveals that most of them regard themselves as contributors to the accomplishment of the course because it is designed to require them to be a part of the group research. This study proposes that project-based English course should be student-interest-oriented and build on a series of academic tasks that need all the students to take part in.

## Literature reviews

### The concept of project-based learning

Project-based learning is widely adopted as part of the EFL/ESL curriculum and our English program is developed based on project-based learning. Laffey et al. (1998:74) explain the basic concept of project-based learning. It is a form of contextual instruction that places great emphasis on students problem-finding and framing, and which is often carried out over extended periods of time. Blumenfeld et al. (1991:372) discuss project-based learning further. It places learners in realistic, contextualized problem-solving environments. In doing so, it provides learners with a link between phenomena in the classroom and real-life experiences. Although project-based learning requires active engagement of learners' effort over an extended period of time, it promotes an extended view of subject matter disciplines rather than a narrow view of subject matter disciplines. However, it is important to note that both teachers and learners need to understand their roles within project-based program. The next part discusses roles of both teachers and learners in a project-based program.

### Roles of teachers and students under project-based learning

Within the framework of project-based learning, the roles of teachers and students are different from those of traditional lecture style classes. Teachers need to be either coaches or facilitators who give opportunities for learners to access to information, who guide learners to make tasks more manageable, and who assess progress, provide feedback and evaluate overall results (Blumenfeld et al., 1991). Students need to fit their projects into curriculum objects but they can decide their projects based on their personal experience and interests. Students also will need to organize and do their project work collaboratively with their peers, and will need to find mentors, resources and guidance in order to achieve quality outcomes (Laffey et al., 1998). Abe (1998) points out learner-centered program enhance learners' communication skills and social skills such as leadership in a group, responsibility, and collaborative skill.

### Effectiveness of introducing group work in class

Under project-based learning circumstances, learners sometimes find it difficult to adjust to the learner centered style of class. In particular, Japanese students who

entered their university directly from their high school are often not familiar with conducting their research projects. Thus students of the first year in particular find it difficult to study English under the project-based learning curriculum. In order to help students' learning, introducing group work for learners might help reduce their pressure from the study. There are several studies which support the idea that group work in class is effective for learners to enhance their learning ability. For example, Adam et al. (1990:6) explain that under collaborative group work, students learn how to jointly search for information for their research questions by individuals or the group. They learn techniques for analyzing, interrupting, negotiating and communicating their information as a team. Instead of the traditional emphasis on communicative individual performance, students encourage each other to research their topics, and come up with group products. Long and Potter (1985) explain the positive effects of group work for learners of their target language. Firstly, group work increases not only opportunities for learners to practice their target language in their groups, but also improves the quality of learners' speaking skills. Secondly, group work helps learners learn from each other and it enhance learners' motivation. Sugino (1994) also points out the effectiveness of introducing group work into language classes. According to her study, she found that small group work facilitates learners' language abilities. Johnson et al. (2001) found a further evidence of group activity in class. They found that combination of a large group activity and small group activity resulted in greater group productivity and higher educational achievement than did a large group activity alone.

The aim of this study

There are two aims in this study.

- 1: to investigate whether or not students' initial English proficiency affects to any significant degree their attitude toward and self-confidence in accomplishment of the project-based course.
- 2: to find how the project based English course can support those who are relatively lower level of English than other students'.

Our project-based learning (Project-based English)

Our English program is developed based on project-based learning. Bluemenfeld et

al. (1991) explain that project-based learning can be adapted to different types of learners and learning situations. Our department, the College of Sport and Health Science at Ritsumeikan University in Japan, arranges project-based learning into English classes. English is a compulsory subject in particular for both the first year and the second year students. Our department offers two English subjects each semester: Project-based English 1 to 4 and Skills workshop 1 to 4. Skills workshop class is the class which students learn English for Project-based English class. In Skills workshop class, students learn grammar, listening, speaking, and reading skills which are necessary for conducting their research in their Project-based English classes.

Two tables below explain both objectives and assessments of Project-based English.

Objectives	P1 (1st semester) 15 weeks	P2 (2nd semester) 15 weeks
1 <sup>st</sup> year	We will learn the basic research skills such as the presentation and writing.	We will develop our research skills. We learn how to do an interview and questionnaires.
	P3 (1 <sup>st</sup> semester) 15 weeks	P4 (2 <sup>nd</sup> semester) 15 weeks
2nd year	Using P1 + P2 skills, we aim to enhance our research skills with your group members. We are able to deliver a mini debate and mini panel discussion.	Using P1 + P2 + P3 skills, we focus on learning how to write an academic paper.

Assessment	P1 (1st semester)	P2 (2nd semester)
1st year	✓ Mid term presentation (3 minutes)	✓ Mid term presentation ✓ Final presentation

	<ul style="list-style-type: none"> <li>✓ Final presentation (5 minutes)</li> <li>✓ Final paper (around 600 words)</li> <li>✓ Attendance</li> <li>✓ Homework</li> <li>✓ Participation</li> </ul>	<ul style="list-style-type: none"> <li>✓ Final paper (600 to 1000 words)</li> <li>✓ Attendance</li> <li>✓ Homework</li> <li>✓ Participation</li> </ul>
	P3 (1st semester)	P4 (2nd semester)
2nd year	<ul style="list-style-type: none"> <li>✓ Mini debate</li> <li>✓ Mini panel discussion</li> <li>✓ Final presentation</li> <li>✓ Final paper (1000 words)</li> <li>✓ Attendance</li> <li>✓ Homework</li> <li>✓ Participation</li> </ul>	<ul style="list-style-type: none"> <li>✓ Final presentation</li> <li>✓ Final paper (1500 to 2000 words)</li> <li>✓ Attendance</li> <li>✓ Homework</li> <li>✓ Participation</li> </ul>

Project-based English 1 (P1) is for the first year students and is taught in the first semester. In P1, students learn basic skills of how to deliver their presentation in English, how to research, and how to write an essay in English. Students decide their topic in two or three weeks and they start their research. They can choose whatever topic they want to research but they often choose their topics which are related to sport areas. Mid term presentation is three minutes and the final presentation is 5 minutes. The final essay consists of two or three pages, about 600 words.

Project-based English 2 (P2) is for the first year students and is taught in the second semester. The major difference between P1 and P2 is that students conduct both interviews and questionnaires in their research in P2. Students need to include either interview or questionnaire data in their final paper. Thus, P2 provides students the entry level of the academic skill.

Project-based English 3 (P3) is for the 2nd year students which is held in the first semester. In P3, students are required to make a small group (4 or 5 members in one group) to do their research. In between week one to three, small groups in class should be formed and each group needs to decide their group topic. Each group should have a moderator who is the leader of the group. Once the moderator is decided, other members need to take their roles for their research. P3 focuses on oral skills and therefore students are required to do three presentations: a mini debate, a mini panel discussion and a final presentation. In the mini debate, each group is divided into a pro and con team and the moderator takes a role of the chair. In the mini panel discussion, each group member becomes a panelist and the moderator takes the role of chair again. In the final presentation, each group can chose to do either the debate or panel discussion. However, the authors encourage students to do a panel discussion since they think it is easier for them to do. Students also need to submit their final written presentation which they need to summarize their research on the paper. Each student needs to write about 1000 words.

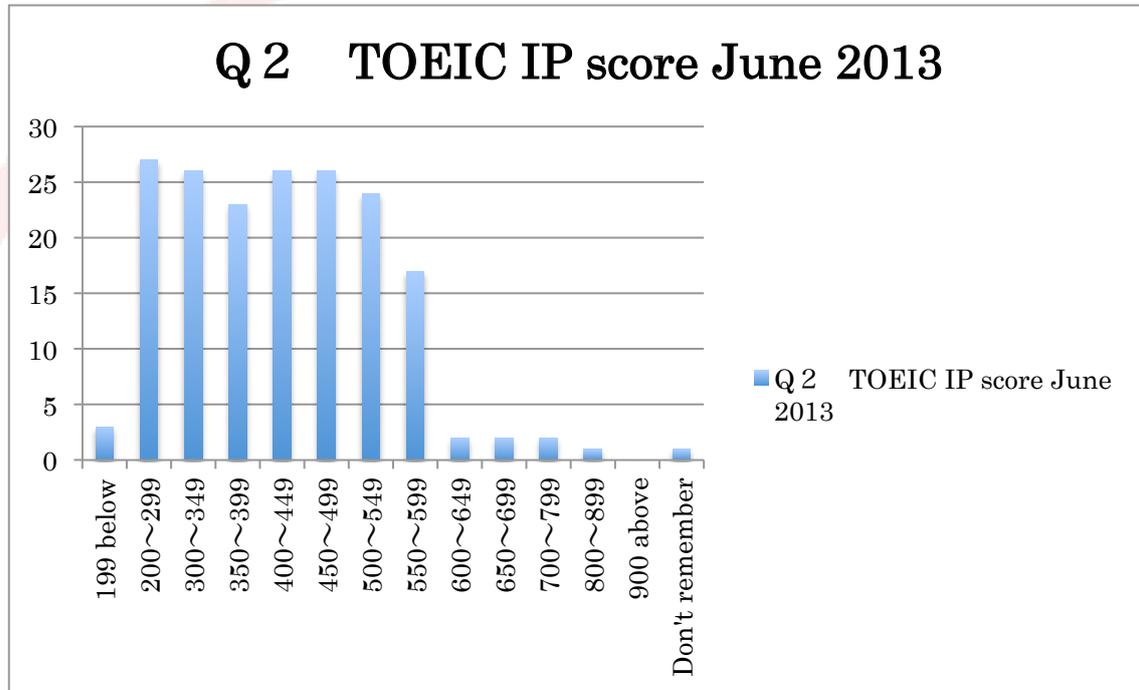
Project-based English 4 (P4) is for the second year students and held in the second semester. It focuses on academic writing. Students can do their research on their own but the authors require them to make groups to do their research. This is because all P classes have mixed level of English learners and therefore the authors believe that group work will allow students to learn from each other. In P4, students are required to do a final presentation and to write a final paper.

### Methodology

The authors of this study asked our students to do questionnaires at the end of the first semester (July, 2013). We distributed questionnaires to 11 classes for 2nd year students since our 2nd year students had to do a group research in P3. Thus the authors of this study were able to see how our students coped with group work through the semester. In P3, once students decide their group, they stay in the same group through the whole semester. Although some groups sometimes break up in the middle of the semester, most groups cooperate together in their group. We got 180 replies. The original questions in Japanese which we asked are put in the appendix section. In addition, a translated version of the original questionnaire in English is put in the appendix section.

## Results

For Q2 (What is your TOEIC score in June?), the graph is provided below.



The range of students' TOEIC score is between below 199 to 899. TOEIC score 400 is thought to be a high school English level but 79 students got their TOEIC score under 399. The average score of our students is between 400 and 449.

For Q3 (How often did you bring your computer in this class?), the graph is also provided below.

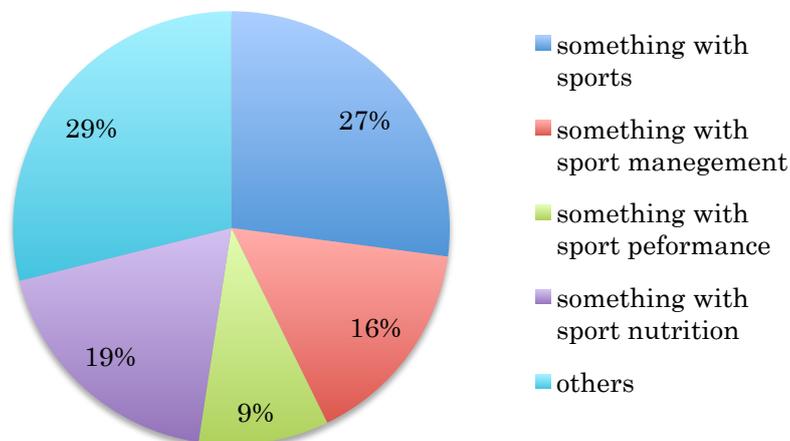
### Q3 how often did you bring your computer in this class?



75 percent of participants answered 'every time' and 15 percent of participants answered 'almost every time'. Thus, the total of 90 percent of participants brought their computers in their class almost every time.

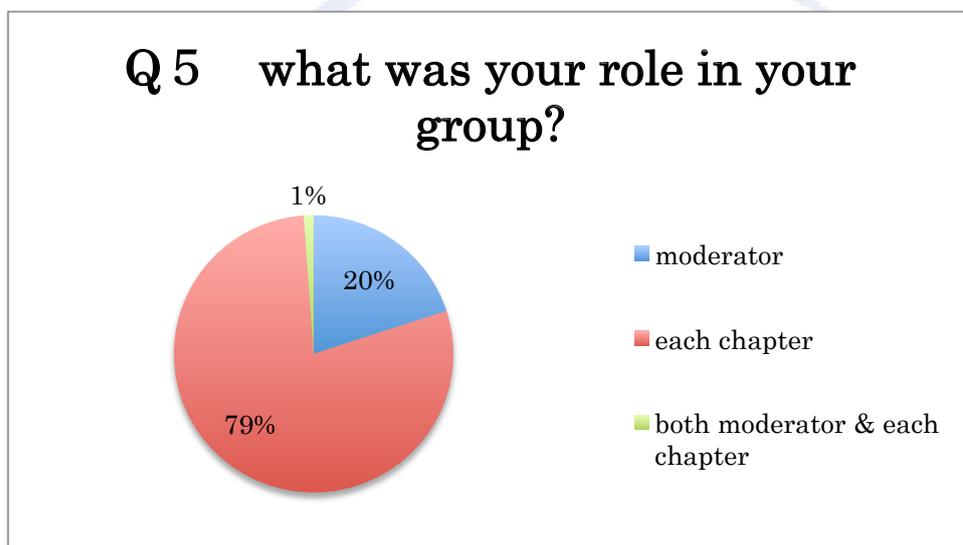
For Q4 (What was your group research topic for this subject?), the graph is provided below.

### Q4 what was your group research topic?



Choice of students' research topic varies. Among four areas of sport related topics, the most popular topic was sport education which is followed by the topic of nutrition. The topic of sport management comes third and the topic of sport performance comes last. Surprisingly, 29 percent of participants of this study chose the topic that is not relevant to sport areas.

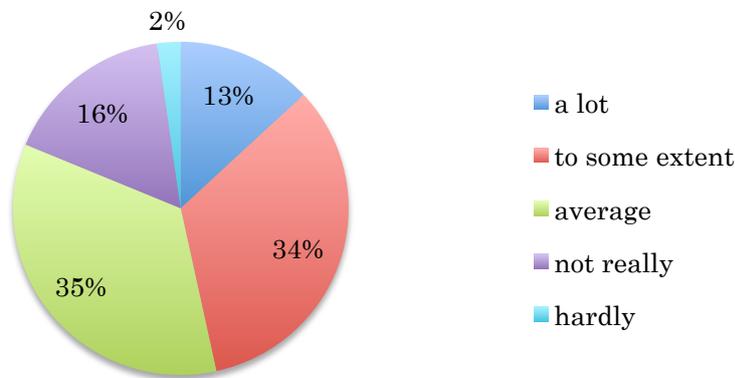
For Q5 (What was your role in your group for your research?), the graph is provided below.



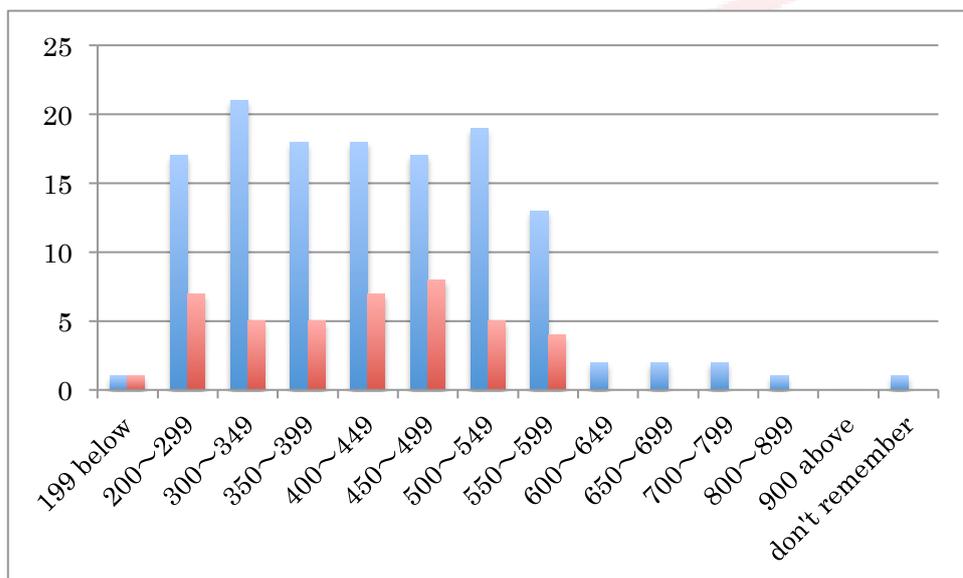
20 percent of our participants took a role of a moderator and 79 percent of them took a charge of each chapter. Interestingly, only 1 percent of our participants took roles of both a moderator and each chapter.

For Q6 (How much did you contribute to your group research?), the graph is provided below.

### Q 6 how much did you think you contributed to your group?

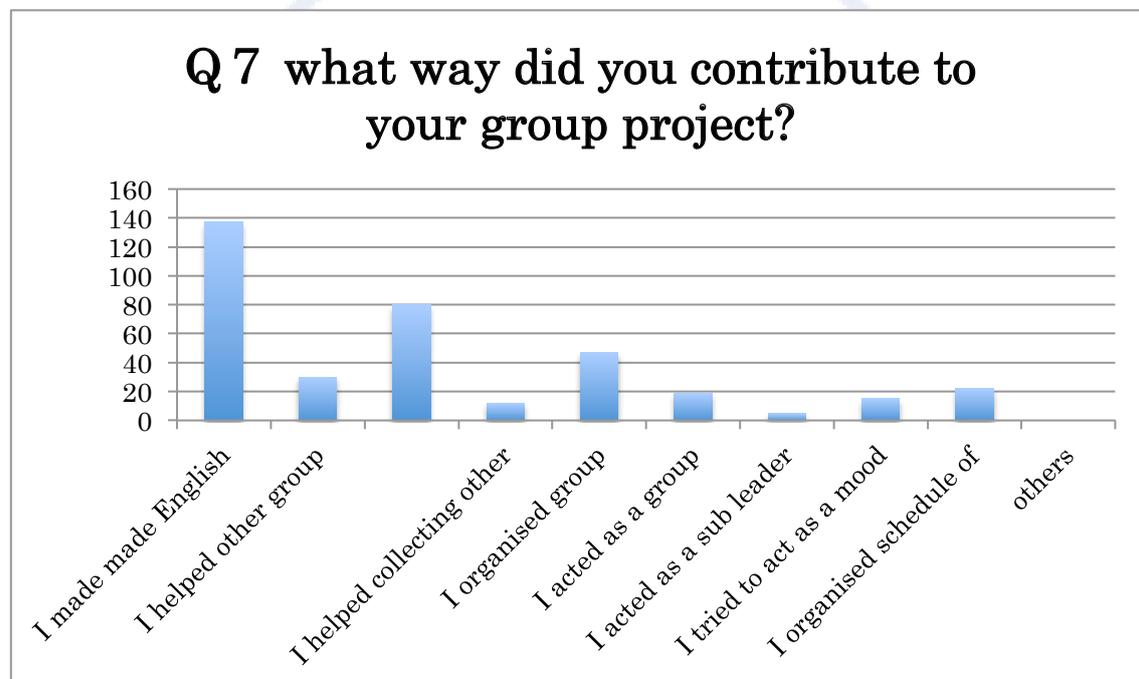


13 percent of the participants answered a great amount of contribution and 34 percent of the participants answered to some extent of contribution. 35 percent of the participant answered average contribution. Thus the total of 82 percent of the participants answered this question positively and it suggests that most students contributed to their group project. However, The total of 18 percent of the participants answered negatively that students did not contribute to their group projects.



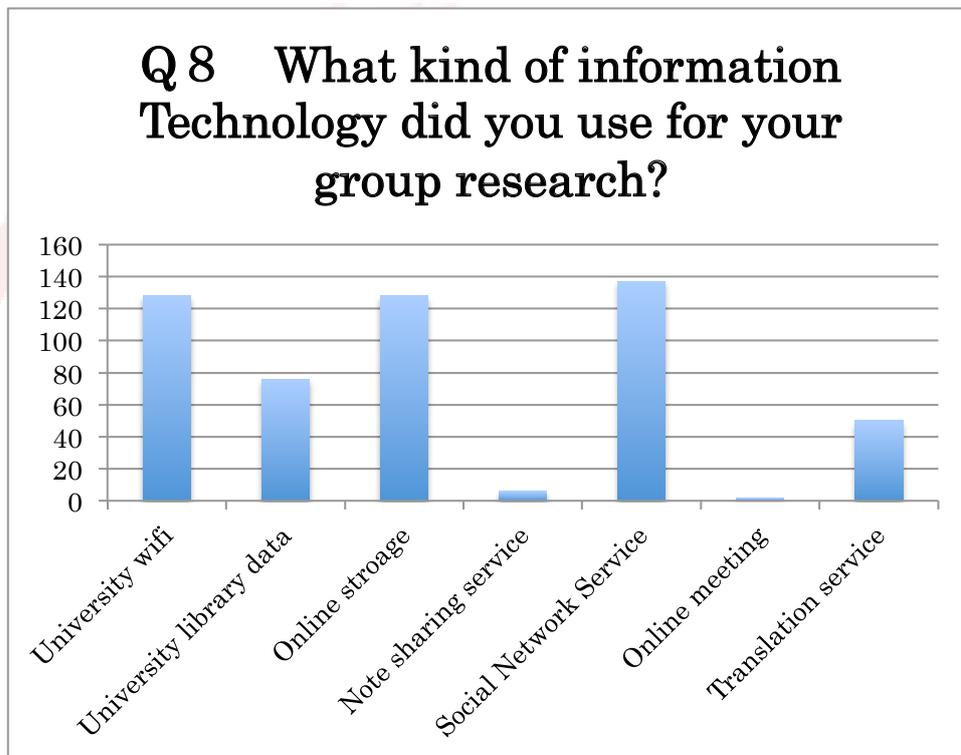
The graph above shows whether any relationship between TOEIC scores and satisfaction towards the subject. The blue color shows that students were satisfied with the subject while the red color shows that students were not satisfied with the subject. Although there is lots of satisfaction, there is no relationship between TOEIC scores and their satisfaction towards the subject.

For Q7 (If you answered yes above, then in what way did you contribute to your group research? Please choose answers as many answers as you want), the graph is provided below.



The most popular answer was ‘I made my part in English on my own.’ which is followed by the answer ‘I collected data for my part on my own’. These two answers suggest that each member took responsibility for their own part in their group. Two answers: ‘I organized making power point slides, manuscripts for our presentation, submitting our group assignments’ and ‘I helped my group member’s writing in English’ are come to the third and fourth most popular answers. These two answers show that group members supported each other and group projects were collaboratively done.

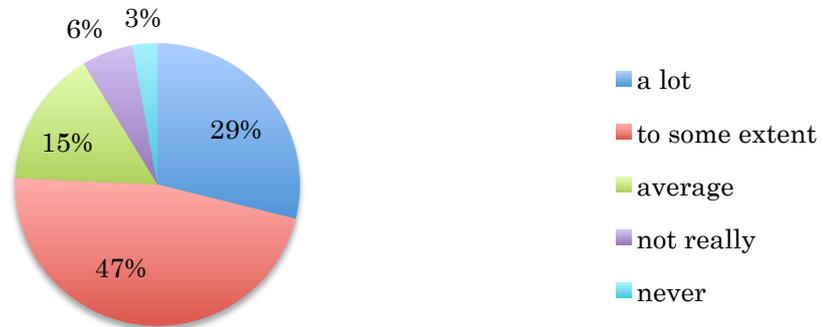
For Q8 (What kind of information technology did you use for your group research in this class?), the graph is provided below.



The most popular answer for this question was ‘SNS such as LINE or Twitter’. ‘Wifi at my university’ and ‘Online storage such as Dropbox or Google drive’ are the second most popular answers.

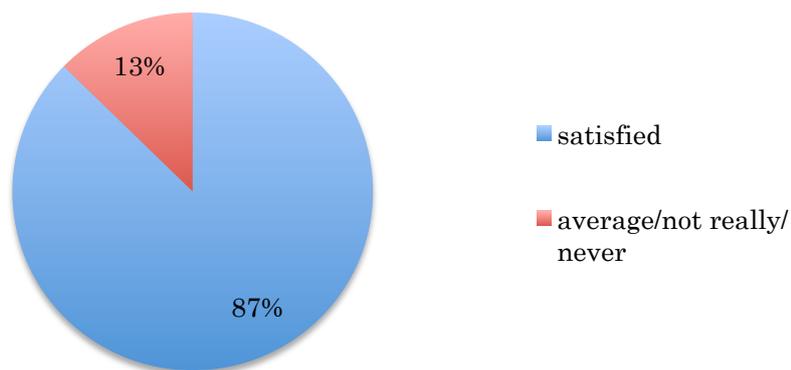
For Q9 (What extent did you think you achieved your aim in this subject?), the graph is provided below.

### Q9 What extent did you think you achieved your aim of this subject?



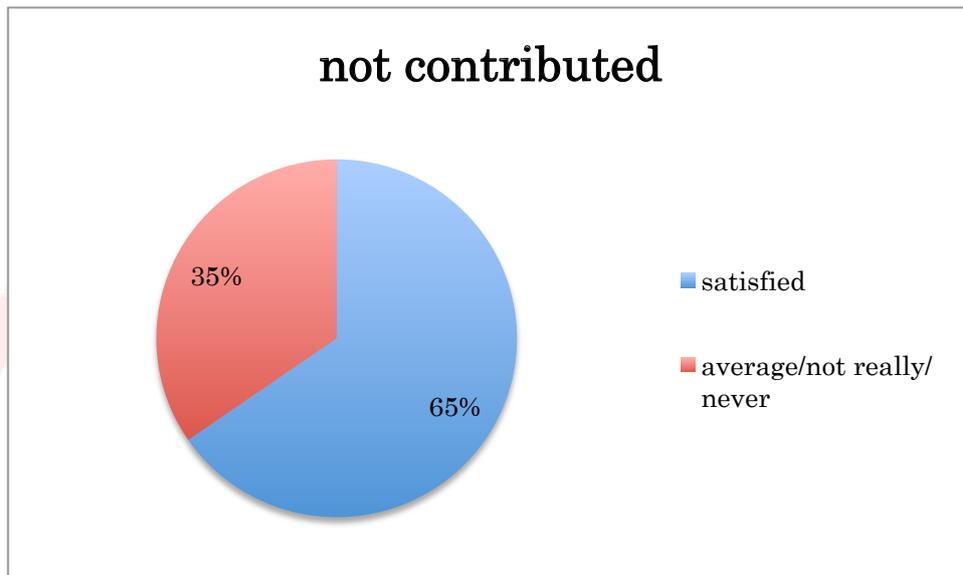
The total of 76 percent (a lot and to some extent) of students answered that they thought they achieved their goal. Only nine percent of the student answered that they did not think they achieved their goals.

### contributed



The graph above shows the relationship between students' satisfaction and contribution to their group. 87 percent of those who answered that they thought they contributed to their group project said they were satisfied with the subject. 13 percent of those who answered that they thought they contributed to their group

project said they were not satisfied with the subject.



The graph above shows the relationship between students' satisfaction and non-contribution towards their group project. The total of 65 percent who answered they did not contribute to their group project were still satisfied with the subject. 35 percent of students who did not contribute to the group work answered that they were not satisfied with the subject.

#### Discussions

Firstly, the result of this study showed that no relationship between students' TOEIC scores and students' contribution/satisfaction towards this subject was observed. In other words, those who were in low scores on TOEIC thought they either contributed to their group project or were satisfied with their group project. However, those who were in higher scores on TOEIC test did not always contribute to their group project or were not satisfied with their group project.

There are some possible reasons which might contribute to this result. First of all, TOEIC test does not include tests of both oral and writing parts. Our students took TOEIC IP, which tests only reading and listening skills, as one of their requirements in their program. Since the result of TOEIC test is still popularly used for

job-hunting in Japan, our university encourages students to take TOEIC for their future job hunting. Therefore, students' TOEIC test scores do not reflect on their writing and speaking skills. In P3, students need to do 3 presentations including a mini debate, a mini panel discussion and the final presentation. Also they need to write the final report around 1000 words. There are those who are not good at listening or reading but who are good at writing or speaking in our classes. Both academic writing and speaking skills are very important skills for succeeding in study at university. For instance, Robin (2003) points out the importance of academic writing skills for learners of English. His study found that many learners of English who do not have sufficient academic writing skills find it very difficult to cope with studies at university. Berman and Cheng (2010) find on their study that non-native speakers of English in their study felt both speaking and writing skills are more difficult than the other two skills: reading and listening. In particular, they imply teaching academic writing and speaking skills for postgraduate students would bring postgraduate students benefit. For instance, they emphasize teaching academic orals skills such as asking and answering questions, how to participate in group discussions, delivering oral presentations. As for academic writing skills, students will need to learn preparation of essay examination, a formal academic writing, and a skill reported by many of them to be difficult.

Secondly, collaborative work in a small group might contribute to students' satisfaction/contribution towards the subjects. Sport students are indeed very good at working in a group since some of them belong to university sport clubs and others used to belong to sport clubs when they were high school students. Our students learnt collaborative skills to work in a group in their sport clubs and they applied what they experienced in their sport clubs to their research project in their class. However, there is a negative aspect of conducting group activities in class. For instance, Xue (2013) reports that those who are low level in English abilities in particular for both speaking and listening found it difficult to participate in group work in their ESL class. Xue explains that their level of English directly resulted in their passive participations in-group activities. In order to encourage learners to participate in-group activities, the authors of this study believe that teachers need to consider learners' characteristics when they make groups in class. Each group needs at least one leader who can organize the group and look after other group members.

Thirdly, project-based learning could motivate students to learn English. The result of our study showed that quite high numbers of students answered that they were satisfied with their projects. Blumenfeld et al. (1991) explain that when learners choose their projects for long-term investigations, learners tend to be motivated by their projects. Although there will be individual preference towards project-based learning, projects can be designed to enhance most students' interest and value, including variety, challenge, choice, cooperation, and finding answers for real questions. In our classes, the authors try to encourage our students to decide their topic which is something relevant to their fields: sport education, sport management, sport performance and nutrition. However, students can choose any topic for their projects which interests them.

### Conclusion

Our first research question was to investigate whether or not students' initial English proficiency affects to any significant degree their attitude toward and self-confidence in accomplishment of the project-based course. In order to answer this question, the authors of this study give an answer for it as no. As the result of this study showed, there was no relationship between students' English proficiency level and their attitude toward the subject.

This study also had the second question, how the project based English course can support those who are relatively lower level of English than other students'. To answer the second question, collaborative group work helps those who are in particular low level of English. Advanced learners of English often support low-level learners of English. Moreover, selecting research topics is also important to help low-level learners. When learners choose their favourite topic to research, they are normally motivated to keep researching their topics. Thus English teachers will need to pay attention when their students make a group and select their topics for their research. If a group does not have any leader who can lead the group, then it is hard for them to work collaboratively. If learners choose topics in which they are not really interested, then they might give up their topics in the middle of the semester.

This research was imposed on students who belong to the department of sport and health science. They are very familiar with working as a group because many of them belong to their sport clubs. As a further research, it is interesting to investigate those who belong to the other department. Those who do not belong to sport clubs might perform differently when they study English under the project-based learning.

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## References

Abe K (1998) Educational productivity and its assessment: a view from student-oriented learning classes. *J. Higher Education (Hokkaido Univ.)* 3 138-142.

Adams D. M., Carlson H and Hamm M. (1990) Collaborative learning – building a team spirit in the classroom *Cooperative learning & educational media – collaborating with technology and each other US: Educational Technology Publications (3 – 34)*

Berman R. and Cheng L. (2010) English academic language skills: Perceived difficulties by undergraduate and graduate students, and their academic achievement. *Canadian Journal of Applied Linguistics Vol:4* 25-40

Blumenfeld P C., Soloway E., Marx R W., Krajcik J S., Guzdial M., and Palincsar A. (1991) Motivating project-based learning: sustaining the doing, supporting the learning. *Educational Psychologist* 26(3&4) 369-398

Johnson D W., Johnson R T, and Stann M B (2001) Impact of group processing on achievement in cooperative groups. *The Journal of Social Psychology* 130(4) 507-516.

Laffey J., Tupper T., Musser D., and Wedman J. (1998) A computer-mediated support system for project based learning. *Educational Technology Research and Development vol46 no1* 73-86

Long M H. and Porter P A. (1985) Group work, interlanguage talk, and second language acquisition. *TESOL Quarterly* 19(2) 207-228.

Robin S (2003) *Academic English: a conceptual framework* Technical Reports, University of California Linguistics Minority Research Institute, UC Berkeley.

Sugino T (1994) Small group work and second language learning among

Japanese of English. Intercultural Communication Studies, IV (1)  
103-121.

Xue Mo (2013) Effects of group work on English communicative  
competence of Chinese international graduates in United States  
Institutions of higher Education. The Qualitative Report vol 18 article 14  
1-19

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*The Roles of Community Colleges in Enhancing the Community Strength in Thailand*

Vachiraporn Surathanaksul, Sornnate Areesophonpichet, Atchara Chaiyoopatham

Chulalongkorn University, Thailand

0431

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Abstract

Apart from expanding the educational opportunity for occupational development, the community colleges also play an important role in enhancing the community strength. In this connection, the community colleges should clarify their roles in order to plan the policy, strategies, and management systems for enhancing the community strength effectively and to meet their objectives.

The research aims to synthesize the roles and factors of community colleges in enhancing the community strength in Thailand. It is a documentary research using the content analysis to analyze 60 items of articles, research papers, policy documents and electronic documents published in 1979-2013.

According to the research findings, the roles of community colleges in enhancing the community strength in Thailand responded to four missions: education arrangement for enhancing the community strength, conducting the research for community development, providing academic services to serve the needs of communities and preservation of community traditional arts and culture. The goals of community college comprise of lifelong education, education for all, education for occupational skills, and education for sustainable development. There are seven factors for enhancing community strength: common goals, community participation, cooperation networks, community learning, community management, social capital and community competence.

**Keywords:** Enhancing community strength, Strengthening community, Community capability, Community colleges

## Introduction

Despite Thailand's economic progress and prosperity after the implementation of the First through Seventh National Economic and Social Development Plan (1961-1996) focusing on the economy, the imbalance of economic, social, cultural and political developments and poor ecological preservation have resulted into the unsustainable development with the emergence of social, natural resource and environmental issues. The Eighth National Economic and Social Development Plan (1997-2001) is the important turning point because all parts of the society are welcomed to have more participation in national development. As a result, human-centered and holistic development becomes the focal point of the Eighth through Tenth National Economic and Social Development Plan (1997-2011) for the balanced development in all dimensions. The pursuit of sufficiency economy philosophy has enhanced the immunity of Thai society (National Economic and Social Development Board, 2007) but it is still insufficient to lay the solid ground for sustainable development and strength of the country. Thus, the human development strategies for a life-long learning society are devised under the Eleventh National Economic and Social Development Plan (2012-2016). Thais and Thai society are encouraged to engage in life-long learning, to recognize the value of Thainess and to strengthen local development. This is realized by creating the learning process, instilling community identity and reviving local wisdom. Also, multi-cultural society understanding for peaceful coexistence should be promoted along with the support for local people to collectively deliberate and determine their own pathways towards the community development based on self-reliance and social capital potentials available in the respective communities. The attention is paid to communities' knowledge management, decoding local knowledge and community model, self-management according to local context and dissemination of local wisdom for occupational skill development (National Economic and Social Development Board, 2012).

The lack of community strength is an impact of the globalization. People tend to behave in a Western manner, abandon good identity of Thais, focus on materials rather than mind and become attached to capitalism, materialism and commercialism. Thai society becomes weak in the sense of the wisdom and knowledge and inclines towards authoritarianism due to the lack of knowledge. For example, the bureaucracy represents an authoritarian organization focusing on rules and regulations and command and control. All these are not the solutions because many complicated problems in Thailand nowadays are difficult to solve (Wasi, 1998). Therefore, to enhance the community strength, it should begin from the foundation, which includes the education and human development in order that people could use such knowledge for self- and country development. These two factors fell into the role of educational institutes as defined in National Education Act B.E. 2542 (1999), Section 29: "Educational institutions in co-operation with individuals, families, communities, community organizations, local administration organizations, private persons, private organizations, professional bodies, religious institutions, enterprises, and other social institutions shall contribute to strengthening the communities by encouraging learning in the communities themselves. Thus communities will be capable of providing education and training; searching for knowledge, data, and information; and be able to benefit from local wisdom and other sources of learning for community development in keeping with their requirements and needs; and identification of ways of promoting exchanges of development experience among communities" (Office of the National Education Commission, 2003). The scholars in educational institutes should play an

active role in strengthening the communities and enhancing their self-reliance and their adaptation to the changes for the communities' happiness and livability. Besides, the creation of community networks may facilitate nationwide development in the future, for example, decoding local wisdom into publicly-available knowledge and community data sources and doing the research in collaboration with the community taking a leading role. The enhancement of community potentials may promote the responsibility of knowledge management, create the learning process and, with the technological breakthroughs, add an economic value to local wisdom. The latter may become an income-generating source for the communities. Moreover, the technology also facilitates the dissemination of knowledge and information needed for living in the modern world e.g. foreign language skills, impacts of global warming on the ecology, occupations and income earning and cyber crimes, etc. (National Economic and Social Development Board, 2007).

The community college is an alternative higher-education institute founded in accordance with the government policy. According to its founding objective, it serves as the educational institute for working-age people and entrepreneurs and one of its important missions involves the educational arrangement for local people because the access to the educational opportunity in the remote area will strengthen the communities. The curriculums and programs are tailored according to the needs, potentials and social geology of the individual communities with the diversity of occupations, economic and social conditions and business activities. The learning process in the communities is arranged for self- and community development in conformity with local way of life, which will eventually lead to better quality of life, more happiness as well as sustainability and strength of the communities. This particular research aims thus at the exploration and analysis of the roles and factors of community colleges in enhancing the community strength in Thailand.

### **Research Methodology**

This qualitative study uses the documentary research approach for synthesizing the roles of community colleges in enhancing the community strength in Thailand. Sixty documents published in 1979-2013 are analyzed by means of content analysis. They include books, national and international publications, research papers related to the enhancement of community strength, documents on the creation of collaboration with the community colleges for enhancing the community strength (e.g. self-assessment report of the community colleges, annual reports, external quality assessment reports and project assessment reports) and electronic documents-Internet-based data on the enhancement of community strength in both national and international context.

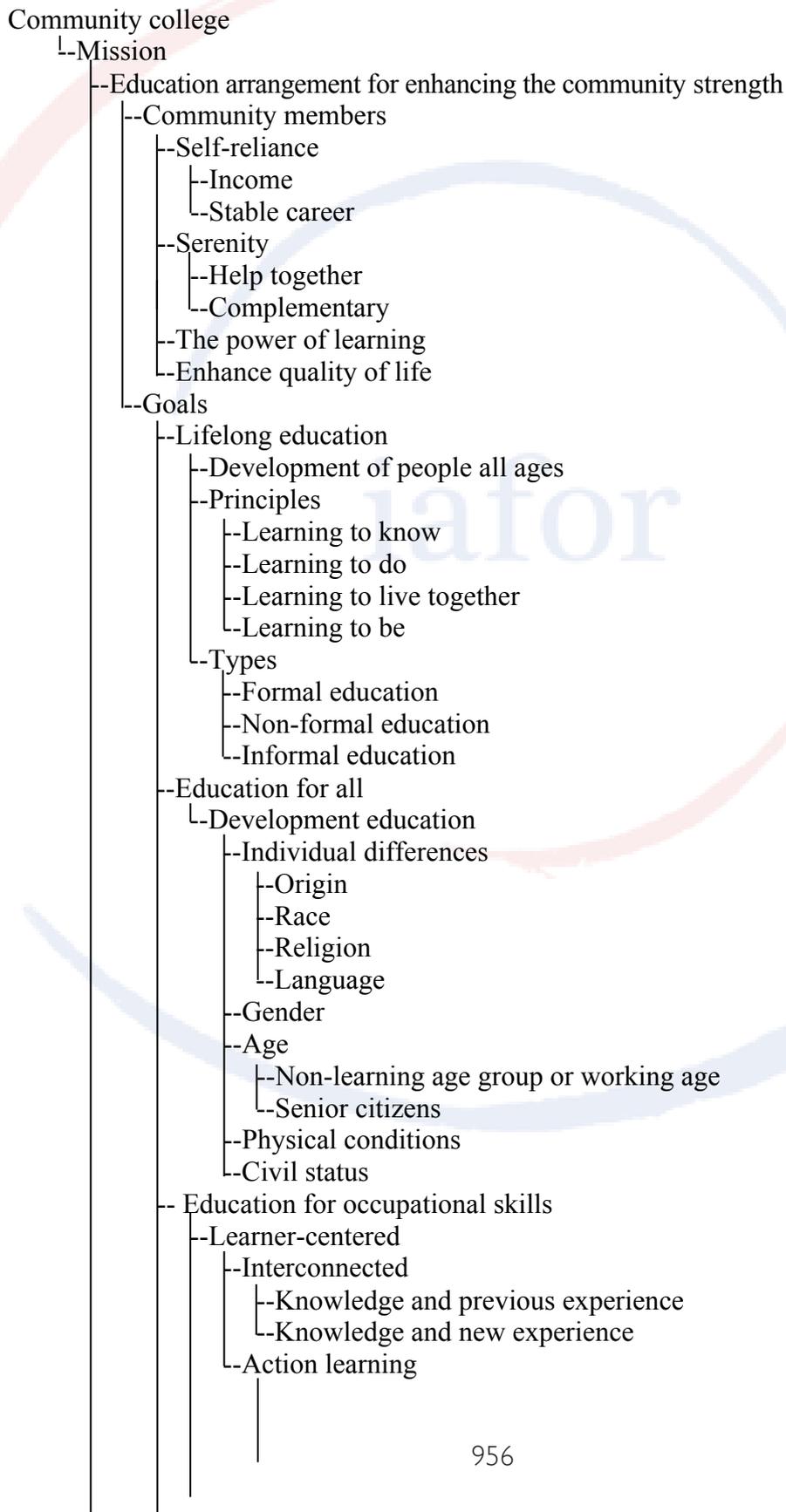
### **Research Tool**

The **Content Analysis Form** is developed in conformity with the concepts of Krippendorff (1980) and Achava-Amrung (1996) with the consent of dissertation advisors and verified by five senior experts in education. It is used in data collection with respect to the roles of community colleges in enhancing the community strength in Thailand and the relevant factors. The collected data are the reference items, issues/details and texts and events. All data are examined and summarized into a dendrogram of the roles of community colleges in enhancing the community strength.

**Research Results**

The roles of community colleges in enhancing the community strength and the relevant goals and factors are as follows:

**Figure 1: Dendrogram of the roles of community colleges in enhancing the community strength in Thailand**





**The roles of community colleges in enhancing the community strength in Thailand respond to four missions, which are**

- 1) **The Educational Arrangement for Enhancing the Community Strength:** this aims to promote self-reliance of the community members with income and career security. They enjoy the peaceful life, help each other and learn eagerly for the sake of quality of life improvement.
- 2) **The Research for Community Potentials Development:** it concerns the educational research for instructional development, the institutional research for community college administration improvement and the community-related research for career and quality of life promotion for community members.
- 3) **The Academic Services In Conformity With Community Needs:** they are in the form of training and short training programs for developing vocational skills, learning skills and life skills. They also include other academic services and the development of students' basic potentials.
- 4) **The Preservation and Inheritance of Local Arts and Culture in a Sustainable Manner:** this aims to conserve, revive, inherit and disseminate the religion, culture and local wisdom by integrated incorporating the art and culture preservation into the instructions and students' activities.

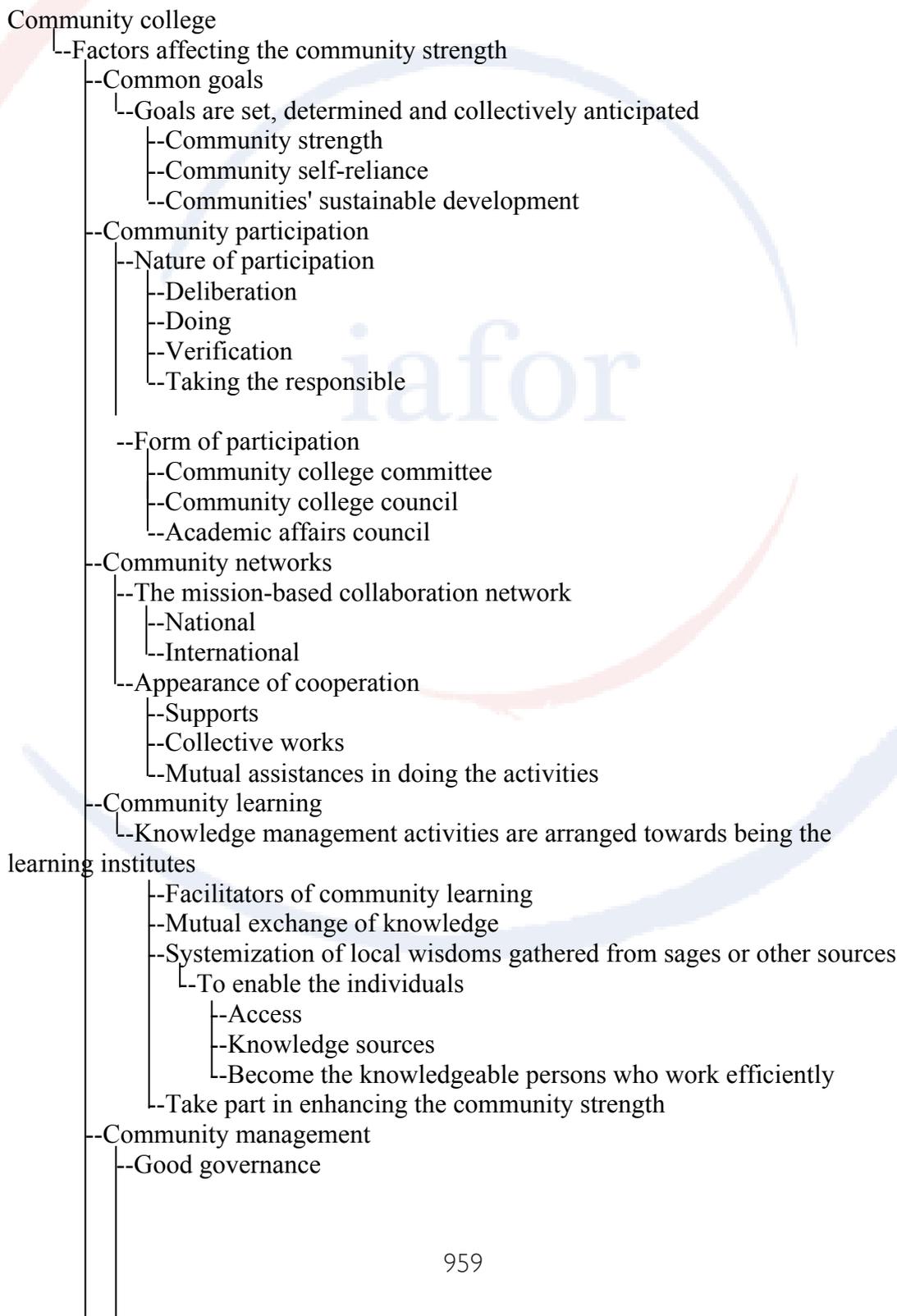
**The goals of community colleges' education arrangement for enhancing the community strength can be summarized in four important issues as follows:**

- 1) **Lifelong Education:** it focuses on continuous development of knowledge throughout the life span for the adaptation to the changes. The characteristics of life-long education are various and cover all human activities. It enables people to accept the world reality of themselves and others and to learn from childhood to old age. The important principles of live-long education are 'learn to know', 'learn to do', 'learn to be with the others' and 'learn for life'.
- 2) **Education for All:** it focuses on potentials development for non-learning age group e.g. people in working age or senior citizens. They enjoy the equal right and the access to educational opportunity without the discrimination of origin, race, religion, language, gender, age, physical conditions and civil status. The development education aims to enhance or adjust certain aspects of knowledge allowing the learners to have the equal opportunity and competency.
- 3) **Education for Occupational Skills:** it puts an emphasis on the development of knowledge, skills and required characteristics for careers in the present time and in the future. The learning is based on Competency-based curriculum with learner-centered approach. The learners' previous knowledge and experience are interconnected with the new ones, while they are also encouraged to practice the skills in the real situation. This is to develop their problem-solving skills and to integrate with the works in the other field. The competency assessment is conducted individually by means of the criterion referenced.
- 4) **Education for Sustainable Development:** it pays an attention to the development of community members' potentials in light of their knowledge, skills, attitudes and values. These factors may lead them to the pathway of sustainable development. Due to the complicated lifestyle in the present time, the knowledge and skills are indispensable for wealth creation, which enhance family wellbeing and happiness, while knowledgeable people can help the others or their communities too. Therefore, the subject contents consist of knowledge and skills required for living in the communities and concern the

current world situations. Proper contents are required for steering the communities towards the sustainable development and facilitating live-long education. In addition, the learning approach has to be diverse and flexible in conformity with the learners' needs and necessities.

**Seven factors related to the enhancement of the community strength by the community colleges in Thailand are as follows:**

**Figure 2: Dendrogram of the factors affecting the community strength by community colleges in Thailand**



- Effectiveness
- Efficiency
- Responsiveness
- Accountability
- Transparency
- Participation
- Decentralization
- Rule of Law
- Equity
- Consensus Oriented
- Leaders
  - Visionary
  - Socially responsible
  - Progressive look
  - Expression of care to their personnel
  - Welcome the community participation in the management
  - Decision-making
  - Monitoring the community colleges' performance
- Social capital
  - Human capital
    - Quality
    - Knowledgeable
    - Wise
    - Skillful
    - Attitudes
  - Institute capital
    - Family institutes
    - Educational institutes
    - Religion institutes
    - Politics institutes
    - Organizations
      - Non-government organizations (NGOs)
      - Community organizations
      - Professional associations
  - Intellectual and cultural capital
    - The value system
      - Moral
      - Discipline
      - Public consciousness
      - Thai culture
      - Local wisdom
- Community competence
  - Behavioral characteristics derived
    - Knowledge
    - Skills
    - Capabilities
    - Other characteristics
  - Creating community identity
    - Products and services from local wisdom
      - One tambon one product

- Thai traditional massage service
- Wisdom of the wise man
  - └--Herbal treatment
  - └--Organic agriculture
- Folk culture is traditionally conservative and ritualistic
  - └--Community-based culture tourism

- 1) **Common Goals:** goals are set, determined and collectively anticipated such as the goals for enhancing the community strength, self-reliance and sustainable development.
- 2) **Community Participation:** it involves the participation in the process of deliberation, doing, verification and taking the responsible in a collective manner. The participation may be in the form of community college committee, community college council and academic affairs council.
- 3) **Community Networks:** it concerns the mission-based collaboration network in both national and international context. The collaboration networks may be in the form of collective works, supports, mutual assistances in doing the activities that maximize the efficiency and effectiveness of the community colleges' missions.
- 4) **Community Learning:** the knowledge management activities are arranged towards being the learning institutes that facilitators of community learning, mutual exchange of knowledge and systemization of local wisdoms gathered from sages or other sources. This is to enable the individuals to access to knowledge sources and to become the knowledgeable persons who work efficiently. In this regard, the community colleges may take part in enhancing the community strength as well.
- 5) **Community Management:** it is the management according to the good governance principle, which includes the effectiveness, efficiency, responsiveness, accountability, transparency, participation, decentralization, Rule of Law, equity and consensus-oriented approach. The leaders are visionary and socially responsible with the progressive look and expression of care to their personnel. They welcome the community participation in the management, decision-making and monitoring the community colleges' performance in order to accelerate the community colleges' progress.
- 6) **Social Capital:** The social capitals are the sum of goodness in the society. It derives from the accumulation and broadening and from the gathering of quality persons who works for public good based on trust, relationship and culture. Meanwhile, human capital refers to the quality, knowledgeable, wise and skillful persons who possess the positive work attitudes for public good. Besides, the institute capital includes the family, educational institutes, religion, politics and organizations e.g. non-government organizations (NGOs), community organizations and professional associations. The intellectual and cultural capital is the value system such as the virtue, discipline, public consciousness, Thai culture and local wisdom.
- 7) **Community Competence:** it is the behavioral characteristics derived from the skills, knowledge, capabilities and other characteristics. It enables the communities to produce the remarkable works reflecting the uniqueness of the individual communities created by local wisdom be products and services such as One Tambon One Product (OTOP) of the sub-districts or villages and Thai traditional massage service, wisdom of the wise man such as herbal treatment

and organic agriculture, and folk culture is traditionally conservative and ritualistic such as community-based culture tourism.



**Figure 3: Factors Affecting the Community Strength**

### Conclusion

**The clear roles and goals of community colleges in enhancing the community strength towards self-reliance and sustainable development of the communities:** according to the study, the roles of community colleges in enhancing the community strength in Thailand serve four missions: the educational arrangement for enhancing the community strength, the research for the development of community potentials, the academic services in conformity with the community needs and the preservation and inheritance of local arts and culture in a sustainable manner. All these conform to the missions of higher education administration, which require higher education institutes (1) to have modern and flexible curriculum and instruction that respond to the diverse needs of the institutes and societies; to put an emphasis on learner-centered approach for enhancing the quality of learners; to focus on the learning and self-development of works in real setting on the basis of relevant research; to do an assessment and to translate assessment results into learner development; to engage in curriculum administration and to properly administrate student activities in accordance with the curriculums and instructions; (2) to do the research according to the institutes' potentials for the creation and application of the new knowledge in order that the knowledge boundary and intellectual property are broadened and connected with the economic conditions, socio-culture and environment; and to build the collaboration network with national and international higher education institutes for promoting the international competitiveness of the society and country; (3) to provide modern and proper academic services based on the individual institutes' expertise in conformity with the needs of society; and to seek the collaboration between the educational institutes and industrial sectors in both national and international context; and (4) to conserve, revive, inherit and disseminate the culture and local wisdom in order to strengthen the knowledge, understanding and pride in Thainess; and to properly adapt foreign arts and cultures for

the sake of the development of society and country (Commission on Higher Education, 2006).

Thus, one important role of the community colleges in Thailand is to accomplish these four missions: to arrange the academic and vocational instructions in conformity with the needs of society; to do the research for the academic advancement; to provide the academic services to the society; and to disseminate and instill the qualities of good citizen (Srisa-arn, 1975). These missions are common to all higher education institutes across Thailand but one important thing that differentiates the community colleges from other higher education institutes is that the former is managed by the communities and founded under the government policy announced to the National Parliament on 26 February 2002. The community colleges' roles and goals are to serve as higher education institutes offering the qualifications below Bachelor degree and to provide the educational opportunity in conformity with the community needs. They are the important mechanism for enhancing the community strength and responding to highly flexible development of economy and society through the provision of quality instructions and the participation of all concerned parties. The community colleges also play a crucial role in human resource development with a particular focus on employability and sustainable self-reliance. The educational arrangement is tailored in a diverse and flexible manner without the overlapping with other agencies. Apart from responding to the community and local needs, it aims to promote the collaboration for quality of life enhancement and meets the following demands: economic and social dimensions, building the entrepreneurship, income augmentation, community peace and tranquility.

**Strong and self-reliant communities need good community management.**

According to the exploration of the factors related to the enhancement of the community strength by the community colleges in Thailand, it is found that good community management will lead towards common goals, community participation, and collaboration networks for enhancing the community strength, community learning, social capital and community competence. Additionally, good community management based on good governance principle is an important factor in enhancing the community strength and self-reliance. This conforms to the study of Saengthong (2008) who finds that (1) the virtue: it should be instilled into the personnel and students of the community colleges including the eight noble paths, the seven principles for leading respectable life, the four principles for helpful integration, sufficiency economy philosophy, building the consciousness, instilment of the sense of responsibility, building the discipline and transparency in the community colleges, recognition of the loyalty, helping the others and having public consciousness; (2) the participation: it is the one of the advantages of the implementation of good governance principle in the community colleges, which are different from the other academic institutes. The establishment and performance of the community colleges conform not only to the educational reform principles but also to the communities' needs and readiness in engaging in the management according to the community colleges' philosophy and principles. The people can participate and have ownership of every process based on the maximization of locally-available resources. This will promote the recognition of their own value and potentials as well as create the sense of collective ownership; and (3) the transparency: the community colleges are required to value the transparency of management allowing the internal and external audit, while the budget spending is economical, cost-effective and transparent with the maximized benefits under the efficient internal audit.

## **Recommendations**

According to the research on the roles of community colleges in enhancing the community strength in Thailand, the recommendations are as follows:

### **1) Recommendations for the Community Colleges**

The community colleges should focus on the efficient management system using a participatory management approach in the form of community college council, which is responsible for steering the community colleges. Its operation must be responsible, ethical and transparent and lead the community colleges towards the organization of information and collective learning. The rules and regulations must be determined to prevent the conflict of interest in light of financial audit, rule compliance audit and risk management. With regard to the responsibilities, it is the commitment for all personnel to work in accordance with the goals and targets under the employment contracts and job descriptions and to complete their works. They are awarded for the achievement and liable for the mistakes; therefore, the performance of all positions is examined using the carrot and stick principle. Furthermore, the responsibilities of community colleges also include the follows: the overall responsibility of work towards the people's wellbeing on annual basis, the responsibility of the standards and qualities of graduates and of other missions and the liabilities for any impacts on the community and environment.

### **2) Recommendations for Future Research**

The approaches for enhancing the community strength suitable for Thailand should be examined. The community colleges are the higher education institutes offering the qualifications below Bachelor degree and provide higher education and short training programs in both academic and vocational fields for the communities where they are located. This is to promote the occupational development, quality of life and the communities' economic and social aspects. The educational arrangement is diverse and open-ended in conformity with the community needs, while the programs are flexible according to the learner's needs; demand for problem solutions and for potentials and lifestyle development and labor market requirements. The community colleges are the mechanism of the communities to achieve sustainable community development under the management and operation based on the faith and participation of individuals, agencies and organizations in those communities. The community colleges are thus the educational institutes managed by the communities in conformity with the community needs under the philosophy of "the instruction by the community and local people on the local agenda for the community development".

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## References

Achava-Amrung, P. (1996). *Development and Working with Status of Techniques in Learning and Teaching to Promote Critical Thinking*. Bangkok: Faculty of Education, Chulalongkorn University.

Commission on Higher Education. (2006). *Standard of Higher Education*. Retrieved September 1, 2013, from [www.mua.go.th/users/bhes/catalog\\_h/StdEdu/LawBse/01.pdf](http://www.mua.go.th/users/bhes/catalog_h/StdEdu/LawBse/01.pdf)

Krippendorff, K. (1980). *Content Analysis: An Introduction to its Methodology*. London: Sage.

National Economic and Social Development Board. (2007). *The Eleventh National Economic Development Plan (2007-2011)*. Bangkok: Office of the Prime Minister. Retrieved July 1, 2013, from <http://www.nesdb.go.th/Default.aspx?tabid=402>

National Economic and Social Development Board. (2012). *The Eleventh National Economic Development Plan (2012-2016)*. Bangkok: Office of the Prime Minister. Retrieved July 25, 2013, from <http://www.nesdb.go.th/Portals/0/news/plan/eng/THE%20ELEVENTH%20NATIONAL%20ECONOMIC%20AND%20SOCIAL%20DEVELOPMENT%20PLAN%282012-2016%29.pdf>

Office of the National Education Commission. (2003). *National Education Act B.E. 2542 (1999) and Amendments (Second National Education Act B.E. 2545 (2002))*. Bangkok: Pimdeekarnpim Co., Ltd.

Sangthong, S. (2008). A Study of the Principles of Good Governance in the Community College. *Tonkra Chumchon* Vol. 4(30) pp. 6-8.

Srisa-arn, V. (1975). *Principles of Higher Education*. Bangkok : Thai Watana Panich Press Co., Ltd.

Wasi, P. (1998). *The Strong Community: Thai Social Capital*. Strong Community Series No. 1. Bangkok: The Social Investment Fund in Thailand (Government Savings Bank).

*The Elements of Creative Culture in Thai Higher Education Institutions*

Runglawan Skulmalaithong, Sornnate Areesophonpichet, Pruet Siribanpitak

Chulalongkorn University, Thailand

0436

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Abstract

Creative culture is a set of shared values reflected by an organization's behavior and attitude in the joint task of the people in the organization that promote creativity and innovation. This is a key factor for higher education institutions, in the development towards a creative university. This research aims to study the current situations, and to analyze creative cultural elements in Thai higher education institutions. It is a qualitative research, using open-ended questions for in-depth interviews, and the instrument and data were analyzed by content analysis from; books, articles, documents, websites and related research, from 1989 to 2012, with a total of 53 items. There are 3 sample groups: (1) Two senior executives from Thai higher education institutions, whose vision is to be creative universities; (2) Three academics/professors in the field of creative organization/innovation organization; (3) Six executives from organizations acknowledged by the 'Thailand's most innovative company award 2011', which are divided into two groups: service company and non-service company. The results revealed 7 elements of creative culture in Thai higher education institutions: (1) Creative policies and goals; (2) Creative environment; (3) Creative organizational structure; (4) Creative supporting system; (5) Creative human resource management; (6) Creative leadership; (7) Creative behavior and attitudes of people in the institutions.

**Keywords:** Creative Culture, Creative University, Creative Organization, Organizational culture

## Introduction

Development of a new paradigm about creative economy is being swiftly expended in the current world. Governments of many countries all over the world have obtained the said aspect, in order to drive their economic systems, resulting from changed marketing and technological impulsion. Notion and culture have become key factors for production to build differences in various fields (Thailand Creative & Design Center, Office of Knowledge Management and Development, 2011). A creative economy is the concept of economic impulsion, based upon knowledge, education, creativity, and the use of intellectual property; linked with cultural foundations, social wisdom, and technology and innovation (Alongkorn Ponlabud, 2011). Creativity is an activity relating to thinking and imagination. It was built for the purposes of achieving accomplishments and gaining assets. Creativity is not only specified in art, but it is also a basis of progression in science, mathematics, technology, politics, business, and all fields of living (Ken Robison, 2011). Therefore, a creative economy is a new alternative of competition, and way above Thailand's ability of being competitive for sustainable development in the future.

The National Economic and Social Development Plan, 8<sup>th</sup> 9<sup>th</sup> and 10<sup>th</sup>, focused on the development of "humans", to be alert to globalization according to the philosophy of economic sufficiency, in order to support economic and social modification of the country, in the future. In addition, the National Economic and Social Development Plan 11<sup>th</sup> (2012-2016) has specified strategies and methods of country development, by determining "strategies of building a manufacturing base that firmly and equally promotes economic growth". It directly involves a creative economy. The key issue is to set the goal of industrial development of the country based upon the concept of creative industry. It focuses on the development of products and services which depend upon; a creative economy base, promotion of the use of creativity for value-added products and services, promotion and development of potential creative businesses; the development of an economic infrastructure and an environment of a creative economy, development of personnel to be able to respond to needs of production and service sectors, for both creative professions and entrepreneurs to create; promote studying and research, and deeply develop a creative economy and cultural capital (National Economic and Social Development Board, 2010), to promote education to prepare man power that can support a creative economy of the country, and to develop students to have creative skills. It is deemed to be a national education policy, as shown in the National Education Development Plan No. 8 (1997-2001). It aimed to specify the characteristics of seeking; knowledge, analyzing, having concepts, imagination, creativity, and the necessary ability and skills for living (Office of the National Education, 2001 and the National Education Act 1999). They greatly give importance for creativity by specifying learning, which means progressive creativity, and which also means that supplementing creativity in Section 7 obviously indicates that the integrated learning processes of; arts and culture, sports, wisdom, and science can all be fun and flexible, and for all sectors of society, including; individuals, family, community, religious institutions to all take part in arranging the teaching and learning (Section 12). The education arrangements can be divided into three models; formal education, non-formal education, and informal education (Section 15). It is believed that all these models can promote students to be able to use their full ability and develop themselves (Section 22); and that a teacher can stimulate them to build learning and creative processes for several subjects, in

terms of; science, art, culture, sport, and wisdom accordingly, including the creation of the research process to systematically develop the power of creation. Schooling is not only limited to the classroom, but also includes art galleries and museums as an important source of learning for students, as required (Section 25) (Rung Kaewdang, 2011).

Valued education toward students and society, in terms of creation, is beneficial for the development of the country in severe competition with global society at present. The tendency of educational change for practical results leads to concrete education, outcomes in the educational field, and creative output, as the new results from thought, wisdom, and the methods of such education; by changing education from a consumption system or others, into education for thinking, invention, and creation. It promotes students to have new thoughts, new ideas and creations in a society for creative outcome. They will not follow others, or consume too much, as per the previous crisis (Paitoon Sinlarat, 2006).

The impulsion of a creative economy to benefit Thai society, at a fundamental level, is essential for developing the mechanisms needed to drive the change for success. The mechanism of impulsion of a creative economy has to use the integration of five laterals; public sector, private sector, academic sector, civil society sector, and people sector. The important roles of the academic sector consist of scholars from higher institutions and independent scholars who drive the strategy of the country's development as a creative economic country, such as creating personals for; creation, modifying the schooling process for student of all fields to develop creative thinking, and the building of process for people's development, and supplementing the development of local identity into their creative products and services (Thitikorn Poonpattarachiwin, 2010). Therefore, higher education institutions should play an important role in producing creative thinking, to support the world of working in a creative economy era. Apart from researching the economic development in Thailand, in aiming to be a creative organization, or an innovative organization of a business organization, the study of creative culture in higher education institutions, the organizational culture, as reflected from the behavior and the attitudes of the workings of people in institutions, in order to promote development and creative innovation, is necessary. The institutions should specify strategies of operation, in accordance with the creative economic policies of the country. Although many higher education institutions in Thailand presently promote creative culture as the visions of the institution, such as; Bangkok University's vision is to be a creative university, Silpakorn University's vision is to be the leading creative university; then the higher education institutions still require strategies to strengthen creative culture in the institution, in order to modify and create a new organizational culture contributing to mutual learning and working creatively and sustainably. Therefore, this research focuses on studying the elements of a creative culture in the Thai higher education institutions, in order to study the need assessment and development of strategies for enhancing creative culture in Thai higher education institutions.

## Methodology

This study is a qualitative research, using content analysis of the creative culture theories from books, articles, documents, websites and related researches from 1989 to 2012, a total of 53 items; including interviews about the elements of a creative culture with the 11 executives of higher education institutions and private organizations. They consist of (1) 2 executives, such as chancellor or vice chancellor of higher education institutions in Thailand which have the vision of being creative universities; such as Silpakorn University and Bangkok University; (2) 3 scholars and experts on creative organization or innovation organization. The criterion of selection is that the person must have acknowledged academic performances in the forms of texts and books, or must be a trainer of trainings or a lecturer of seminars about creative organization or innovative organization and (3) 6 executives from creative organizations or innovative organizations. The criterion of selection is that they must come from the organizations which are winners of 'Thailand's Most Innovative Company Award 2011', jointly organized by the Faculty of Commerce and Accountancy, Chulalongkorn University, and Bangkok Business Newspaper. These organizations have passed the selection process based on the evaluation by business people in each industry together with the judgment by savants, and they are divided into 3 non-service companies and 3 service companies, a total of 6 persons from 6 companies.

Tools and data analysis for the research was content analysis, to analyze data and documents, and in-depth interviews about the elements of a creative culture. With regards to the executives of a creative university, scholars or experts of creative organizations or innovation organizations, the executives of a creative organization or innovation organization analyzed data by using content analysis (Supang Chantawanit, 2009). Data of concepts and theories of a creative culture from sources, such as; books, articles, documents, websites and related local and overseas researches, were gathered along with the data from interviews with executives of universities, scholars or experts of creative organizations and executives of creative organizations, in order to obtain the elements of a creative culture in the higher education institutions in Thailand.

## Results

The results from the research found that there are 7 important elements of a creative culture, in the higher education institutions, that link together, and they are significant factors to be creative universities as follows; (1) Creative Policies and Goals, (2) Creative Environment, (3) Creative Organizational Structure, (4) Creative Supporting System, (5) Creative Human Resource Management, (6) Creative Leadership (7) Creative Behaviors and Attitude of People in the Institutions.

**1. Creative Policies and Goals** and creative culture promotion found in the research that higher education institutions, which have visions to be creative universities, specified the word "Creative" in their philosophy or vision or mission or mutual values of the institution. They specified that the creativity of operations was the main strategy, and they target creativity with clear objectives, including; policies that promote, support, and motivate faculty teachers, personnel, and students to practice

their thinking methods, operations to develop new work in the institutions, and have the opportunity to express their creativity, such as projects of creative work contests or thinking innovation, etc.

**2. Creative Environment** of the institutions has space for appropriate operating or developing. It concludes that the maintenance of a clean and fresh environment, and beautiful landscape within the institution, develops the learning center to foster creative skills for faculty teachers, personnel, and students in the institution and additions, such as; libraries, innovation centers, art galleries, museums, student lounges, etc., supply sufficient equipment and facilities for operation, contributing to the creative thinking of people in the organization, and further additions, such as; computers, the internet, office equipment, etc., create an atmosphere within the institution which promotes creative thought, and where namely it is fun, relaxed, unhurried and not too inactive. Furthermore, the institution is a characteristic of the 'smart classroom'. Notebooks or mobile devices, such as a Tablet or Ipad, are prepared for students to support e-book or e-learning. A projector should be supported by WIFI, so that a professor can transfer data from a student's screen to a main monitor, immediately. It makes for effective discussions or presentations of opinion. There are three or four LCD screens to separate work for students, as a team. A classroom should be a relocated classroom, with tables or chairs can be arranged as per a professor's requirements; and an intelligent podium with a screen that can immediately record schooling. A professor can modify his schooling, or change his role to a facilitator or coach, and select digital contents in the form of e-Handouts (PDF, Power point, Documents), and simultaneously send to students in the classroom.

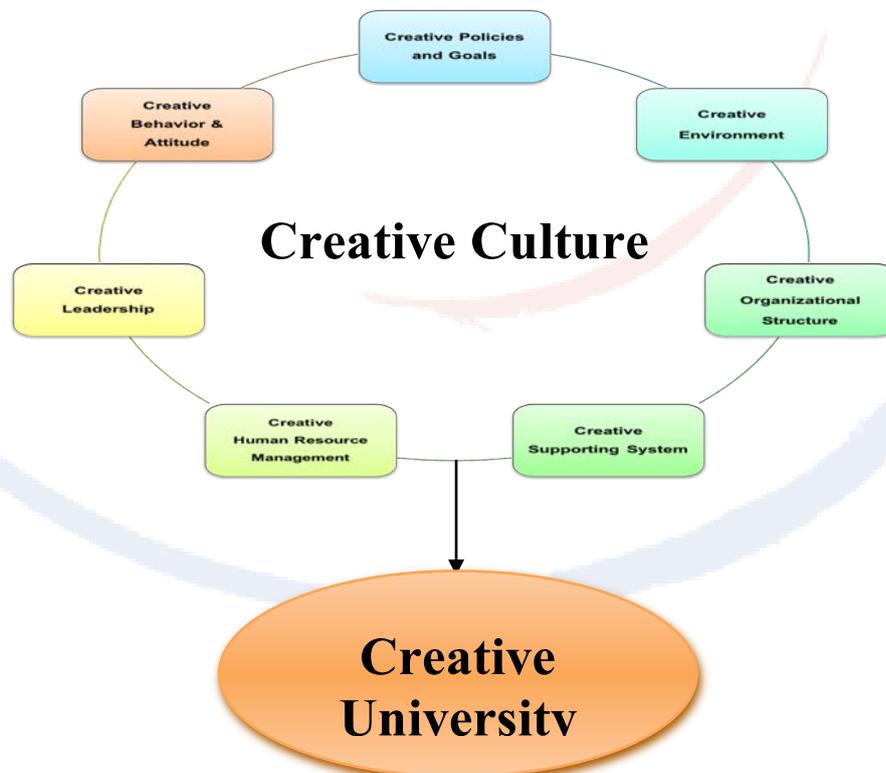
**3. Creative Organizational Structure** of the institution has the flat work structure, in the form of the board, or the project team without the structure of flat organization. Cross-function is promoted for persons who have different bases of cultures and traditions (Multiculturalism), and for personnel in the institution to have diverse perspectives and experiences, resulting in creative thought. The institution focuses on the related persons who maintain a relationship and realize the need of outside and inside stakeholders, in order to develop curriculums and schooling, within the institution. The executive promotes ongoing creative culture within the institution. Some institutions probably add another position of a chief creative officer to particularly control the creative development of the institutions.

**4. Creative Supporting System** probably applies information technology systems to timely access data, and to help operations and schooling. The computer center supports the clear internal communication system for all levels; from top to bottom and bottom to top, for communicating policies, make creative public relations in both words and conference, and through letters, notices, or the intranet system within the institution. The knowledge management system is provided to record good practice, and avoid mistakes which may occur during operation, so that personnel can access the system and study, including the supply of a 'community of practice', in order to brainstorm creative work. In addition, a risk control mechanism or risk management is built in, in order to reduce errors and concerns for creative operations and possible errors.

**5. Creative Human Resource Management** is built in, since the institution seeks for and selects; faculty teachers, personnel and students who have creational desires to study and work in the institution. For example, the selection of creative students is made by considering; their portfolios to receive the creative student scholarship, the selection of talented graduates or persons who have created work to work in the institution, and the promotion of personnel to work in an appropriate department, as a result of their aptitude and interests. The motivation of faculty teachers, personnel and students is built, creative ideas are produced, and they gain monetary, or non-monetary, rewards or incentives. Maintenance for qualified persons is conducted based upon such things as; performance evaluation, or free time to further work, and the development of creative skills for faculty teachers, personnel and students through training, teaching and activities.

**6. Creative Leadership**, the executive of the institution has visions, and promotes and participates in building a creative culture in the institution. Communication is clear to perceive visions, objectives, and strategies for personnel in the institution. The executive opens an opportunity for faculty teachers, personnel and students to express opinions with open-mindedness and flexibility of administration.

**7. Creative Behaviors and Attitudes of People in the Institutions** is for an understanding of the visions, missions, objectives and purposes, giving importance to; creative & innovative ideas, having the bravery to express creative ideas and work development, preparing for changes, both internal and external, which impact the institution, creating new work and developing better working methods, having good relationships and cooperation, trusting the institution, and participating in workings and openings for new opinions or concepts.



**Figure1: The Elements of Creative Culture in Thai Higher Education Institutions**

## Discussion

The research results found that visions and policies of the executive is a major and important factor for building a creative culture in higher education institutions in Thailand. It conforms to the concept of Fernando Trias de Bas & Philip Kotler (2011) and Jonathan Feinstein (2011), who indicated that creative culture in an organization can emerge when it is driven or promoted from the executive to lower level employees in the organization, to build creativity in all parts of workings. The executive can build an organizational culture, so a key factor who contributes to the creative culture in the organization is the executive. Furthermore, determining creativity to main strategies of the institution, and the clear objective of creation within the institution, conforms to the concept of Christiansen, JA (2000), who indicated that the organization that will develop to become a creative organization or innovative organization has to focus on creation at all levels. Thus, the organization must have a long-term strategy relating to creativity or innovation, resulting in the promotion of organizational management, in order to create new ideas and allocate resources to build strategic innovation, which focuses on innovation. It leads to innovative ideas for personnel in the organization.

**Creative Environment** in the institution is a key factor to motivate creativity for faculty teachers, personnel and students. It conforms to the concept of Sombat Kusumawwalee (2009), who indicated that an organization which is a creative and innovative organization usually consists of a creative environment, for creativity in the organization, including the concept of Tidd, Bessant & Pavitt (2001) who indicated that a creative climate will motivate creative behavior of staff. What the organization should perform is to build a creative environment, such as; the development system; organizational structure, policy and communication processes, rewards system, admiration of training policies, an appropriate performance evaluation system, promotion for entrepreneurship, and a creative culture to support new ideas of staff.

**Creative Organizational Structure** from the document found that the flat organization will result in a creative culture of working (Jonathan Feinstein, 2011; Christiansen, 2000). However, the interview results of the executives of higher education institutions, the executives of creative and innovative organizations, and scholars in Thailand, found that the environment in Thailand is not appropriate for a flat organization, especially higher education institutions; since the environment of higher education institutions and private organizations have different administrations. Practically, higher education institutions in Thailand are flat organizations, and namely the commission is appointed to work together on many projects and to support cross-functions, and coordinate with the persons who have diverse perspectives. It results in creativity in the organization, in accordance with the concept of Fernando Trias de Bas & Philip Kotler (2011), who indicated that multiculturalism and cross-functions, coordination of staff in the organization who have different bases of experience, culture, and tradition will all lead to various ideas and creativity of work.

**Creative Supporting Systems** For example, information technology systems, communication systems, knowledge management and risk management all help the teachers, personnel and students to teach, learn and operate smoothly and punctually. They also reduce fear of failure, which can happen during the operation, and they encourage the construction of a creative culture within higher education institutions. This finding is in accordance with the concept of Fernando Trias de Bas & Philip Kotler (2011), which indicated that fear is an obstacle to the formation of creativity in an organization's personnel. To solve this problem, the organization has to develop risk control mechanisms, which will help to lessen the personnel's fears of thinking and operating. Additionally, communication within the organization is another important tool for the change of organizational culture. The organization should inform all the staff about the major strategies and plans, so that the personnel can share the same goals. This idea is also in accordance with the opinion of Christiansen (2000), which specified that an organization or innovative organization should encourage and allow creative personnel to communicate and exchange new ideas. In this process, the organization should have an efficient data collection system, and should be capable of distributing and sharing information with the personnel, so that it receives essential information which is necessary for creativity and the creation of innovation, especially the exchange of ideas among creative experts from various divisions and departments.

**Creative Human Resource Management** Creative administration and personnel development is an important factor for the formation of a creative culture within higher education institutions, which is also in accordance with the idea of Christiansen (2000) and Higgins (1995), who pointed out that the employment of a creative or innovative organization will focus on the searching and hiring of creative personnel, since this type of organization requires that the employees have a wide range of experiences and backgrounds. This is because the employment of such personnel will allow the organization to have various kinds of employees, with different viewpoints, which can help to generate new ideas for the development of creative work. Also, the development of personnel within the organization is vital, in order to enhance their creativity, as this will enable the organization to follow its desired approach. Knowledge and skills are also indispensable for creativity. For this reason, training and developmental programs, as well as the indoctrination of learning habits among the personnel, must be paid attention to (Tidd, Bessant & Pavitt, 2001). Moreover, creative organizations usually nurture staff with high potential, by building an interesting environment, providing technologically advanced equipment, creating external motivation, like financial profits, and internal motivation, like challenge, independence, resources, group work, encouragement from supervisors and support from organization, as well as putting the right man on the right job (Amabile, T.M., 1996).

**Creative Leadership** Leaders of creative organizations with broad visions, open minds and flexibility in administration, play an important role in the creation of a creative culture within higher education institutions. This finding is in accordance with the opinion of Eric Bryn (2009), who indicated that one of the factors of condition and culture which encourages creativity, is the management team that is open to new ideas for the development of work, and encourages creativity in the organization, at all levels from chief executives to organizational staff (Amabile, T.M., 1996). When an organization defines its new vision, the organization's leaders

are the main keys of the changes, as they have to communicate and create clear vision recognition (Tidd, Bessant & Pavitt, 2001). Additionally, this idea is also agreed by Higgins (1995), who said that organizational leaders, who are supportive of creativity or innovation, are the ones who; define vision and strategies, in order to reach the organization's goals, accept the errors of their personnel in some operations, administer by focusing on finding solutions, consider and decide about new opinions, enhance and distribute power, to encourage the personnel to participate in the creation of innovation. Besides, the executives must have the characteristics of the leaders of changes.

**Creative Behaviors and Attitudes of People in the Institutions** According to the results of the study, the courage to think, to operate and to express creativity, as well as the readiness for change, are creative behaviors. This finding is in accordance with the research by Decha Dechawatthanapaisan (2011), which demonstrated that a dare to risk and to operate is an important basic factor which leads to the creative behaviors of an organization's personnel. In addition, such a factor also influences the relationships between the feeling of fun in working, the readiness for changes and the creative behavior. Creativity and trust in the organization are essential factors for the construction of a creative culture in an organization (Fernando Trias de Bas & Philip Kotler, 2011). Nevertheless, according to the results from the study of documents, teamwork can bring about a variety of ideas and lead to creativity (Fernando Trias de Bas & Philip Kotler, 2011; Eric Bryn, 2009; Jonathan Feinstein, 2011; John Winsor, 2006). However, the results of the study from the interviews demonstrate that, in the context of Thai society, there is still kind consideration, especially towards senior people. Thus, when working as a team, if a senior staff member, or a person who plays an important role in group decisions, has the characteristic of idea domination or has power over team members who do not dare to express opposed opinions, creativity may not take place. Furthermore, a team with too many members may bring about excessive diversity in ideas, resulting in slower operation. Therefore, there should be a further study on the appropriate number of team members for the encouragement of creativity.

#### Future Work

Future research should utilize the elements of a creative culture from this research, for the study of the needs assessment that enhance a creative culture within higher education institutions in Thailand, from the groups of Thai higher education institutions which provide creative industry courses in 15 branches, and are selected as creative academies. The result from the categorization of the needs assessment can be used for the development of strategies for enhancing creative culture in Thai higher education institutions. Such development will benefit the administration of Thai higher education institutions, which aim to become creative universities, and it will enable the operation of the institutions to be in line with the creative economic policies of the country, in the future.

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The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, serif font. The text is surrounded by two large, overlapping, semi-transparent circular arcs. The upper arc is light blue and the lower arc is light red, both curving around the central text.

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## References

- Alongkorn Ponlabud. (2011). *Thailand's Creative Economy Policy*. 31 January 2011.
- Amabile, T.M. et al. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39, 1154-84.
- Bettina Von Stamm. (2008). *Managing Innovation, Design and Creativity*. 2<sup>nd</sup> edn. John Wiley & Sons Ltd.
- Christiansen, J. A. (2000). *Building The Innovative Organization*. Hampshire: Macmillan Press.
- Cooke, R.A., Szumal, J. L. (2000). Using the Organization Culture Inventory to Understand The Operating Cultures of Organization. In N.M. Ashkanasy; C.P.M. Wilderom; and M.F. Peterson (eds.), *Handbook of Organizational Culture & Climate* pp. 147-162. Thousand Oaks: SAGE Publications, Inc.
- De Bono. E. (2007). *How to Have Creative Ideas*. UK. Vermilion.
- Decha Dechawatanapaisal. (2011). Creative behavior and work context determinants: understanding the mediating effect of risk engagement. *Chulalongkorn Business Review*, Vol.127 Jan-Mar 2011.
- Decha Dechawatanapaisal et al. (2011). Influences of workplace environment and personal attributes on creative thinking. *NIDA Development Journal*, Vol.51 No.3/2011.
- Eric Bryn , (2009). *Creating a Culture of Creativity and Innovation*. Retrieved Feb. 8, 2012 from: <http://www.realestaterelativity.com/blog/2009/01/15/creating-a-culture-of-creativity-and-innovation>.
- Fernando Trias de Bas & Philip Kotler. (2011). *Winning at Innovation*. Plagrave Macmillan.
- Florida, R., Gates, G., Knudsen, B. & Stolarick, K. (2006). *The University and the Creative Economy*. Heinz Endowments, December.
- Gerald D. Groves. (2012). *Creating Sustainable Change in Education: An Inside-Out Look at Nation Building, Regionalization and Globalization*. Copy.
- Gareth Morgan. (1989). *Creative Organization Theory*. California: SAGE Publications, Inc.
- John Winsor. (2006). *Spark*. Dearborn publishing.
- Jonathan Feinstein. (2011). *Creative Culture Attribute*. Retrieved Feb. 8, 2012 from: <http://www.realestaterelativity.com/blog/2009/01/15/creating-a-culture-of-creativity-and-innovation>.
- Ken Robison. (2011). *All Our Future: Creative, Culture and Education*. Creative Education Meeting Report. page 9-12. 16 January 2011 at Le Meriden Bangkok Hotel.
- National Education Act B.E.2542 (1999) and Amendments (Second National Education Act .B.E. 2545 (2002). Office of the National Education Commission, Office of the Prime Minister, Thailand.
- National Economic and Social Development Board. (2007). *The Eleventh National Economic Development Plan (2007-2011)*. Bangkok: Office of the Prime Minister. Retrieved Jul. 1, 2013. from: <http://www.nesdb.go.th/Default.aspx?tabid=402>.

- National Economic and Social Development Board. (2012). *The Eleventh National Economic Development Plan (2012-2016)*. Bangkok: Office of the Prime Minister. Retrieved Jul. 25, 2013. from: <http://www.nesdb.go.th/Portals/0/news/plan/eng/THE%20ELEVENTH%20NATIONAL%20ECONOMIC%20AND%20SOCIAL%20DEVELOPMENT%20PLAN%282012-2016%29.pdf>.
- Paitoon Sinlarat. (2006). *Creative and Productive Higher Education*. Bangkok: Higher Education Department, Chulalongkorn University.
- Paul Bate. (1994). *Strategies for Cultural Change*. Oxford: Butterworth Heinemann.
- Paul TJ James. (2010). *The Creative University in the Thai Creative Economy*. Bangkok University.
- RanaZeine, Patrick Blessinger, Michael Hamlet. (2011). *Changing Organizational Culture in Higher Education*. Retrieved Dec. 29,2010. from: <http://hetl.org/.../Changing-Organizational-Culture-in-Higher-Education>.
- Rung Kaewdang. (2011). *Education Reform for Creative Education: Thailand*. page 5-6.  
16 January 2011 at Le Meridien Bangkok Hotel.
- Sombat Kusumawalee (2009). *Personal and Organization Development in Creative Economy*. copy.
- Supang Chantawanit. (2009). *Qualitative Research*. 17 edn. Bangkok: Chulalongkorn University Press.
- Tidd, Bessant, & Pavitt. (2001). *Managing Innovation Integrating Technological and Organization Change*. Chichester: John Willey & Sons.
- Tony Schwartz. (2010). *Six Secrets to Creating a Culture of Innovation*. Retrieved Feb. 8, 2012. from: <http://blogs.hbr.org/schwartz/2010/08/six-secrets-to-creating-a-cult.html>.
- Torrance, E.P. (1974). *Torrance Tests of Creative Thinking*. Earth City, Missouri: Scholastic Testing Service, Inc.

*A Case on Learning about 'You Tubing' and 'Face booking' for Learning*

Michelle Mei Ling Yeo

Monash University, Australia

0439

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## Abstract

This paper aims to better understand the experiences of the youth with the tapping of social media like YouTube videos and Facebook for learning. The youth of the 21st century has better autonomy of time, choice of what to learn, how to learn and when to learn with such large depositories of information and data around them with the leveraging of YouTube videos and the Facebook application. This paper is also interested in finding out the problems and issues that the students have experienced with the leveraging of the YouTube videos and the Facebook applications for learning. What must be considered here though is not the shifting ground in relation to definitional aspects but the exploration of the media and social networking applications within education and pedagogic possibilities. Using a qualitative method of semi-structured interviews with a case study of keen participants of youth, whose age ranges from 18 to early 20s, from a particular polytechnic in Singapore, this papers seeks to explore and understand the experiences and the issues and difficulties as experienced by the youth with the leveraging of YouTube and Facebook for learning. From the data, the youth indicated they could learn informally about 'knowledge of the world' and on 'life's experiences' using the YouTube videos and from the network of friends with Facebook. However, the youth also experienced the problems of distractions and the abundance of unreliable information, thus rendering the use of the social media and networking applications as unsuitable pedagogical tools for formal learning. The role of the educators would be to tap on these current and socially collaborative tools to facilitate students' learning that is based on self-discovery. There can be learning beyond the boundaries of the classroom and on lifelong learning at any time and at any place with YouTube videos and Facebook.

**Keywords:** YouTube, Facebook, Youth Culture, Social-Media, Networking and Informal Learning

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## **Introduction**

Using a qualitative method of semi-structured interviews with keen participants of youth, whose age ranges from 18 to early 20s, from a particular polytechnic and a University in Singapore, this paper seeks to explore and understand the learning experiences of youth with the leveraging of media and social networking applications like YouTube and Facebook for learning. Oblinger (2006) points out that the characteristics of the 21<sup>st</sup> century youth are technologically inclined and have a high preference for active and participatory experiences of both face-to-face as well as online learning. This high preference for a participatory experience via the social media and networking applications does not mean that the youth need to be online synchronously or be together physically. Rather, the youth or the students can be discussing, communicating and sharing information and knowledge synchronously or asynchronously using the various social media and networking applications like YouTube and Facebook at any time and at any place as long as there is Internet connectivity.

O'Hanlon (2007) suggests that the implementation of social media technologies, specifically social networking, is what students are using every day and it is this social setting that breeds the students' intrinsic and extrinsic motivation to use technologies for learning. Simonson et al. (2000) describe online learning and social networking tools as more convenient than the traditional classroom learning (the use of textbooks for learning) because of the availability of online materials and 24 hour access to learning.

## **YouTube Videos and Facebook Connection**

### *Video Sharing Sites - YouTube*

YouTube is increasingly being used by educators as a pedagogic resource for many interesting newsworthy events to teach students especially within an 'English as a Second Language' course, (Duffy, 2008). The students watched the videos as a resource towards learning the essentials of the English Language and the students get enjoyment from watching the videos. There was positive students' feedback about the learning of English as a Second language through the YouTube videos (Duffy, 2008). To Duffy (2008), videos can be a powerful educational and motivational tool but the effectiveness of YouTube is not in itself but in how it is used towards achieving learning goals and objectives before it can be seen as an effective learning tool. Effective instructional video is student-centred and can be used for student pedagogy with the video as a vehicle for students' discovery of knowledge and for instructional videos on an online space to share student authored content (Duffy, 2008). Today's youth have much experience with video and photo-sharing media such as YouTube (Mullen & Wedwick, 2008). This video-sharing media can be incorporated into a constructivist classroom as learning tools as the youth; the students are actively creating their own learning experiences through viewing and creating videos and educators can use this as a tool for engaging the youth in meaningful learning experiences (Mullen & Wedwick, 2008).

With the discourse on the use of YouTube videos for learning now and in the future, educators may want to consider how to engage students with YouTube to teach students to think critically about their potential uses of YouTube videos for collaborative and meaningful social learning experiences with one another.

### *Social Networking Application – Facebook*

Besides the use of YouTube videos for collaborative students' learning experiences, Facebook also shares many of the qualities of a good education technology in its reflective element, allowing for peer feedback and a fit for the social context of learning. The conversational and collaborative characteristics of Facebook are also "collaborative and encourage active participatory role for users" (Maloney 2007, p.26). According to Stutzman (2005), students use Facebook to 'hang out' with friends, learn about each other or simply as a directory to other websites and knowledge. Students often use Facebook for social purposes to develop social networking skills with their peers at school and from previous institutions they have attended. Students' use of Facebook is profoundly informal and often at a tangent with the official learning aims of educators (Stutzman, 2005). It seems that the formal use of Facebook as a tool for rigorous academic study is fairly rare, but the use of Facebook as a tool for teaching and learning has been on the rise recently.

According to Selwyn (2009), Facebook is very useful as a tool for negotiating a social and community identity, such as student identity as a university student. Selwyn (2009) conducted an extensive survey of the contents of Facebook postings by 909 undergraduate students in the U.K and found that the students would use Facebook particularly to negotiate their identity as a university student by sharing feelings and perceptions about the institution and teaching staff. The study has not been able to extensively show that Facebook is fully welcomed as a good teaching and learning pedagogy. There seems to be a gap in the literature about the use of YouTube and Facebook for learning among the youth (Singapore Polytechnic, 2009; Selwyn, 2009). Thus, this paper aims to seek a better understanding of the youth's learning experiences with YouTube videos and the Facebook connections as well as the problems and difficulties associated with the leveraging of these social media applications for the students' learning.

### **Discussions – Social Connectivity with Friends and Informal Learning**

The youth, the students liked to be connected with one another using Facebook to make friends and to learn from one another. They also liked to use YouTube videos for informal learning, the learning of information and knowledge that extends beyond the knowledge learnt in school and from the textbook. They felt that with the rich connectivity with many people and friends online, "that learning ... would be an enriching experience that no textbooks could provide" (see Appendix I).

To the students, informal learning via YouTube videos and Facebook connections are the learning about "knowledge of the world" and "life's experiences" from the YouTube videos (see Appendix I). This is parallel to the literature that the YouTube videos can be powerful educational and motivational tool for the students to partake in the creation and sharing of videos for self-discovery and for knowledge through active participation of the social media (Duffy, 2008; Mullen & Wedwick, 2008).

The Internet and the social media networking applications were not only just a haven from the outside world of education but were seen more as a network of informal connections that crossed the boundaries of learning, work and leisure (see Appendix I). The students were tapping into the interactive media and the social networking tool for informal socialization with peers and the knowledge community, especially with Facebook for communication, information gathering and content sharing. This knowledge was identified by the students as informal learning (see Appendix I). This echoes some of the literature of the informal use of Facebook (Selwyn, 2009), whereby the students' main use of Facebook was to maintain relationships with existing known friends, and their reported use of Facebook for entertainment purposes, to vent their emotions and to 'hang out' with their friends and for social purposes (Stutzman, 2005).

#### *Discussions - Problems of Distractions and Unreliable Information*

The students were distracted with the myriad of online games while using the YouTube videos and Facebook applications for learning. Distraction can also be in the form of 'invites' which is a feature of the various social networking activities, like Facebook. The students thus identified that the problems of these distractions actually 'take away' their learning time when they were using the YouTube videos and the Facebook applications (see Appendix I). The students did not think positively of using the YouTube videos and Facebook applications for formal learning related to academic study due to the open nature and connectivity of the applications with so many different people (see Appendix I).

In fact, the students did not fully credit the postings and information as reliable and credible. Together with the abundance of information and knowledge, the students could be exposed to the danger of being mis-informed by the open and collaborative nature of sharing and postings from anyone within or out of the social connections.

The students voiced major concerns over the legitimacy of reliable information from the YouTube videos and the Facebook postings for schoolwork or for educational purposes (see Appendix I). With the abundance of some of the YouTube videos and Facebook videos as "unpleasant", "uncouth" and "not educational", the students also suggested that the videos and the Facebook postings be taken with "a pinch of salt" (see Appendix I).

Apparently, the students did not think positively towards using YouTube and Facebook for formal learning academically, and instead, they deferred to the teachers with the formal learning of schoolwork preferring "face-to-face" sessions with the teachers if I were to encounter problems and difficulties with learning" (see Appendix I).

But, on the contrary, besides the "face-to-face" preference to answer to their questions toward learning, the students expressed an interest for their teachers to be leveraging on the social media and networking applications "as good and engaging teaching aids" (see Appendix I). To the students, they deferred to the teachers for proper

guidance with YouTube videos and Facebook postings “when tutors suggest and recommend the websites and links on Facebook for learning, then it is a good learning tool for students (see Appendix I).

Hence, it is essential and vital for educators to be in tune with the changes of the technically driven 21st century society, necessitating the tapping of these current and socially collaborative tools to facilitate and to guide students’ learning towards students’ learning beyond the boundaries of the classroom and lifelong learning at any time.

### **Conclusion and Recommendation**

From the data the students indicated that they liked the active participatory experiences of using the social networking applications, like Facebook for making friends, to learn about information and knowledge informally with the network of friends (See Appendix I). From the YouTube videos and the Facebook postings and connections, they could learn about information and knowledge pertaining to every day activities which extends beyond the boundaries of the classroom and the textbook. But, it is also due to the large amount of information and the abundance of videos and knowledge that could lead to an information overload and students being mis-informed instead. With the various social activities and the myriad of games online; the distractions of which would take away the students’ learning time (see Appendix I).

Although there are the positive benefits of leveraging on learning technologies for learning educators cannot take for granted and assume that the use of social media and networking applications will naturally benefit the students (see Selwyn, 2009). Distractions, from the social activities and games and the unreliable and not credible information as well as being mis-informed are some of the issues with using the social media and networking applications for learning. Thus, the social media and networking applications of YouTube and Facebook are suitable and effective tools for the social reasons of networking, making friends, making new friends, and for students to be learning informally.

Informal learning, in this context, is usually highly self-directed for additional or future learning (NSF, 2006). There is learning that extends beyond the school compound and the school textbook or curriculum. There is learning that is beyond the basics of arithmetic, and languages and that based on academic content (Richardson, 2008). It also points to the educators’ role in the students’ life which is changing, from that of managing school content to connecting students in new ways to other learners, resources, and expertise (Richardson, 2008).

Hence, the role of the educator is no longer to passively feed students information and knowledge but to be a facilitator to guide students towards a self-directed and ‘self-discovery’ learning process with an authentic context of the real world in society with the participatory culture of social media and networking applications (Richardson, 2008).

It is inevitable that social media and networking applications are becoming a part of everyday living and learning. With the leveraging of these social media and networking applications for learning, the students are given the autonomy to be owners of their own learning where there are online spaces and opportunities created that allow the students to collectively share, discuss, and create their own representations of information and knowledge with one another in the technically driven society of the 21<sup>st</sup> century (see Appendix I).

The world we live in today is very different than the world twenty to thirty years ago. The 21<sup>st</sup> century is a media saturated, technologically dependent, and globally connected world! Most importantly, the students may need to be reminded on how to leverage on these technological social media networking applications (which some may already know) to learn from them, gain information, reflect on this and validate that information with one another to obtain knowledge and understanding to be more self-directed learners.

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## References

- Duffy, P. (2008). Engaging the YouTube Google-Eyed Generation: Strategies for Using Web 2.0 in Teaching and Learning. *The Electronic Journal of e-learning* 6 (2), 119-130.
- Maloney, E. J. (2007). What Web 2.0 Can Teach Us about Learning. *Chronicle of Higher Education* 53, (18).
- Mullen & Wedwick, R. L. (2008). Avoiding the Digital Abyss: Getting started in the classroom with YouTube, Digital Stories and Blogs. *Clearing house: A Journal of Educational Strategies, Issues and Ideas* 82, (2), 66-69.
- Richardson, W. (2008). *World without walls: Learning well with others: How to teach when learning is everywhere*. Retrieved from Edutopia : <http://www.edutopia.org/collaboration-age-technology-will-richardson>
- Oblinger D. J. (2006). Learning Spaces: *Space as a Change Agent*. Educause. Retrieved May 2013: <http://net.educause.edu/ir/library/pdf/PUB7102a.pdf>
- O'Hanlon, C. (2007.). *If you can't beat\_em\_join\_em*. Retrieved Feb 20, 2011, from T.H.E Journal: <http://www.thejournal.com/articles/21082>
- NSF, N. S. (2006). *Informal science education program solicitation (NSF 06-520)*. Retrieved Dec 2012, from [www.nsf.gov/pubs/2006/nsf06520.htm](http://www.nsf.gov/pubs/2006/nsf06520.htm)
- Selwyn, N. (2009). Faceworking: Exploring students' education-related use of Facebook. *Learning, Media and Technology* 34(2), 157-174.
- Simonson, S. A. (2000). *Teaching and Learning at a Distance: Foundations of Distance Education*. Upper Saddle River, NJ: Merrill.
- Singapore Polytechnic. (2009). *Singapore youth and social media*. Singapore: Singapore.
- Stutzman, F. (2005). *Our lives, our Facebooks*. Retrieved from Our lives, our Facebooks: [[http://www.ibiblio.org/fred/pubs/stutzman\\_pub6.pdf](http://www.ibiblio.org/fred/pubs/stutzman_pub6.pdf)]

*Appendix I: Samples of Interviews Transcripts*

*Like more sharing and communication between all for knowledge of the world than just information from the textbooks and curriculum....*

(E3.m4a, 35:01sec)

*Learning can take place at anytime and anyplace on Facebook.*

35:03sec)

(E3.m4a,

*I like the social interactive aspect of sharing and openly discussing interesting topics on Facebook and preparing myself for the real working world. Learning using Facebook postings would be an enriching experience that no textbooks could provide.*

(J3.m4a, 16:21sec)

*I learn much more from Facebook as more people are interlinked and connected.*

16:22sec)

(J3.m4a,

*I would sometimes learn life's experiences through watching the YouTube and Facebook videos.*

17:29sec)

(D2.m4a,

*It will be a good learning tool if the YouTube videos are well recommended by classmates, friends and teachers .... the videos can be used as good and engaging teaching aids.*

29:00sec)

(E2.m4a,

*When tutors suggest and recommend the websites and links on Facebook for learning, then it is a good learning tool for students.*

(D3.m4a, 19:11sec)

*I would rather prefer face-to-face sessions with the teachers if I were to encounter problems and difficulties with learning.*

(E4.m4a, 38:02sec)

*Facebook is not considered as a formal learning tool, as friends or classmates would not take the posts too seriously as information meant for learning.*

(P2.m4a, 38:51sec)

*Facebook is not reliable and credible enough to be used as a point of reference for academic purposes.*

(P2.m4a, 38:47sec)

*Facebook is used more appropriately for social interaction and not for educational purposes of learning for students.*

(D2.m4a, 19:07sec)

*Distractions such as games and videos on both Facebook and YouTube would take away most of the time meant for doing research and for reading of information and knowledge.*

(P2.m4a, 39:58sec)

*Many of my friends will get invited to play the games on Facebook so, this distraction actually take away learning time.*

(J4.m4a, 21:04sec)

*Take it with a pinch of salt; I feel that the YouTube videos are unpleasant at times and too uncouth for some young viewers... there are not many educational videos worth watching.*

(J4.m4a, 17:33sec)

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*A Study on Establish Decision Tree of Teacher Ethic Reasoning in Taiwan*

Huang, Jia Li

National Taiwan Normal University, Taiwan

0458

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### **Background and Objectives**

In 1994, a new teacher education policy was initiated that turned the model of teacher education in Taiwan from a labor market driven by planning and centralized control to one that guided by market principle. The number of Teacher Education Institutions (or Center for Teacher Education) increased from 12(nine teacher colleges and three normal universities) to 78 within a short period of time. The reformed was implemented to increase the quality and independence of teachers through competition and diversified sources of supply. After 16 years, teacher education has become even more challenging for policy makers due to the oversupply of teacher candidates, problematic teacher quality, and decreasing prestige to teacher education policy.

Due to saving the teacher prestige, teacher professional ethical as one of professional trait theory should be taught during pre-service teacher education. Actually, the teacher professional ethical is the null curriculum in teacher education program in Taiwan. Especially, the teaching practice is complicate to deal with in uncertainly context that depends on teachers' deliberation (Cohen, Raudenbush, & Ball, 2003; Danielson, 2007; Day, 1999; Labaree, 2000). Teacher has to carry out the students learning right and comply with teaching professional ethic to conduct appropriate decision (Goodlad, 1999; Pring, 2004; Soder, 1990). But those abilities of ethical reasoning and professional moral won't provide during teacher education curriculum. The training of ethical reasoning taking factors into consideration such as promoting student learning, increasing the willing to learning participation, containing the learning environments, and corresponding the needs of students' cognition and emotion still lack in teaching practicum in Taiwan. In order to constructing the content of teacher ethical reasoning in teacher education curriculum, this study aims to gather the information of ethical reasoning from student teachers and the experience teachers in dealing with the dilemmas of teaching practice by case study and to establish the decision tree on teacher ethical reasoning in the case of Taiwan's teachers. Specifically, this study aims to

1. Gather the ethical reasoning case of student teachers and experience teacher in dealing with dilemma in teaching practice.
2. Analyze the differences of ethical reasoning from student teachers and experience teacher.
3. Establish decision tree of teachers' ethical reasoning from the case study.

### **Theoretical Framework**

“Moral reasoning” such as Rawls(1970) definition is individual taking the human welfare or social well-being of value to apply to the external evaluation of situational reasoning and therefore, the reasoning is a process in which personal information processed to show the personal judgment in external performance. The ethical reasoning is substituted with moral reasoning in this study for focusing on the relationship of self with others.

The ethical judgment was not only a personal encounter special situation when used to determine with the ability to the right and wrong actions (Chang, 2000), but also teachers face ethical dilemmas for reflection and decision-making. The ethical judgment is the result of ethical reasoning process. The reasoning process will determine the results in the actual context including what happened, taking option action, action what happens next, the individual will make decision according what response during the ongoing situation. This cycle of this process was called as “practical reasoning” (Husu & Tirri, 2003). The problem in the situation has Reid (1979, pp. 188-189) requires that the answers is uncertain, relative to the relationship with past experience, unanticipated results, and change to another choice on the different result. This individual reasoning is a model of hypothetical-deductive cognition. Just like Klabbers (2006) made up the hypothetical-deductive mode of operation, the cognition model can develop into one kind of tree state, the practical reasoning or ethical reasoning can be prompted into interact via digital situational story mode to practice to strengthen teachers’ ethical reasoning ability. Therefore, this study is to find out the teacher ethical reasoning from teaching practice dilemma and to establish the decision tree for cultivating student teachers’ ethical reasoning ability.

### **Data and Methods**

This study aims to collect the evidence and information about the rule or principle of teacher ethical reasoning. The case study is used to gauge the responses from student teachers and experienced teacher on the dilemma of teaching practice. According the information from cases, this study analyzes the difference of student teachers and experienced teachers on ethical reasoning and to identify the factors of the ethical reasoning, and the types of teacher ethical reasoning. Finally, this study establishes the decision tree of teacher ethical reasoning on the evidence gauging from the methods mentioned as the above.

### **Temporally Results**

From the same dilemma of teaching practice, the student teacher’s ethical reasoning is lack the experience to propose multiple possibilities from the context teaching practice. Comparing to students teacher, experience teacher can make more assumptions from the context and students responses. This temporary discovery provides the importance of the teaching practice in pre-service teacher education to cultivate moral sensitivity. Meanwhile experience teacher makes ethical decision due to the parent’s responses more than the needs from students just as the study results made by Colnerud (1997) and van Manen (1995). The study result shows that the first principal of teachers taking into consideration in dealing with ethical dilemmas is in adults than students. All the details will be discussed and described in full paper.

**Scientific or Scholarly Significance of the Work**

The results of this study making decision tree can be used in teacher education curriculum to cultivate professional ethical reasoning. The decision tree can also transform into Digital Contextual Learning (DCL) model or web-based Digital Contextual Learning (WDCL) model. The blending learn of DCL and WDCL, the effects of upgrading students' ethical reasoning ability, and the elements of cultivating ethical reasoning ability can be tested in the future. Findings can be used for theoretical discussion and practical suggestion on reforming teacher education curriculum and modifying teaching practicum.

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## References

- Cohen, D. K., Raudenbush, S., & Ball, D. (2003). *Resources, instruction, and research. Educational Evaluation and Policy Analysis, 25(2)*, 1-24.
- Colnerud, G. (1997). Ethical conflicts in teaching. *Teaching and Teacher Education, 13(6)*, 627-635.
- Danielson, C. (2007). *Enhancing professional practice: A framework for teaching (2<sup>nd</sup> ed.)*. Alexandria, VA: the Association for Supervision and Curriculum.
- Day, C. (1999). *Developing teachers: The challenges of lifelong learning*. London, UK: Falmer Press.
- Goodlad, J. I. (1990). The occupation of teaching in schools. In J. I. Goodlad, R. Soder, & K. A. Sirotnik (eds.), *The moral dimension of teaching* (pp.3-34). San Francisco, CA: Jossey-Bass.
- Husu, J. & Tirri, K. (2003). A case study approach to study one teacher's moral reflection. *Teaching and Teacher Education, 19(3)*, 345-357.
- Kennedy, M. M. (2006). From teacher quality to quality teaching. *Educational Leadership, 63(6)*, 14-19.
- Klabbers, J. H. G. (2006). Artifact assessment vs. theory testing. *Journal Simulation & Gaming, 37(2)*, 148-154.
- Labaree, D. F. (2000). On the nature of teaching and teacher education: Difficult practices that look easy. *Journal of Teacher Education, 51(3)*, 228-233.
- Pring, P. (2004). Teaching and the good teacher. In F. Inglis (Ed.), *Education and the good society* (pp. 75-87). London, UK: Palgrave Macmillan.
- Reid, W. (1979). Practical reasoning and curriculum theory: In search of a new paradigm. *Curriculum Inquiry, 9(3)*, 187-207.
- Soder R. (1990). The rhetoric of teacher professionalization. In J. I. Goodlad, R. Soder, & K. A. Sirotnik (eds.), *The moral dimension of teaching* (pp.35-86). San Francisco, CA: Jossey-Bass.
- Van Manen, M. (1995). On the epistemology of reflective practice. *Teachers and Teaching: Theory and Practice, 1(1)*, 33-50.

*Comparative Analysis of Thinking Process between Designer and Engineer Based on Case Application of Multi-Space Design Method*

Shuji Takano\*<sup>1</sup>, Koichiro Sato\*<sup>2</sup>, Takeo Kato\*<sup>3</sup>, Yoshiyuki Matsuoka\*<sup>2</sup>

\*<sup>1</sup>Shonan Institute of Technology, Japan, \*<sup>2</sup>Keio University, Japan,  
\*<sup>3</sup>Tokai University, Japan

0459

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Abstract

This paper describes each feature of thinking process for a designer and an engineer based on comparative analysis applying Multi-space Design method (M method) to the bench design. Additionally, it is indicated that a utility of M method for an unrestricted idea generation and precise design thinking.

M Method is a design method that combines idea generation and analysis methods based on the Multi-space Design Model, which is a framework to arrange elements used in design. Using the M method, user can derive precise design thinking. In addition, this method aims to correspond to various usages. In the past study, the usage for precise design thinking was confirmed thorough case application by a professional designer.

As the result of case application in this research, it was confirmed that a feature of designer's thinking process: multiple and diverse idea deployment in order to derive diverse solutions by obtaining hints from various viewpoints based on active extraction of design elements. Moreover, an engineer's thinking process has a following feature: idea deployment by logical and top-down thinking using classification and arrangement based on extraction of design elements along the lines of a theme.

Thus, from the comparative analysis of case applications, it is indicated that each feature of thinking process by different users. As the result, the usage of the unrestricted idea generation and precise design thinking is confirmed, and it is suggested that the design method could perform precise design thinking corresponding to diverse users.

**Keywords:** Multi-space Design Method; Thinking process; Designer and Engineer; Multi-space Design Model; Design Theory and Methodology

## **1. Introduction**

As science and technology have developed during the 20th century, artifacts (objects) have become more functional. To adapt to these advances, design and industrial engineering fields have been segmented and specialized. In addition, the number of elements and conditions that must be considered to solve Industrial Design and Engineering Design issues has become enormous because modern artifacts have become large-scale and more complex, and user's sense of values has diversified. Under these conditions, it is difficult to obtain innovative design solutions while accounting for elements in a complicated circumstance. Thus, new artifact creation methods are needed. In the conventional research, the Multi-space Design Method (M method) is proposed as a design method to address the aforementioned issues. This design method combines idea generation and analysis methods based on the Multi-space Design Model (M model), which is a framework to arrange elements used in design. Additionally, in the conventional M method, individual designers propose an object's design. In practice, various members, including designers and engineers, are involved in product development, and the circumstances that employ a design method have diversified. Therefore, the design method itself should accommodate its usage environment. When applying a design method, there are many perspectives to consider, such as those of the users, the object to be designed, and the design process. This study focuses on the viewpoint of diverse users. We extracted the requirements to adapt to various, and proposed the M method that satisfies these requirements.

In the M method, the usefulness for precise design thinking and derivation of a new solution was confirmed through case application conducted by a proposer who is a professional designer. However the usefulness of this method for different users is not verified. The purpose of this research is to comparatively analyze case applications of M method by two different experienced users, a professional designer and a professional engineer, and it is indicated that each feature of thinking process.

## **2. Research Method**

### **2.1. M model**

The M model is a design theory that can comprehensively acknowledge all kinds of design procedure. The M model is shown figure 1. The M model is composed of s thinking space and knowledge space, which enables logical reasoning of design practices through the design process. When designing, elements of the objects are broken down into the thinking space, and from the relation of those elements, a novel design will be extracted.

First, the thinking space comprises 4 spaces: the value space, meaning space, state space, and the attribute space. The value space consists of various values such as social value, cultural value, and personal value. Next, the meaning value consists of elements relating to the objects functionality and image. Thirdly, the state space consists of the state of the object, which can be described by the relation of the object and its circumstance. Finally, the attribute space holds elements that express the objects traits that are not effected by its circumstance.

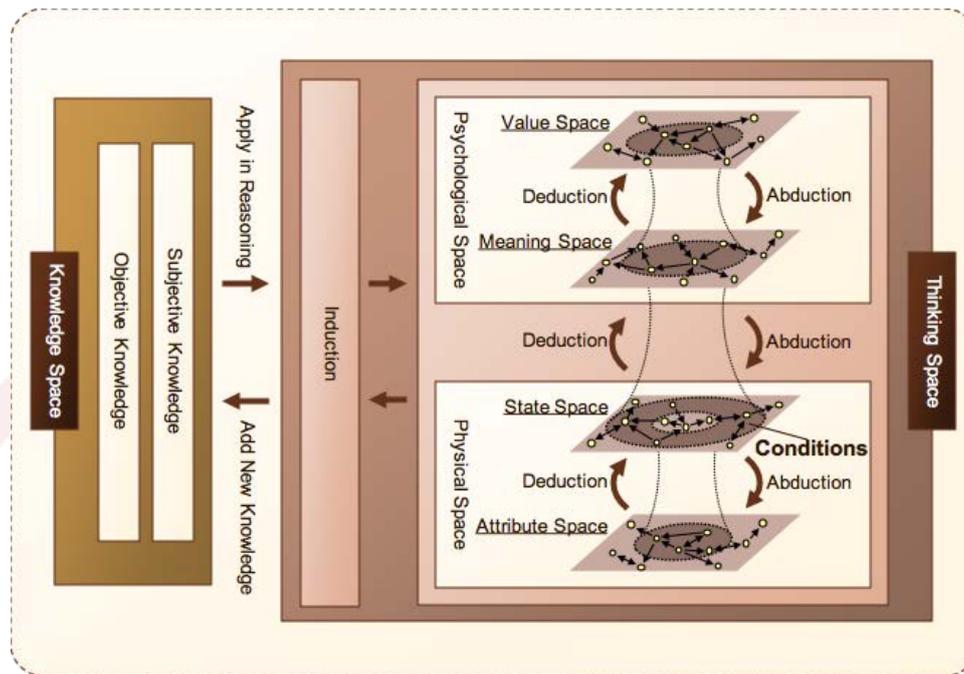


Figure 1 Multi-space Design Model (M model)

The value space and meaning space exist in the psychological space, and the state space and the attribute space exist in the physical space. In addition to the thinking space, the M model is comprised of 2 kinds of knowledge spaces. One is the objective knowledge space, where the knowledge consists of generality to everyone, and the other is the subjective knowledge space, where the knowledge is based on experience and characteristics. In short, the M model is created by 4 spaces in the thinking space and 2 kinds of knowledge in the knowledge space.

## 2.2. Design process based on M model

The design process based on the M model is shown figure 2. As shown in the figure 1, the design process is mainly divided into 3 processes. The first process is the concept design, where mainly the psychological elements are considered. The second process is the basic design, where the meaning space and physical spaces are mainly considered. The final process is the detail design, where mainly the physical elements are considered and optimized. Furthermore, the concept and basic design both conduct a bottom up process and a top down process through the design process, whereas the detail design only conducts a top down design through the process.

## 2.3. M method

The M method proposed in previous studies was formed by introducing the viewpoint of the M model into both the design generation-based bottom-up type and the analysis-based top-down type of design deployment. Specifically, existing idea generation and analysis methods were considered as bottom-up and top-down processes, respectively. After classifying the methods, the selection guidelines were identified for each method. A multi-space perspective was then introduced to each classified method to build multi-space idea generation and multi-space analysis methods. Combining these methods into the M method facilitated the arrangement of design elements, allowing novel and highly complete design solutions to be obtained.

### 2.3.1. Subject of conventional M method

The conventional M method was proposed by focusing on artifact design via an individual designer. In reality, product design involves a team of people, and objects are often designed by expanding from tangible objects to intangible concepts. Consequently, design issues have become more complex, and design methods must be able to adjust to the diversification of

usages including design processes, users, and the object to be designed. To propose a design

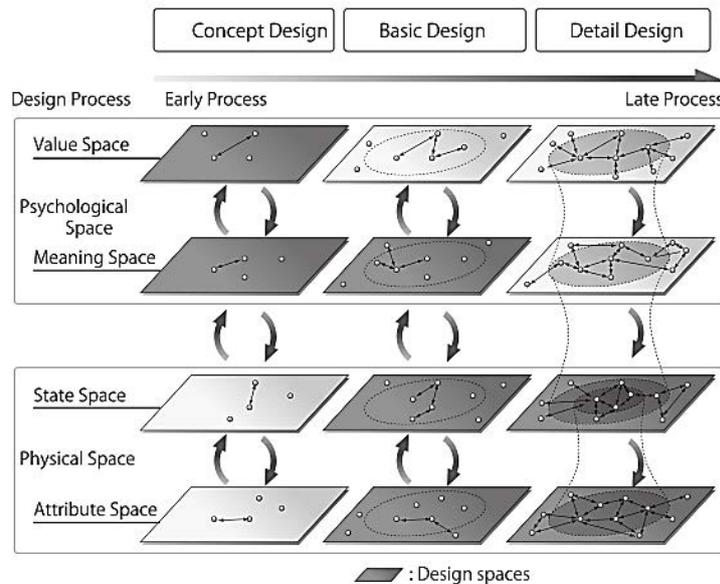


Figure 2 Design process based on M model

method capable of adapting to diverse usages, the framework of the M method must be established by considering the characteristics of diverse users. Additionally, the diversification of usage environments may cause an idea generation method to be used in a top-down and an analysis method to be used in a bottom-up. Thus, a classification from a unified perspective may increase the flexibility of each method.

This method is based on the M model, one of the design theory frameworks. Its main features are the adoption of a perspective based on circumstance and on multi-space. Circumstance refers to the usage environment, including the user and the ways in which artifacts are used. Circumstance has an impact of value, meaning and state.

### 2.3.2. Classification of idea generation and analysis methods

The purpose of this section is to establish selection guidelines to choose suitable methods for specific design environments and user preferences. Idea generation and analysis methods, which have been traditionally classified according to different perspectives, herein are classified according to a unified perspective.

### 2.3.3. Classification method

80 idea generation and analysis methods were extracted, which were used to design actual artifacts. These 80 methods were extracted from the following publications and references published within a five years (2001 to 2005): papers published by the Japanese Society for the Science of Design (249 articles), papers published by the Japan Society for Design Engineering (161 articles), papers published by The Japan Society of Mechanical Engineers (289 articles), journal articles published by the Japan Creativity Society (53 articles), Design Encyclopedia, Mechanical Engineers' Handbook (Design Series), and encyclopedias and manuals related to creation techniques.

Then the extracted idea generation and analysis methods were classified based on the M model in which thinking space, design process, and design thinking were used as evaluation

criteria. The three evaluation criteria were further divided. Thinking space was divided into value, meaning, state, and attribute space, while the design process was divided into conceptual, basic, and detailed design. Design thinking was divided into extraction, classification, qualitative structure, and quantitative structure. Table 1 shows all of the evaluation criteria. Here, "extraction" refers to extracting detailed design elements of the object. "Classification" refers to grouping of similar design elements. "Qualitative structure" and "quantitative structure" refer to the structures formed via linking qualitative and quantitative connections between elements in causal and hierarchical relationships, respectively. In this section, cluster analysis using Ward's method was conducted to classify idea generation and analysis methods. Classifications were repeated until the cluster analysis method merged all the clusters.

Table 1 Evaluation criteria

	Item	Evaluation
Thinking Space	Value Space	The design is performed in value space
	Meaning Space	The design is performed in meaning space
	State Space	The design is performed in state space
	Attribute Space	The design is performed in attribute space
Design Process	Concept Design	Is it used at a conceptual design ?
	Basic Design	Is it used at a basic design ?
	Detail Design	Is it used at a detail design ?
Design Thinking	Extraction	Is it extracting ?
	Classification	Is it classifying ?
	Qualitative Structure	Is it structuring qualitatively ?
	Quantitative Structure	Is it structuring quantitatively ?

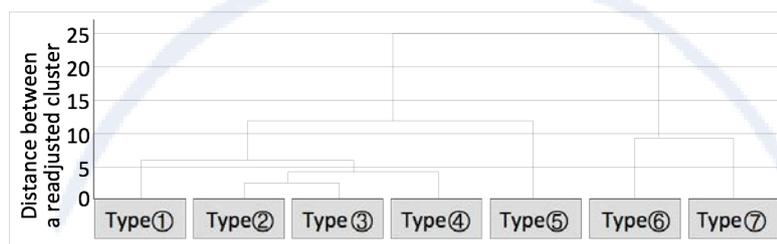
### 2.3.4. Classification results

The 80 idea generation and analysis methods were evaluated based on the aforementioned evaluation criteria, and cluster analysis was conducted based on the evaluation results. Figure 3 shows the results of the cluster analysis; the 80 methods were classified into seven distinct types.

### 2.3.5. Characteristics of each Cluster

Based on figure 3 and the evaluation results, the characteristics of the seven types were analyzed. Table 2 shows the characteristics and selection guidelines. By classifying the seven types of idea generation and analysis methods as guidelines, suitable methods could be applied to solve design issues. Furthermore, various combinations of idea generation and analysis methods were possible because the combinations were classified using a unified perspective. Therefore, the applied methods could be tailored to different design issues involving various users, design processes, and objects to be designed.

Table 2 Characteristics and selection guidelines



		Design process				
		Concept design		Basic design		Detail design
		Thinking space				
		Value · Meaning	Value · Meaning · State · Attribute	Meaning · State · Attribute	State · Attribute	
Design thinking	Extraction	<b>Type ①</b> The method of extracting elements by focusing on value and meaning space. Catalog Method, NID Method, Alphabet System, Casting Method	<b>Type ②</b> The method of extracting elements by focusing on value, meaning, state, and attribute space. Mood Board, Checklist Method, Pair Association Analysis, Hope Points Listing Method, Weak Points Listing Method, Gordon Method, Incentive Word Method, Focal Spot Method, Δ, □, ▽ Idea Generation Method, Bionics Method, Brain Storming, Card BS, Brain Writing, Card BW, Syntectics, Reverse Setting Method, Virtual Matter Method			
	Classification		<b>Type ③</b> The method of classifying elements by focusing on value, meaning, state, and attribute space. Positioning Method, Cross method, Card method, KJ method, Morphological Analysis, Attributions Listing Method, Affinity Diagram Method, QFD			
	Qualitative structure		<b>Type ④</b> The method of performing qualitative structuring of elements by focusing on value, meaning, state, and attribute space Mind Map, Stop and Go BS, NW Method, Characteristic Diagram, Story Method, Relevance Tree Method, Routes Chart Method, ZK Method, Laddering, Association Diagram Method, Protocol Analysis	<b>Type ⑤</b> The method of performing qualitative structuring by focusing on meaning, state, and attribute space. Input and Output Method, Work Design Method, Business Design Method, Matrix Method, T.T HS Method, Triz Method, Causality Analysis Method, FEMA, FTA, Petri Net, ISM, Rough Sets, Decision Tree		
	Quantitative structure			<b>Type ⑥</b> The method of performing quantitative structuring by focusing on meaning, state, and attribute space. DEMATEL, Correspondence Analysis, Self-Organizing Map, Quantification Theory Type III, Quantification Theory Type IV, Dual Scaling, Factor Analysis, Cluster Analysis, Identify Mapping Model, Principal Component Analysis, Multi-Dimensional Scaling, Covariance Structure Analysis, Quantification Theory Type I, Quantification Theory Type II, Fuzzy Inference, Cohort Analysis, Canonical Correlation Analysis, Path Analysis	<b>Type ⑦</b> The method of performing quantitative structuring by focusing on state and attribute space. Heuristic Idea Generation Method, Response Surface Method, Hierarchical Neural Network, Multiple Regression Analysis, Ordinary Differential Equation, Interconnected Neural Network, Algebra education, Discriminant Analysis, Partial Differential equation	

Figure 3 Result of Cluster analysis

### **3. Proposal of a Multi-space Design Method (M method) corresponding to various usage**

#### **3.1 Outline of the M method corresponding to various usage**

This section outlines our highly adaptive M method based on the aforementioned framework and selection guidelines for idea generation and analysis methods. The design method consisted of idea generation and analysis methods, which were incorporated from the viewpoint of the M model. As described in chapter 2, the selection guidelines, which were based on a unified perspective, allowed the appropriate method to be selected for the design issue as well as to meet the needs of the designers and engineers. These Multi-space methods allow users who are unfamiliar with the M model to design objects based on a Multi-space perspective.

#### **3.2 Design deployment using the M method**

Design deployment using our proposed design method shows following case application. First, the selection guidelines are used to determine the idea generation and analysis methods appropriate for the design issue. Then the viewpoint of the M model is applied to the selected methods, and elements including sketches and pictures are extracted. Thus the design deployment is performed.

### **4. Case application**

In this section, the case studies applying our proposed M method is described. The purpose is to be indicated that each feature of thinking process by different design users. We conduct two types of case studies in which the design users are a professional designer and a professional engineer.

#### **4.1. Outline of case application**

The selected object to be designed was a bench because it can be designed from both a mechanical and an artistic perspective. Additionally, the design elements of benches were not too complicated. Thus, both designers and engineers should be able to design one. Because the differences between design implementers should become most apparent in early processes, we decided to perform a conceptual design. The case study participants were asked to design a bench to be placed in a park with a beautiful sunset. The participants initially selected methods suitable to the design issue according to the classification table in the preceding chapter. The viewpoint of the M model is then introduced to the selected methods, and the participants performed conceptual design using these methods. Conducting case studies using two types of design participants verified the usefulness of our method for users in different fields.

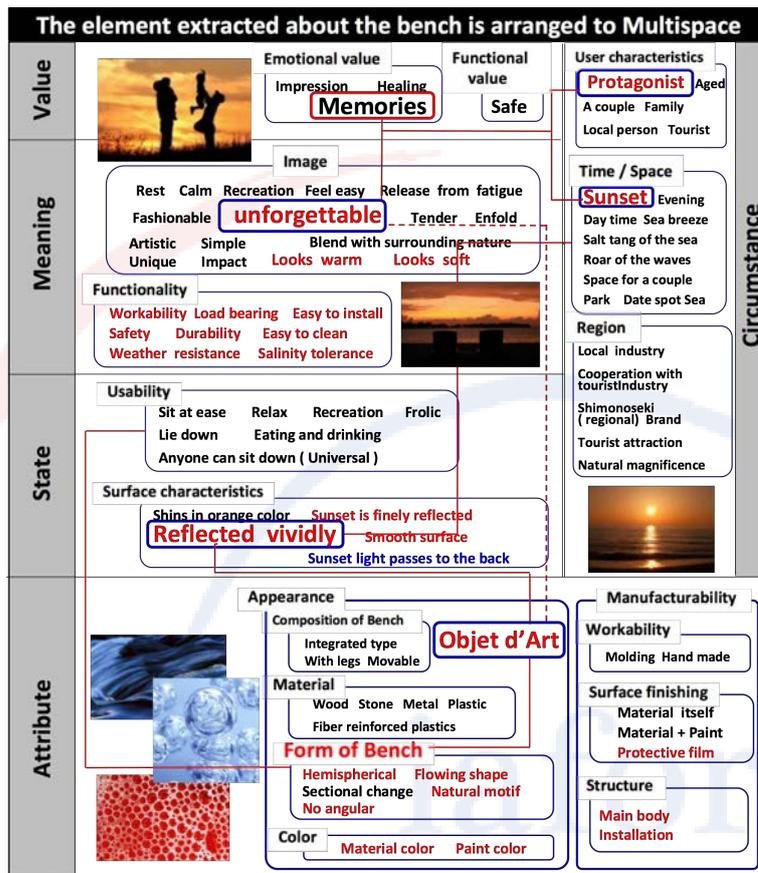


Figure 4 Element relation diagram by a designer

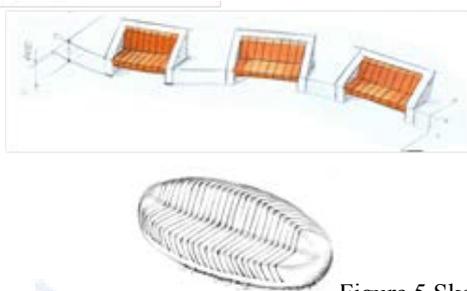


Figure 5 Sketch by a designer



## 4.2. Design by a single designer or engineer

### 4.2.1 Design by a single designer

The designer in this case study was a male in his 50s. Table 3 shows the methods he selected. With regard to thinking space, the designer considered meaning space in every method. He seemed to focus on image and function as he designed the bench. With regards to design thinking, he focused on element extraction. In particular, after extracting and classifying the elements to some degree in the checklist method, the selected method confirmed whether elements were missed. The designer obtained hints from various viewpoints to test many ideas. In the end, the designer created an element relationship diagram (figure 4) and sketches for idea deployment (figure 5). In order to make the bench memorable, artwork was tied into an unforgettable image, and the

concept entitled, "Sunset Theater, Sunset and the Protagonist, and the Objet d'Art" was conceived.

Table 3 Selected method by a designer

Selected Method	Thinking Space	Design Thinking
Casting Method	Value, Meaning	Extraction
Mood Board	Value, Meaning	Extraction
Virtual Matter Method	Meaning, State	Extraction
Card Method	Meaning, State, Attribute	Classification
KJ Method	Meaning, State, Attribute	Classification
Checklist Method	Meaning, Attribute	Extraction
Association Diagram Method	Value, Meaning, State, Attribute	Qualitative Structure

#### 4.2.2. Design by a single engineer

The engineer in this case study was a male in his 60s. Table 4 shows the methods he selected. With regard to the thinking space, the selected methods considered psychological spaces, such as value space and meaning space, as well as physical spaces, such as state space and attribute space. With regard to design thinking, the engineer extracted, classified, and then arranged elements from a theme. He seldom changed his way of thinking, and proceeded in a logical, top-down manner. The engineer created an element relationship diagram (figure 6). Upon speculating the market needs and arranging the requirements related to the concept, he came up with the concept entitled, "ZIGZAG BENCH SEAT facing the sunset." Figure 7 is a sketch of his idea.

Table 4 Selected method by an engineer

Selected Method	Thinking Space	Design Thinking
Mood Board	Value, Meaning, State, Attribute	Extraction
KJ Method	Value, Meaning, State, Attribute	Extraction, Classification

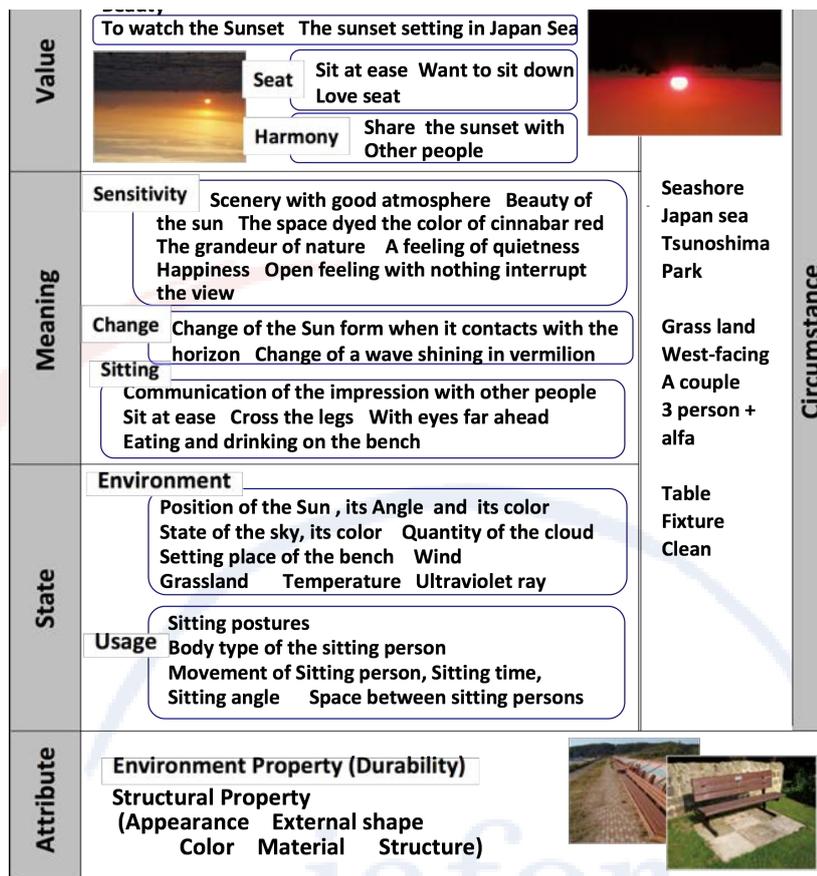


Figure 6 Element relation diagram by an engineer



Figure 7 Sketch by an engineer

### 5. Discussion of the comparison between designer and engineer designs.

First, table 3 and 4 clearly demonstrate a difference in the types and numbers of design methods selected by the designer and engineer. Therefore, our proposed M method allows users to select methods to meet their individual characteristics and style of design deployment.

Next, figures 4 and 6 indicate that the designer and engineer extracted similar numbers of elements. The elements were related to various images and functions, such as "beauty of the sunset" and "emotional scenery." We expect that pictorial information aided in handling meaning elements. The designer examined form via pictures in attribute space, suggesting that pictorial information can help consider various elements of space.

Thirdly, although designers typically do not handle state elements in state space, the designer in our case study was able to sufficiently extract elements that are hard to quantify, such as "the light shines through to the back" and "shines in orange,"

indicating that our method facilitated the treatment of the state space for designers. The engineer extracted quantifiable elements, such as "the position of the sun," suggesting that the characteristics determined in Chapter 2 were exhibited.

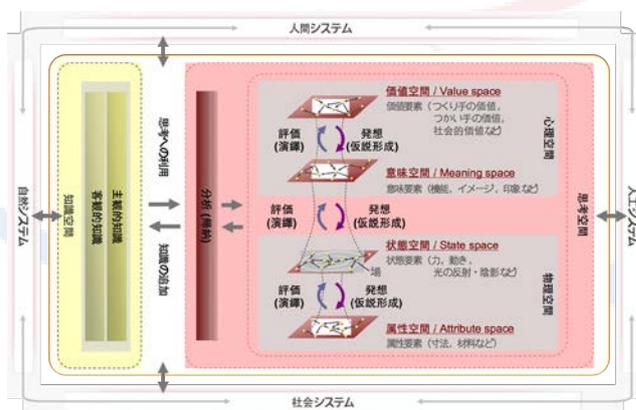
Fourthly, our proposed M method also redefined circumstance, which allowed many correlations to be made between the elements of circumstance and psychological elements in value space and meaning space. Our method led to both the designer and engineer generating element of circumstance, such as "protagonist" and "west-facing". Then both tangible objects and intangible concepts could be incorporated in the design.

Finally, through case applications in this research, it was confirmed that a feature of designer's thinking process: multiple and diverse idea deployment in order to derive diverse solutions by obtaining hints from various viewpoints based on active extraction of design elements. Moreover, an engineer's thinking process has a following feature: idea deployment by logical and top-down thinking using classification and arrangement based on extraction of design elements along the lines of a theme

### 6. Conclusions

In this research, it was confirmed that a feature of different user's thinking process through the case application applying the M method. Specifically, we constructed usage guidelines to practically employ various idea generation and analysis methods by reclassifying the methods according to a unified perspective. Additionally, it was indicated that each feature of the thinking process by both a designer and an engineer from the comparative analysis of case application of M method. Moreover, through case applications applying the M method, the usefulness was indicated precise design thinking by different users.

In a future study, the usage from single to collaboration should be considered. Furthermore, the usefulness of our method should be verified for different design processes by applying it to late processes such as detailed design.



## References and citations

Matsuoka Y., Ujiie Y., Asanuma T., Takano S., Izu Y., Sato K., Kato T. (2013)  
Design

Thinking on Multispace, Kindai-Kagaku-Sha.

Matsuoka Y. (2010) Design Science: "Six Viewpoints" for the Creation of Future,  
Maruzen

Shuppan.

Yoshikawa H. (1979) Introduction to General Design Theory, JSPE Journals, Vol.45,  
No.8,

pp.906-912.

Yoshikawa H. (1981) General Theory of Design Process. JSPE Journals vol.47, no.4,

pp.404-410.

Yoshikawa H. (1985) General Design Theory. Science of Machine vol.37, no.1,  
pp.108-116.

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*Theories and Practices in English as an International Language (EIL), World Englishes (WE), English as an Lingua Franca (ELF) Seen in Students Perception Data (1)*

Michiko Nakano\*<sup>1</sup>, Clarence Ng\*<sup>2</sup>, Barley S. Y. Mak\*<sup>3</sup>, K. Owada\*<sup>4</sup>, N. Ueda\*<sup>5</sup>,  
Y. Kondo\*<sup>1</sup>, S. Yoshida\*<sup>1</sup>, S. Maswana\*<sup>1</sup>

\*<sup>1</sup>Waseda University, Japan, \*<sup>2</sup>Australian University of Catholic, Australia,

\*<sup>3</sup>The Chinese University of Hong Kong, Hong Kong,

\*<sup>4</sup>Tokyo College of Music, Japan, \*<sup>5</sup>Komazawa University, Japan

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Abstract

This paper addresses the issues of the gap between theoretical stances and inferential data in WE, EIL and ELF, on one hand, and university students' judgments and perception about theoretical stances and inferential data. We collected students' responses about these issues. The participants are students who have taken the cyber course called World Englishes or those who have cyber interactions among Asian countries and who have used English as ELF. In this globalized world, most of learners are exposed to English use in their daily life, such as newspapers, TV, music, movies, the Internet and other social networking services. This suggests that our students must have their own judgments about the functions of English. We try to investigate whether their judgments agree with the factual claims made by WE proponents, and ELF proponents.

Kirkpatrick (2012) mentions that the goal of English education among the outer circle and expanding circle countries should be set at the level of successful ELF users rather than that of Native Speakers. This suggests the paradigm shift of the traditional model of English Language Education which heavily dependent on native speaker norms to a bilingual or multilingual model. The paper also addresses what images and concepts Asian learners of English have toward the concept of successful bilinguals.

## 1 Introduction

Professor Larry Smith had offered in the 70's English Language Teaching Courses for Asian teachers of English at East-West Center, University of Hawaii at Manoa. He discovered that while he could not understand their English sometimes but not always, their various forms of English were well understood among themselves as the intra-communication tool within Asian users of English. He then claimed that, other than Native Speaker English, there exists English as an International English (EIL) in the world, by proposing three criteria of Intelligibility, Comprehensibility and Interpretability at the same time (Smith, 1976). As far as any English is intelligible, comprehensible and interpretable, it can be a candidate for English as an International Language. All the candidates are equally important as a language of communication.

In the 80's and 90's, Kachru expanded this fair-minded thinking to English variations all over the world and proposed the three-concentric circle model which can address World Englishes (WE; Kachru, 1992, etc.). The inner-circle English encompasses Native Speaker (NS) Englishes in UK, USA, Canada, Australia and New Zealand. The outer circle countries include all the former colonies by British Empire: due to this historical reasons, English had been introduced as a tool of communication for more than 100 years, sometimes 250 years such as in India. Since Englishes in the colonial area became nativized and finally institutionalized, they developed their own norms which are independent of NS norms. The proponents of World Englishes thus asserted that the outer circle Englishes should be recognized as a marker of their identity and they should be proud of expressing their native cultures in their use of Englishes. The expanding Circle includes such countries as China, Japan, Korea, Thailand etc., where English is learned as a foreign language (EFL). Kachru's three-concentric circles can describe the historical spread of English as well as it fits our common sense of the divisions among NS norm-providing Englishes, ESL norm-independent Englishes and EFL norm-dependent Englishes. His model received great popularity among English Language Teaching practitioners.

The notion of World Englishes drew European researchers' attention, since Englishes in Europe began to spread as a common tool of communication since the establishment in European Union (EU). Barbara Seidlehofer and Jennifer Jenkins promoted the notion of English as a Lingua Franca (ELF). ELF stands for non-native speaker interactions whose first languages are different from each other and ELF includes NNS-NNS interactions as well as NS-NNS interactions, as far as their first languages are different. Based on the empirical data, Seidlehofer proposed ELF lexico-grammar and Jenkins, a reduced inventory of phonetic teaching and supra-segmental teaching items. As Hung (2007) indicates, for NNS speakers, NS competence and NS spoken fluency are unattainable and thus, unrealistic goal of learning; particularly the size of vocabulary and idiomatic knowledge and pronunciation accuracy is beyond the ability range of most learners of English. ELF thus lexico-grammar lists the following six features

1. non-use of the third person present tense -s, (as in “She look very sad.”)
2. omissions of the definite and indefinite articles where they are obligatory in NS English, and insertion where they do not occur in NS English
3. heavy reliance on verbs of high semantic generality, such as get, make, have, do, etc
4. pluralization of nouns which are considered uncountable in NS English, e.g., informations, staffs, advices, furnitures, softwares
5. addition of unnecessary prepositions, such as “discuss about” or “study about.”
6. use of an all-purpose tag questions, e.g., isn’t it? or no?

Adapted from Seidlhofer (2004:220) Cited by Jenkins (2005:5)

As you can see, these negative features are common not only among European users of English, but also among Asian users of English. This led Kirkpatrick (2010) speculate universal simplification of grammar acquisition of English across global learners whose first languages are different.

Kirkpatrick (2009, 2010) thus proposed the realistic goal of English Language Learning as successful bilinguals, due to two factors: the underlying universal simplification of syntax learning and the fact that NS competence and fluency is an unattainable goal of English language education.

In this survey, we are investigating in Part I how much Asian learners know about EIL, WE and ELF, and in Part II how much they agree with the theoretical messages given by EIL, WE and ELF researchers. Part III attempts to clarify learners’ notion of successful bilinguals.

## **2 Method**

### **2.1 Participants**

The participants of this survey were 367 university students ( $M_{age} = 20.3$ ;  $SD = 2.7$ ). Many of these students were enrolled either in *World Englishes and Miscommunications* or in *Cross-Cultural Distance Learning (CCDL)*, both of which are English courses offered by Open Education Center at Waseda University (for details, see below), and recruited from the following universities: The Chinese University of Hong Kong, Waseda University, Korea University, Tamkang University, Shanghai Jiao Tong University, East China University of Science and Technology, Shanghai Finance University, Shanghai Normal University, Shanghai University of Political Science and Law, Shanghai University of Electric Power, Anhui University of Traditional Chinese Medicine, and Wuhan University. Table 1 summarizes the details of the participants.

Table 1: Participants

Nationality	<i>n</i>	%
Chinese	186	50.7%
Japanese	88	24.0%
Taiwanese	53	14.4%
Korean	19	5.2%
Hong Kong	18	4.9%
Malaysian	2	0.5%
Singaporean	1	0.3%
Total	367	100

Note: Some Hong Kong students might be counted as Chinese students because their responses on nationality were submitted as *People's Republic of China*.

*World Englishes and Miscommunications* is offered for students to learn phonetic features, syntactic features, socio-cultural differences, and para-linguistic features that might cause misunderstanding among native speakers and Asian interlocutors. Professors of several major universities in Asia jointly created the omnibus course. The course consists of five live sessions using a videoconferencing system and on-demand lectures. *CCDL*— comprised of three theme-based courses: Social & Global Issues, Media, and International Career Path—is characterized by collaborative joint cyber seminars among Asian Universities initiated by Waseda University, Japan. *CCDL* typically includes five online video chats, two video conferencing sessions, and an international students' forum.

## 2.2 Questionnaire

On the basis of the previous research (e.g., He & Miller, 2011), we developed a questionnaire called the "Asian English Survey," consisting of three parts corresponding to the objectives of this study. The questionnaire also included some items concerning the participants' background information such as nationality, age, years of English learning and use of English in her/his daily life, family life and at school.

The first part (henceforth, Part1), which is titled *How much do you know the current status of English in the world?*, is concerned with to what extent our students know the current status of English in the world. The followings are the items included in Part 1.

1. There are more people in Asia who use English as their second language or as a foreign language than native speakers.
2. ... As our native language has various dialects, so are Englishes in Asia.
3. Received Pronunciation (RP) is pronunciation norms taught in Britain. The RP speakers are only 4 % in Britain.
4. General American (GA) has been regarded as pronunciation norms in the North America. GA speakers are only 2 % in USA.
5. In your country, which variety is officially recognized as a model for learners? Circle one or two. (Choose from 9 options)

6. In 2050, half of the world population will use English for their working life.
7. Currently more NNS-NNS interactions are taking place than NS-NNS interactions.

The participants were supposed to make a response to the above 7 questions by choosing from *Yes*, *Uncertain*, or *No*.

The second part (henceforth, Part 2), which is titled *What is your opinion about World Englishes (WE), English as an International Language (EIL), a common tool of communication among non-native speakers (ELF)?*, consists of 13 items intended to ask how each of the students think of the Asian and native varieties of English as well as to what extent they understand the notions of WE, EIL and ELF. The following list shows each of the items in Part 2.

1. Some varieties in Asia show marked features which are unintelligible to users of other varieties.
2. Asian Englishes are easier to understand than Native Speaker Englishes.
3. There must be a globally intelligible English as English as an International Language (EIL).
4. English can function as a common tool of communication among non-native speakers (ELF) in Asia.
5. Which variety is the best candidate for EIL? Choose one (from 9 English options + Common Core of all the varieties but it does not exist in reality)
6. The interactions with non-native speakers are useful in improving our communication skills.
7. The interactions with native speakers are the only way we can improve our communication skills.
8. Bilinguals have more advantages over mono-lingual NS speakers, since bilinguals know two cultures well enough.
9. Kachru's three concentric circles refer to the three categories roughly corresponding to EFL, ESL and NS Englishes.
10. The inner circle is norm-independent.
11. The outer-circle is norm-dependent.
12. The expanding circle is norm-providing.
13. Kachru's three concentric circles refer to the three geographical areas in the world.

In responding to the above items, the students were asked to choose from *Yes*, *Uncertain*, or *No* in the same manner as in Part 1, except for the item 5 where they

had to choose a best item from a number of options.

The third part (henceforth, Part 3), titled *Tell us your ideas of successful bilinguals*, included the following 13 items.

1. The successful bilinguals have clear pronunciation, but they can have local accent.
2. The successful bilinguals know more than ( ) words.  
3000    5000    8000    10000    13000    more than 15000
3. The successful bilinguals can use effectively roughly ( ) English words.  
3000    5000    8000    10000    13000    more than 15000
4. The successful bilinguals seldom make grammatical errors in writing.
5. The successful bilinguals can talk about one's culture and society in English.
6. The successful bilinguals can communicate with other Asians effectively.
7. The successful bilinguals can communicate with Native Speakers effectively.
8. The successful bilinguals can read various genres in English.
9. The successful bilinguals can write and speak about one's own professional fields.
10. The successful bilinguals are familiar with the English pronunciation of other Asians.
11. The successful bilinguals are familiar with the English grammar of other Asians.
12. The successful bilinguals are familiar with the cultures of other Asians.
13. The successful bilinguals can use communication strategies to overcome communication breakdowns.

These items, except for items 2 and 3, were designed to delineate what kind of image the participants have of *successful bilinguals*. To do so, using 5-point Likert scale, we asked the participants to reflect to what extent they agreed with each of the item descriptions. In responding to these two items, the participants were supposed to choose one of the options, which they thought sounded appropriate for the questions.

## 2.3 Data collection

In order to gather the responses from a number of participating universities, we developed an online questionnaire. We also made a paper-based version available. The survey took about 10 minutes for each student to complete, and was conducted in a classroom or at students' convenience between June 4, 2013 and October 6, 2013. The participation of the students was primarily called by the teachers of *World Englishes and Miscommunications* and *CCDL*.

At the early period of the data collection, there were two design errors in the online questionnaire: with the first students could only choose one answer although they needed to choose one or two answers (Part 1, Item 5); the second allowed students to choose multiple answers although they needed to choose only one answer (Part 2, Item 5). The survey team fixed the design problems quickly and deleted inappropriate answers only for the items concerned.

## 2.4 Data Analysis

The students' responses on the items in Parts 1 and 2 were analyzed in terms of frequency distribution and cross tabulation because the data were collected in the form of nominal scale. As for the items in Part 3, we computed the means and standard deviations for each item because the data were in the form of Likert scale.

It is also important to note here that in order to further discuss the students' attitudes toward the Asian as well as the native varieties of English, we divided the students into two groups called "Mastery" and "Not mastery" on the basis of the responses on the following questions: (1) items concerning the current status of English (items 1, 3, 4, 6 and 7 in Part 1), and (2) items concerning the notions of WE (items 9, 10, 11, 12 and 13 in Part2). Because each of these 10 items had a correct answer, we tallied the number of the correct answers within each participant and then, regarded those who had more than 8 correct answers as Mastery. Thus, the students in Mastery group can be said to have enough knowledge on the current status of English as well as the concepts or notions of WE. The second group is called Not mastery, where those who had less than 7 correct answers on the items were grouped. On the basis of the two groups, we discussed the students' attitudes toward Asian varieties as well as native varieties of English.

## 3. Result

### 3.1 Background Questionnaire

Tables 2-4 show the result of background questionnaire concerning (1) *use of English in her/his daily life*, (2) *use of English in her/his family life*, and (3) *use of English at school*, respectively.

Table 2: Use of English in daily life

Nationality	rare	often	every day	Total
Japanese	58 (65.9%)	21 (23.9%)	9 (10.2%)	88
Korean	7 (36.8%)	8 (42.1%)	4 (21.1%)	19
Chinese	91 (49.7%)	63 (34.4%)	29 (15.8%)	183
Taiwanese	15 (28.3%)	24 (45.3%)	14 (26.4%)	53
Hong Kong	6 (33.3%)	7 (38.9%)	5 (27.8%)	18
Malaysian	0 (00.0%)	0 (00.0%)	2 (100.0%)	2
Singaporean	0 (00.0%)	0 (00.0%)	1 (100.0%)	1
	177 (48.6%)	123 (33.8%)	64 (17.6%)	364

Note: Those who had not responded to the item were excluded.

Table 3: Use of English in his or her family life

Nationality	rare	often	every day	Total
Japanese	82 (94.3%)	4 (04.6%)	1 (01.1%)	87
Korean	15 (78.9%)	3 (15.8%)	1 (05.3%)	19
Chinese	174 (95.1%)	7 (03.8%)	2 (01.1%)	183
Taiwanese	45 (84.9%)	7 (13.2%)	1 (01.9%)	53
Hong Kong	15 (83.3%)	2 (11.1%)	1 (05.6%)	18
Malaysian	2 (100.0%)	0 (00.0%)	0 (00.0%)	2
Singaporean	1 (100.0%)	0 (00.0%)	0 (00.0%)	1
	334 (92.0%)	23 (06.3%)	6 (01.7%)	363

Note: Those who had not responded to the item were excluded.

Table 4: Use of English at school

Nationality	rare	often	every day	Total
Japanese	37 (42.5%)	37 (42.5%)	13 (14.9%)	87
Korean	3 (15.8%)	10 (52.6%)	6 (31.6%)	19
Chinese	47 (28.0%)	69 (41.1%)	52 (31.0%)	168
Taiwanese	1 (01.9%)	27 (51.9%)	24 (46.2%)	52
Hong Kong	2 (11.1%)	7 (38.9%)	9 (50.0%)	18
Malaysian	0 (00.0%)	2 (100.0%)	0 (00.0%)	2
Singaporean	0 (00.0%)	0 (00.0%)	1 (100.0%)	1
	90 (25.9%)	152 (43.8%)	105 (30.3%)	347

Note: Those who had not responded to the item were excluded.

First, on the question concerning the use of English in daily life, most students belonging to the expanding circle, that is, Japanese, Korean, Chinese, and Taiwanese students reported that they rarely or often use English in their daily life. On the other hand, as we expected, the students belonging to the outer circle, that is, Malaysian and Singaporean students reported that they use English every day. As for Hong Kong students, who are said to be belonging to the outer circle, they showed almost the same proportions as the students in the expanding circle<sup>1</sup>. Second, on the question concerning the use of English in family life, almost all the students reported that they rarely use English in their family lives. Lastly, on the question concerning use of English at school, over 70 percent of the students in the expanding circle reported that they use English *often* or *every day* at school, but a large population of the Japanese students, say more than 40 percent, reported that they rarely use English at school.

<sup>1</sup> The result might be inconclusive because some Hong Kong students were counted not as Hong Kong students but as Chinese students as discussed above.

This result may reflect the current situation of English language education at the tertiary-level in Japan, where most of the classes are conducted in their mother tongue.

### Part 1

Tables 4-5 show the results of frequency distributions of the items in Part 1.

Table 4: Frequency Distribution of the items in Part 1.

	Group	Yes	Uncertain	No
item 1	Not Mastery	244 (71.1%)	69 (20.1%)	30 (08.7%)
	Mastery	22 (95.7%)	0 (00.0%)	1 (04.3%)
	Total	266 (72.7%)	69 (18.9%)	31 (08.5%)
item 2	Not Mastery	213 (62.1%)	72 (21.0%)	58 (16.9%)
	Mastery	20 (87.0%)	3 (13.0%)	3 (13.0%)
	Total	233 (63.7%)	75 (20.5%)	58 (15.8%)
item 3	Not Mastery	59 (17.2%)	242 (70.6%)	42 (12.2%)
	Mastery	22 (95.7%)	1 (04.3%)	0 (00.0%)
	Total	81 (22.1%)	243 (66.4%)	42 (11.5%)
item 4	Not Mastery	46 (13.5%)	240 (70.2%)	56 (16.4%)
	Mastery	15 (65.2%)	6 (26.1%)	2 (08.7%)
	Total	61 (16.7%)	246 (67.4%)	58 (15.9%)
item 6	Not Mastery	169 (49.3%)	128 (37.3%)	46 (13.4%)
	Mastery	22 (95.7%)	1 (04.3%)	0 (00.0%)
	Total	191 (52.2%)	129 (35.2%)	46 (12.6%)
item 7	Not Mastery	174 (50.7%)	129 (37.6%)	40 (11.7%)
	Mastery	20 (87.0%)	3 (13.0%)	0 (00.0%)
	Total	194 (53.0%)	132 (36.1%)	40 (10.9%)

As Table 4 shows, most of the students in Mastery group (over 80 %, on average) chose *Yes*, a correct answer for each question, on the items in Part, except for item 4, which asks the current status of GA in USA. It is also important to note that most of the students in Not Mastery (over 80 % in each item) did not recognize that the RP speakers are only 4 % in Britain (item 3) and that GA speakers are only 2 % in USA.

Table 5: Frequency distribution of item5 in Part 1

Varieties of English	Group		
	Not Mastery	Mastery	Total
AE	180 (52.3%)	12 (52.2%)	192 (52.3%)
AE, BE	5 (01.5%)	1 (04.3%)	6 (01.6%)
AE, BE, CE	1 (00.3%)	0 (00.0%)	1 (00.3%)
AE, BE, CE, IE	0 (00.0%)	1 (04.3%)	1 (00.3%)
AE, BE, CCV	1 (00.3%)	0 (00.0%)	1 (00.3%)
AE, CE	2 (00.6%)	0 (00.0%)	2 (00.5%)
AE, SE	1 (00.3%)	0 (00.0%)	1 (00.3%)
BE	82 (23.8%)	3 (13.0%)	85 (23.2%)
BE, CCV	1 (00.3%)	0 (00.0%)	1 (00.3%)
CE	19 (05.5%)	1 (04.3%)	20 (05.4%)
CCV	42 (12.2%)	4 (17.4%)	46 (12.5%)
IE	1 (00.3%)	1 (04.3%)	2 (00.5%)
KE	1 (00.3%)	0 (00.0%)	1 (00.3%)
SE	5 (01.5%)	0 (00.0%)	5 (01.4%)
SE, CCV	1 (00.3%)	0 (00.0%)	1 (00.3%)
Missing	2 (00.6%)	0 (00.0%)	2 (00.5%)
<b>Total</b>	<b>344 (100.0%)</b>	<b>23 (100.0%)</b>	<b>367 (100.0%)</b>

Note: AE, BE, CE, CCV, IE, KE and SE stand for American English, British English, Chinese English, Common Core of All the Varieties of English but not exists in reality, Indian English, Korean English and Singapore English, respectively.

The result indicates almost the same pattern between the students in Not Mastery and Mastery. Indeed, over 70 % of the students (in total) chose native varieties of English, that is, American English or British English, as those officially recognized as a model for English learners in their own countries.

## Part2

Tables 6-7 show the results of frequency distribution of the items in Part 2.

Table 6: Frequency Distribution of the items in Part 2

	Group	Yes	Uncertain	No
item 1 (Part2 )	Not Mastery	167 (48.7%)	146 (42.6%)	30 (08.7%)
	Mastery	19 (82.6%)	4 (17.4%)	0 (00.0%)
	Total	186 (50.8%)	150 (41.0%)	30 (08.2%)
item 2 (Part2 )	Not Mastery	87 (25.4%)	81 (23.6%)	175 (51.0%)
	Mastery	12 (54.5%)	3 (13.6%)	7 (31.8%)
	Total	99 (27.1%)	84 (23.0%)	182 (49.9%)
item 3 (Part2 )	Not Mastery	185 (53.8%)	108 (31.4%)	51 (14.8%)
	Mastery	16 (69.6%)	4 (17.4%)	3 (13.0%)
	Total	201 (54.8%)	112 (30.5%)	54 (14.7%)
item 4 (Part2 )	Not Mastery	251 (73.0%)	64 (18.6%)	29 (08.4%)
	Mastery	23 (100.0%)	0 (00.0%)	0 (00.0%)
	Total	274 (74.7%)	64 (17.4%)	29 (07.9%)
item 6 (Part2 )	Not Mastery	227 (66.4%)	73 (21.3%)	42 (12.3%)
	Mastery	21 (95.5%)	0 (00.0%)	1 (04.5%)
	Total	248 (68.1%)	73 (20.1%)	43 (11.8%)
item 7 (Part2 )	Not Mastery	50 (14.6%)	62 (18.1%)	230 (67.3%)
	Mastery	9 (40.9%)	1 (04.5%)	12 (54.5%)
	Total	59 (16.2%)	63 (17.3%)	242 (66.5%)
item 8 (Part2 )	Not Mastery	200 (58.7%)	103 (30.2%)	38 (11.1%)
	Mastery	19 (82.6%)	3 (13.0%)	1 (04.3%)
	Total	219 (60.2%)	106 (29.1%)	39 (10.7%)
item 9 (Part2 )	Not Mastery	95 (27.8%)	230 (67.3%)	17 (05.0%)
	Mastery	23 (100.0%)	0 (00.0%)	0 (00.0%)
	Total	118 (32.3%)	230 (63.0%)	17 (04.7%)
item 10 (Part2 )	Not Mastery	78 (22.7%)	234 (68.2%)	31 (09.0%)
	Mastery	21 (91.3%)	0 (00.0%)	2 (08.7%)
	Total	99 (27.0%)	234 (63.9%)	33 (09.0%)
item 11 (Part2 )	Not Mastery	66 (19.3%)	248 (72.5%)	28 (08.2%)
	Mastery	23 (100.0%)	0 (00.0%)	0 (00.0%)
	Total	89 (24.4%)	248 (67.9%)	28 (07.7%)
item 12 (Part2 )	Not Mastery	75 (21.9%)	236 (69.0%)	31 (09.1%)
	Mastery	22 (95.7%)	0 (00.0%)	1 (04.3%)
	Total	97 (26.6%)	236 (64.7%)	32 (08.8%)
item 13 (Part2 )	Not Mastery	71 (20.7%)	222 (64.7%)	50 (14.6%)
	Mastery	14 (60.9%)	1 (04.3%)	8 (34.8%)
	Total	85 (23.2%)	223 (60.9%)	58 (15.8%)

Table 7: Frequency Distribution of the item 5 in Part 2

Varieties of English	Group		Total
	Not Mastery	Mastery	
AE	180 (52.3%)	12 (52.2%)	192 (52.3%)
AE, BE	5 (01.5%)	1 (04.3%)	6 (01.6%)
AE, BE, CE	1 (00.3%)	0 (00.0%)	1 (00.3%)
AE, BE, CE, IE	0 (00.0%)	1 (04.3%)	1 (00.3%)
AE, BE, CCV	1 (00.3%)	0 (00.0%)	1 (00.3%)
AE, CE	2 (00.6%)	0 (00.0%)	2 (00.5%)
AE, SE	1 (00.3%)	0 (00.0%)	1 (00.3%)
BE	82 (23.8%)	3 (13.0%)	85 (23.2%)
BE, CCV	1 (00.3%)	0 (00.0%)	1 (00.3%)
CE	19 (05.5%)	1 (04.3%)	20 (05.4%)
CCV	42 (12.2%)	4 (17.4%)	46 (12.5%)
IE	1 (00.3%)	1 (04.3%)	2 (00.5%)
KE	1 (00.3%)	0 (00.0%)	1 (00.3%)
SE	5 (01.5%)	0 (00.0%)	5 (01.4%)
SE, CCV	1 (00.3%)	0 (00.0%)	1 (00.3%)
missing	2 (00.6%)	0 (00.0%)	2 (00.5%)
<b>Total</b>	<b>344 (100.0%)</b>	<b>23 (100.0%)</b>	<b>367 (100.0%)</b>

Note: AE, BE, CE, CCV, IE, KE and SE stand for American English, British English, Chinese English, Common Core of All the Varieties of English but not exists in reality, Indian English, Korean English and Singapore English, respectively.

It is particularly important to note here that, although about half of the students (in total) thought some varieties in Asia would have some marked features which might be unintelligible to users of other varieties, about 75% of the students (in total) still thought English could function as a common tool of communication among non-native speakers (ELF) in Asia (item 4).

### Part3

Table 8 shows the descriptive statistics for the items 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 in Part 3. Table 9 summarizes the frequency distributions of items 2 and 3.

Table 8: Descriptive Statistics for the items 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 in Part 3

item	Group		
	Not Mastery	Mastery	Total
item1 (Part3)	3.47 (1.09)	2.82 (1.50)	3.43 (1.13)
item4 (Part3)	3.21 (1.10)	2.48 (1.16)	3.16 (1.12)
item5 (Part3)	3.85 (0.93)	3.43 (1.38)	3.82 (0.97)
item6 (Part3)	3.78 (0.94)	3.48 (1.27)	3.77 (0.96)
item7 (Part3)	4.02 (0.93)	3.43 (1.44)	3.98 (0.98)
item8 (Part3)	3.70 (0.92)	3.17 (1.34)	3.66 (0.96)
item9 (Part3)	3.81 (0.89)	3.43 (1.38)	3.79 (0.93)
item10 (Part3)	3.18 (1.04)	2.87 (1.22)	3.16 (1.05)
item11 (Part3)	3.03 (1.02)	2.59 (1.10)	3.00 (1.03)
item12 (Part3)	3.08 (0.97)	2.77 (1.11)	3.06 (0.98)
item13 (Part3)	3.77 (0.88)	3.39 (1.41)	3.75 (0.92)

Note: The values in the parenthesis show standard deviations.

Table 9: Frequency Distribution of the items 2 and 3 in Part 3

item	Group	Group							Total
		3000	5000	8000	10000	13000	morethan15000	missing	
item 2 (Part3)	Not Mastery	11 (03.2%)	44 (12.8%)	51 (14.8%)	102 (29.7%)	33 (09.6%)	101 (29.4%)	2 (00.6%)	344 (100.0%)
	Mastery	5 (21.7%)	3 (13.0%)	4 (17.4%)	5 (21.7%)	1 (04.3%)	4 (17.4%)	1 (04.3%)	23 (100.0%)
	Total	16 (04.4%)	47 (12.8%)	55 (15.0%)	107 (29.2%)	34 (09.3%)	105 (28.6%)	3 (00.8%)	367 (100.0%)
item3 (Part 3)	Not Mastery	40 (11.6%)	79 (23.0%)	88 (25.6%)	66 (19.2%)	16 (04.7%)	51 (14.8%)	4 (01.2%)	344 (100.0%)
	Mastery	6 (26.1%)	7 (30.4%)	6 (26.1%)	3 (13.0%)	0 (00.0%)	1 (04.3%)	0 (00.0%)	23 (100.0%)
	Total	46 (12.5%)	86 (23.4%)	94 (25.6%)	69 (18.8%)	16 (04.4%)	52 (14.2%)	4 (01.1%)	367 (100.0%)

## 4 Discussion

### 4.1 The knowledge of English and the image of successful bilinguals that the students have

In this section, we report what we have learned through the survey. The items below are about the interactions among non-native speakers of English.

P2-4: English can function as a common tool of communication among non-native speakers (ELF) in Asia (75% answered Yes).

P2-6: The interactions with non-native speakers are useful in improving our communication skills (68% answered Yes).

P2-7: The interactions with native speakers are the only way we can improve our communication skills (67% answered No).

About 75% of the students think English is a common tool of communication in Asia. And about 70% of the students think that the interactions among non-native speakers make their English better and the interaction with native speakers are not the only way they can improve our communication skills. The results imply that the students think that new English is locally developed. Then native speakers of English are irrelevant to such English. For our students, to be a member of the native speakers' community is just one of their purposes of their English language learning. They learn English to be a member of international communities. This is also claimed in Widdowson (2003) and McKay (2002). To acquire the competence of the native speakers of English is one of the final goals of their English language learning. The final goal of vast majority of learners of English is to be a member of international

communities where English is used as a communication tool.

The next finding is that students think that there are two kinds of English: our students think that English we end up with and English that we target at in learning English. For the answers to the question, “Which variety is the best candidate for EIL?” about 80% of the students think that American or British English should be set as a models of EIL. The students think that they need a model in their English language learning. On the other hand, however, our students accept English that is locally developed, Asian Englishes, which is indicated to the answers to the question below. About 50% of the student think Asian Englishes are intelligible and are easier to understand than native speaker Englishes. The results indicate that there are two kinds of English: English we end up with and English we target at in learning English.

P2-1: Some varieties in Asia show marked features which are unintelligible to users of other varieties (50% answered No or Uncertain).

P2-2: Asian Englishes are easier to understand than Native Speaker Englishes (50% answered Yes or Uncertain).

The third finding is the knowledge of English and the image of successful bilinguals. The 19 items is about the knowledge of English and the image of successful bilinguals in our questionnaire. The items are designed to measure the knowledge on the current environment surrounding English. We divided the students into two groups, based on the sum of the scores of these items: Mastery (8 or more points) and Not Mastery (below 8 points). If students get the score of 8 or more, we call them Mastery. If students get the score of below 8, we call them Not Mastery. Below is the items about the knowledge of English.

P1-1: There are more people in Asia who use English as their second language or as a foreign language than native speakers.

P1-3: Received Pronunciation (RP) is pronunciation norms taught in Britain. The RP speakers are only 4 % in Britain.

P1-4: General American (GA) has been regarded as pronunciation norms in the North America. GA speakers are only 2 % in USA.

P1-6: In 2050, half of the world population will use English for their working life.

P1-7: Currently more NNS-NNS interactions are taking place than NS-NNS interactions.

P2-9: Kachru’s three concentric circles refer to the three categories roughly corresponding to EFL, ESL and NS Englishes.

P2-10: The inner circle is norm-independent.

P2-11: The outer-circle is norm-dependent.

P2-12: The expanding circle is norm-providing.

P2-13: Kachru’s three concentric circles refer to the three geographical areas in the world.

If we divide our students into two groups: Mastery and Not Mastery, we can find differences between two groups. These are items about the image of successful bilinguals. These are items with 5-point scale: 1 strongly disagree and 5 means strongly agree. For example, if one agrees with the statement of an item, he/she choose 5. The students of Not Mastery tend to give higher scores to all the items about the image of successful bilinguals than the students of Mastery. The items are

shown below. Table 10 shows the average scores of the items. The expectation for the proficiency of successful bilinguals that the students of Mastery is not so high. If people cannot communicate with the native speakers effectively, we can call them successful bilinguals. Since we are English users, it is difficult for us to always communicate with the native speakers effectively. Sometimes we cannot communicate with them in an effective manner.

P3-4: The successful bilinguals seldom make grammatical errors in writing.

P3-6: The successful bilinguals can communicate with other Asians effectively.

P3-7: The successful bilinguals can communicate with Native Speakers effectively.

P3-8: The successful bilinguals can read various genres in English.

P3-9: The successful bilinguals can write and speak about one's own professional fields.

P3-10: The successful bilinguals are familiar with the English pronunciation of other Asians.

P3-11: The successful bilinguals are familiar with the English grammar of other Asians.

P3-12: The successful bilinguals are familiar with the cultures of other Asians.

P3-13: The successful bilinguals can use communication strategies to overcome communication breakdowns.

Table 10: The means of the items on the image of successful bilinguals

	P3-4	P3-6	P3-7	P3-8	P3-9	P3-10	P3-11	P3-12	P3-13
Not Mastery	3.2	3.7	4.0	3.7	3.8	3.1	3.0	3.0	3.7
Mastery	2.4	3.4	3.4	3.1	3.4	2.8	2.5	2.7	3.3
All	3.1	3.7	3.9	3.6	3.7	3.1	3.0	3.0	3.7

## 4.2 How do Japanese students who have had interactions with Asian students come to view their English and Asian Englishes?

### 4.2.1 CCDL Course Evaluation Questionnaire Survey

In this section we report on some of the results of the CCDL Course Evaluation Questionnaire Survey (see Owada et al., 2012). The purpose of this survey was to investigate how Japanese students who engaged in cross-cultural interactions with Asian counterparts came to perceive their own English and Asian Englishes. This survey, which consists of 54 items written in Japanese, was administered to 92 students at the end of CCDL Courses in the spring semester of the academic year 2012. The mean age of the participants was 20.41 years old (Range: 19-24). Out of 92, 54 students reported their TOEIC scores, whose mean score was 777.80 (SD = 107.25).

Here we focus on the four items related to Japanese students' perception toward varieties of English: Japanese English, Asian Englishes, and native English. The students responded to each of the four items on the scale of 7, with 1 being 'strongly disagree' and 7 being 'strongly agree.' In the following discussion we regarded 5 and more as 'agree,' 4 as 'neither agree nor disagree,' and 3 and less as 'disagree.'

The four items and one sample scale are the following:

Item 26: Through the CCDL Course, I got to realize that we can speak English with some Japanese accent as long as we can communicate effectively.

1-----2-----3-----4-----5-----6-----7

Strongly disagree strongly  
agree

Item 27: Through the CCDL Course, I got to realize that Asian people can speak English with their own accent as long as they can communicate effectively.

Item 28: Through the CCDL Course, I got to realize that we need to make my English closer to native-like pronunciation in order to communicate effectively.

Item 29: Through the CCDL Course, I got to realize that Asian people need to make their English closer to native-like pronunciation in order to communicate effectively.

#### 4.2.2 Analysis of the four items

We analyze the four items in contingency tables of items 26 and 28 as well as items 27 and 29 in order to find out how the Japanese students came to view their English model. Items 26 and 28 were intended for what the Japanese students think is their ideal English model. As in Table 11, 25 out of 92 students (27%) responded that while they should aim for native-like pronunciation, they should accept Japanese accent.

Table 11: What do Japanese students think is their ideal English mode? (N = 92)

		Item 28. native-like pronunciation		
		Disagree	Neither agree nor disagree	Agree
Item 26. Japanese accent	Disagree	0	5	19
	Neither agree nor disagree	4	2	10
	Agree	20	7	25

Items 27 and 29 were intended for what the Japanese students think is the ideal English model for Asians. Table 12 shows that 25 out of 92 students (27%) showed their agreement for both Japanese accent and native-live pronunciation. In other words, they seemed to believe that both Japanese accent and the native model can coexist in the cross-cultural setting.

Table 12: What do Japanese students think is the ideal English mode for Asians?  
 (N = 92)

		Item 29. native-like pronunciation		
		Disagree	Neither agree nor disagree	Agree
Item 27. Asian accent	Disagree	0	5	14
	Neither agree nor disagree	2	9	6
	Agree	22	9	25

### 4.2.3 Findings

As we have seen, less than one third of the students (27%) showed positive attitudes toward both Japanese accented English and native-like pronunciation for both the Japanese and Asians. It seems that they became aware of the importance of ELF (English as a Lingua Franca) through interactions with Asian students. At the same time, however, they felt the need to speak English with native-like pronunciation. Therefore, we can argue that students have come to recognize the importance of Japanese English in particular and Asian Englishes in general while aiming for a native variety as their model for English in the cross-cultural setting provided by the CCDL Courses. In future research, we plan to investigate what kind of thought processes in the actual ELF context of the CCDL Courses lead to the necessity of balancing competing goals for Asian Englishes and native-like pronunciation

## References

- He, D., & Miller, L. (2011). English teacher preference: the case of China's non-English-major students. *World Englishes*, 30, 3, 428-443.
- Hung T. N. T. (2007). English as a global language: The teaching of pronunciation. In M. Nakano (ed.), *World Englishes and Miscommunications*. Tokyo: Waseda University International. 3-12.
- Kachru, B. B. (1992). *The other tongue English accross cultures*. 2nd edition. Illinois: University of Illinois Press.
- Kirkpatrick, A. (2009). English as the international academic language: implications for 'other' knowledge. In F. Sharifian (Ed.) *New Perspectives on Language and Education Clevedon*. Multilingual Matters: 254-270.
- Kirkpatrick, A. (2010). *English as a Lingua Franca in ASEAN: A Multilingual Model*. Hong Kong: Hong Kong University Press.
- Kirkpatrick, A. (2012). English as an International Language in Asia: Implications for language education. In Kirkpatrick, A. & Sussex, R (Eds.). *English as an International Language in Asia: Implications for language education*. Dordrecht: Springer.
- McKay, S. L. (2002). *Teaching English as an international language*. Oxford: OUP.
- Seidlhofer, B. (2004). Research perspectives on teaching English as a lingua franca. *Annual Review of Applied Linguistics*, 24, 209-239.
- Smith, L. E. (1976). English as an International Auxiliary Language. *RELIC Journal*. 38-42.
- Owada, K., Ueda, N. & Yoshida, S. (2012, December). *Nihonjindaigakuseino ajiano daigakuseinitaisuru ibunkarikai —eigoo baikaitoshita ibunkakoryukurasuniokeru gakushukokasokuteio mezashite* [Cross-cultural understanding between Japanese and Asian university students: Measuring the learning effect in English-medium cross-cultural classes]. Paper presented at the 31st National Conference of the Japanese Association for Asian Englishes (JAFAE), Tokyo.
- Widdowson, H. G. (2003). *Defining issues in English language teaching*. Oxford: OUP.

*Problems and Advantages of Children with Filipino Parents in Their School Lives in the Philippines and in Japan: Through Their Experiences in both Countries*

Kimi Yamoto

Osaka University, Japan

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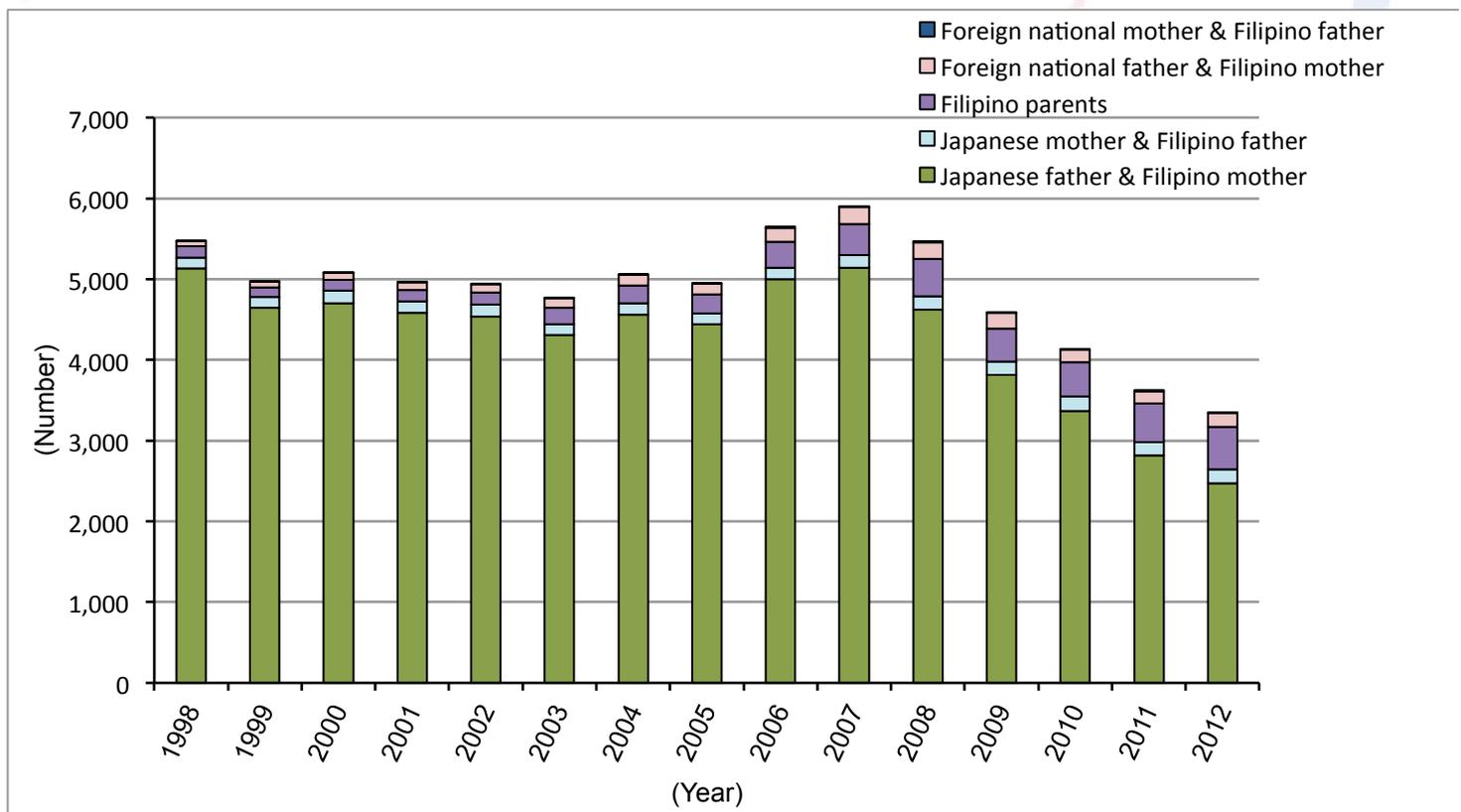
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### 1. Background and Objective

Nowadays not only people called “oldcomers” who have lived in Japan as a result of Japanese colonial policies, mainly Koreans and their descendants, but also many foreign people and their children called “newcomers” who have arrived in Japan relatively in recent years since the late 1970s live in Japan.

According to statistics, there were 2,033,656 foreign nationals in Japan as of December 31, 2012 (Ministry of Justice 2013a). 202,974 were Filipino nationals and 27,496 among them were under the age of 20. Moreover, 62,009 stayed in Japan unregistered as of January 1, 2013. Of the unregistered foreigners, 5,722 were Filipino nationals (Ministry of Justice 2012b), some of whom were presumably children under the age of 20.

There are also many children who were born to one or both of whom were foreign nationals. The number of babies born in Japan in 2012 to parents one or both of whom were foreign nationals was 31,748. This is approximately three percent of the total number of babies born in Japan. The number of babies born in Japan in 2012 to parents one of whom is a foreign national was 20,536. Among them, 2,474 had Filipino mothers while 169 had Filipino fathers (MHLW 2013b). On the other hand, the number of babies born in Japan in 2012 to parents both of whom were foreign nationals was 11,212. Among them, 529 had both Filipino mothers and fathers, 171 had Filipino fathers and mothers of another foreign nationality, and nine had Filipino mothers and fathers of another foreign nationality (MHLW 2013a). The number of babies born to parents one or both of whom were Filipino was 72,939 in fifteen years from 1998 to 2012 (Figure 1).



Many newcomer children came to Japan because of their parents' international marriage or because of their parents' job also attend school. The number of school-age children, especially those born to Filipino parents who attend public schools has been increasing yearly.

According to the 2012 statistics (MEXT 2013), 27,013 foreign national students who needed Japanese instruction were enrolled in Japanese public school system at different levels: elementary, junior high, senior high, secondary<sup>i</sup>, and schools for children with special needs<sup>ii</sup>. 4,495 or more than sixteen percent of the total speak Filipino<sup>iii</sup> as their native language. The number of Filipino speakers has increased almost sevenfold in the past fifteen years (Figure 2), and now, Filipino is the third most common foreign language after Portuguese and Chinese. The number of Japanese national students who needed Japanese instruction by native language is undisclosed but it is presumed that many children of Japanese nationality who speak Filipino as their native language are also enrolled in public schools.

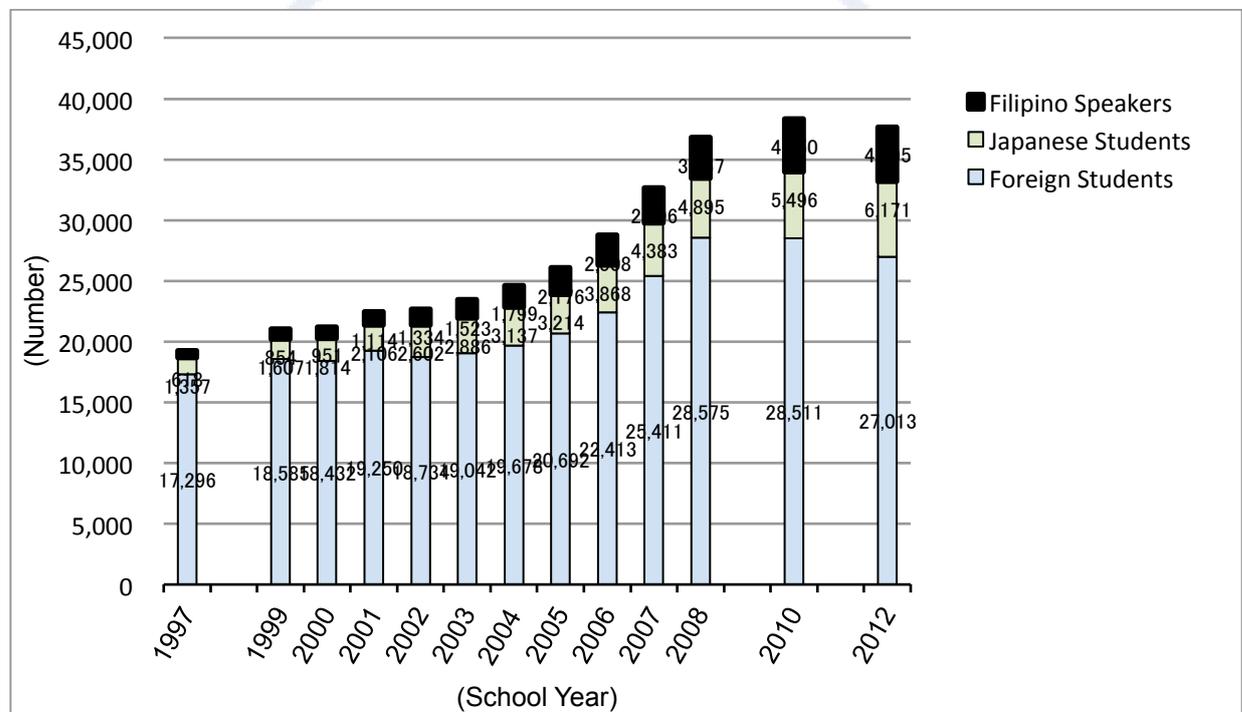


Figure 2: Number of Students in Public School Who Need Japanese Language Instruction (Ministry of Education, Culture, Sports, Science and Technology [MEXT] 1997, 1999 to 2008, 2010, 2012)

Many foreign students encounter the following problems: 1) adapting to schools and to society; 2) language issues, like learning Japanese and preserving their native language; 3) academic achievement and future course; and, 4) ethnic identities (Shimizu & Shimizu 2001, p.15). In 1989 the Japanese government started to adopt measures regarding the education of new-comer foreign children. Various policies have been carried out mainly by local governments for the education of foreign children. 'The assimilation policies regarded foreign children only as temporary residents and were formulated based on Japanese school and education' (Sato 2010, p.136). Such measures include the development of Japanese language textbooks and curriculum for teaching Japanese language, the production and distribution of

teachers' manuals and materials for teaching foreign students, and the publication of a guidebook for starting school (translated in several languages), the placement of additional teachers, the dispatch of personnel with the ability to use the mother tongues of foreign students to schools to work with teachers, etc. One new development is a policy established by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) aimed at revising the School Education Act in fiscal year 2013 to include the teaching of the Japanese language to foreign students in the formal curriculum from academic year 2014.

In addition to the issues mentioned above, children with Filipino parents also face a number of other challenges such as transnational moves (e.g., actual cross-national moves), family issues, nationality or residential status, and identity struggles. The patterns of their move vary, and the choice of move and career also vary. At home, some have difficulties in building relations with their mothers who had lived separately for many years and with their fathers-in-law and siblings in-law.

It is important to recognize their problems and to seek solutions. At the same time it is also possible to shed light on where the children feel happiness and what they regard as advantages of studying in each country to consider what is needed and how education can support them. It is also necessary to consider education not only from the perspective of children who settle or will settle in Japan but also children who move to and from a different country.

The objective of this study is to point out the areas where children feel difficulties and happiness in their school lives and studies in the Philippines and in Japan, what they regard as advantages of studying in either country and what they desire and what kind of support they need in Japanese school education system through interviews with the children who are now experiencing or have experienced going to school both in the Philippines and in Japan. I obtained some feedback on my presentation similar in objective of study to this paper at The 18th Annual Young Scholars' Conference on Philippine Studies in Japan at Kobe College in Hyogo, Japan on July 6, 2013. Some parts of this study will be published in the Bulletin of Global Human Studies (2013) by the Graduate School of Human Sciences, Osaka University.

In this paper, the term "children with Filipino parents" is defined as children where one or both parents are Filipino nationals or citizens who come from the Philippines. The backgrounds of these children vary. Among these, the author deal with those who are getting or had gotten primary or/and secondary education in Japanese public or private schools.

## 2. Review of Related Literature

### (1) Problems in the Education of Foreign Children and Newcomer Children in Japanese Schools

With regards to their school attendance, problems arise in connection with the obligation to send children to school, the appropriate school level for children, and attendance or non-attendance problems of unregistered foreign children. There are also children who do not attend schools for the ff. reasons: they are unregistered foreigners, their parents are not obliged to send them to school as they are foreigners,

or the level of difficulty of the lessons and the lack of friends at school (Ota 2000; Sato 2010).

Language is also regarded as one of the major issues. Miyajima (2002, p.132) points out that 'the problem is not the Japanese language used in daily social life [snip] but Japanese language that is used inside the classroom (language used in subjects)'. It is necessary to support the children with their Japanese language proficiency which is difficult to acquire but is necessary to understand the lessons. On the other hand, it is also important to maintain and to improve their mother tongue or first language because it plays an important role in developing their cognitive abilities and forming their identities. Ota (2002, p.303) mentions that not only learning one's mother tongue but also learning using it should be made a reality.

Teachers try to make the children adjust in schools along with the teaching of the Japanese language. Ota (2000, p.297) mentions that 'the children's reactions to this kind of process vary but it is true that different conflicts and problems arise'. In recent years, the children's future courses have been recognized as one of the important issues (Sato 2010; Shimizu 2001).

Children with Filipino parents also deal with these problems. In order to determine the necessary educational support that should be given to these children, we should not look at the problems they encounter but also the things that they enjoy in their school lives as well as what they regard as advantages of studying in Japan. Many of the existing studies focus on children who reside or will reside permanently in Japan. Since some children living in Japan move between Japan and other countries or will move to another country in their future, it is also necessary to consider education from the perspective of these children.

## (2) Problems in the Education of Children with Filipino Parents in Japan

Some of the previous studies concerning education of children with Filipino parents in Japan are: studies on the children's school experience and difficulties at school (Umezawa & Tsuchiya 2003; Yano 2011; Takahata 2011a; Takahata 2011b), studies on the education of children without foreign resident registration (Iwamoto 2005), studies on the influence of the parents' educational consciousness and family relationships on the children's education (Nishiguchi 2005; Tokunaga 2008; Tsunogae, Iegami & Shimizu, 2011; Nukaga 2012; Miura 2013; Shikita 2013).

In the literature mentioned above, it is found that a new system and a new type of practice are needed for the education of children with Filipino parents. These should be implemented by respecting cultural differences and the diversity of identities, and by considering the children's career options. Where the children encounter difficulties and happiness in their school lives and studies in Japan, and what they regard as advantages of studying in each country have not yet discussed much. It is important to think what is needed in educational support for the children with Filipino parents based on their points of view.

## 3. Target and Survey Methodology

The author selected fourteen interviewees who have Filipino parents and have

attended school both in the Philippines and in Japan. Interviews were held from December 2012 to March 2013. The interviewees' age is equivalent to a junior high school student or over, they have stayed or stay in Japan more than six months and have studied or are studying at schools in Japan. The researcher has known some of the interviewees for some time and the other interviewees were introduced to the researcher by her acquaintances<sup>iv</sup>.

The researcher conducted semi-structured interviews with them. Although the questions were arranged in an orderly fashion, the interviewer did not follow its order strictly and asked the questions following the flow of conversation to let the interviewees feel at ease in responding. Therefore, some parts of the interviews were more unstructured. Interviews were done face-to-face and one-on-one except for some interviews with two siblings and together with the child's family at the same time. Four of the interviews were done with one more Japanese graduate student. Each interview took an hour to two hours. One interview was conducted twice and the rest of the interviews were done only once. The language that was used in the interview is one or a mix of Filipino, Japanese, and/or English.

The profiles (age, sex, nationality, country of residence, area of residence in the Philippines and in Japan, and occupation) are shown in table 1.

Table 1: Interviewee Profile

	Age	Sex	Nationality	Country of Residence	Area of Residence (Prefecture) in Japan	Area of Residence (Province) in the Philippines	Occupation
A	20	M	Filipino	Japan	Osaka	Metro Manila / Cavite / Negros Occidental	Senior High School Student
B	17	F	Japanese / Filipino	Japan	Osaka	Negros Occidental	Senior High School Student
C	17	M	Japanese / Filipino	Philippines	Osaka	Negros Occidental	High School Student
D	17	F	Filipino	Japan	Osaka	Negros Occidental	Senior High School Student
E	19	M	Japanese	Japan	Hyogo	Metro Manila	In Preparation for Studying Abroad
F	27	M	Filipino	Philippines	Shizuoka	Metro Manila	Own Business
G	17	F	Filipino	Philippines	Osaka	Zambales / Metro Manila	College Student
H	19	F	Japanese / Filipino	Philippines	Osaka	Metro Manila	In Preparation for Entering College
I	19	M	Japanese	Philippines	Osaka	Metro Manila	College Student
J	20	F	Filipino	Philippines	Nagasaki	Metro Manila	College Student
K	18	F	Filipino	Philippines	Hyogo	Metro Manila	College Student
L	13	M	Japanese	Philippines	Fukuoka	Laguna	Elementary School Student
M	20	F	Filipino	Philippines	Aichi / Hyogo	Metro Manila	College Student
N	30	M	Filipino	Philippines	Aichi / Hyogo	Metro Manila	Freelance

Of the fourteen, seven are males and seven others are females with ages ranging from thirteen to 30. Eight are Filipino nationals, three are Japanese nationals and three have dual nationality. Only one of them is married. Interviewee B and C are twins and M and N are siblings. Ten live in the Philippines and four live in Japan when they were interviewed.

In Japan, seven of the interviewees live or had lived in Osaka, two in Hyogo, one each in Shizuoka, Nagasaki and Fukuoka. The remaining two have moved inside Japan and one of them had lived in Aichi and Hyogo, and the other had lived in Aichi and Tokyo. In the Philippines, on the other hand, eight of them live or had lived in Metro Manila, three in Negros Occidental, one in Laguna. The remaining two have moved inside the Philippines and one of them had lived in Metro Manila, Cavite and Negros Occidental, and the other in Zambales and Metro Manila. All interviewees reside or had resided in urban areas both in Japan and in the Philippines.

The percentage of non-Japanese residents in the cities where they live or had lived in Japan except for interviewee J and L is the 2.0% to 3.0% and it is above the national average 1.6% (Ministry of Justice 2013a). On the other hand, in the cities where interviewee J and L lived before, the percentage of non-Japanese residents is below 1.0%.

Table 2 shows the interviewees' country of birth, the move between the Philippines and Japan and their age when they moved, reasons to move, and experience of school education.

Table 2: Move between the Philippines and Japan and Experience of School Education

	Country of Birth	Move between the Philippines and Japan	Reason to Move	Experience of School Education
A	P	From the Philippines to Japan at the age of 15 (Temporarily stayed in Japan for about 6 months at the age of 11 and in the Philippines at the age of 20)	To live with family	[P] Private E.S.→Another private E.S.→Private H.S.→[J] Night J.H.S.→Public S.H.S.
B	P	From the Philippines to Japan at the age of 14 (Temporarily stayed in Japan for about 2 months at the age of 13 and in the Philippines once at the age of 15 and twice at the age of 16)	To live with mother	[P] Private E.S.→Private H.S.→[J] Public J.H.S.→Public S.H.S.
C	P	From the Philippines to Japan at the age of 14 From Japan to the Philippines at the age of 16 (Temporarily stayed in the Philippines at the age of 16 and in Japan at the age of 17)	To live with mother For schooling	[P] Private E.S.→Private H.S.→Public H.S.→[J] Public J.H.S.→Public S.H.S.→[P] H.S.
D	P	From the Philippines to Japan at the age of 13	To live with mother	[P] Private E.S. (transferred several times)→Private H.S.→[J] Japanese Language School→Public J.H.S.→Private S.H.S.
E	P	From the Philippines to Japan at the age of 11 (Temporarily stayed in the Philippines once a year while living in Japan)	Because of father's job	[P] Private E.S.→Another private E.S.→[J] Public E.S.→Public S.S.→Private College (quitted)
F	P	From the Philippines to Japan at the age of 10 From Japan to the Philippines at the age of 19 From the Philippines to Japan at the age of 21 From Japan to the Philippines at the age of 27	To live with mother To study drawing To work in Japan To work in the Philippines	[P] Public E.S.→[J] Public E.S.→Public J.H.S. (graduated)
G	P	From the Philippines to Japan at the age of 10	To live with mother	[P] Private E.S.→[J] Public

		From Japan to the Philippines at the age of 12	For schooling	E.S.→[P] Private H.S.→Private College
H	P	From the Philippines to Japan at the age of 6 From Japan to the Philippines at the age of 19 (Temporarily stayed in the Philippines once a year while living in Japan when studying in elementary school and at the age of 16)	Judge of parents (better to live in Japan) For schooling	[J] Public E.S.→Another Public E.S.→Public J.H.S.→Vocational School (graduated)
I	J	From Japan to the Philippines at the age of 6 From the Philippines to Japan at the age of 14 From Japan to the Philippines at the age of 18 (Temporarily stayed in the Philippines about twice while living in Japan)	Due to family matter Due to family matter For schooling For schooling	[J] Public E.S.→[P] Private E.S.→[J] Public J.H.S.→Public S.H.S.→[P] Private College
J	J	From the Philippines to Japan at the age of 7 From Japan to the Philippines at the age of 9 From the Philippines to Japan at the age of 15 From Japan to the Philippines at the age of 16 (Temporarily stayed in Japan once a year while living in the Philippines)	Because of father's job For schooling For schooling For schooling	[P] Private E.S.→[J] Private E.S.→[P] Private E.S.→Private H.S.→[J] Private J.H.S.→[P] Private H.S.→Private College
K	P	From the Philippines to Japan at the age of 9 From Japan to the Philippines at the age of 13 (Temporarily stayed in Japan once a year while living in the Philippines)	To live with mother Due to family matter	[P] Private E.S.→Another private E.S.→Public E.S.→[J] Public E.S.→Public S.S.→[P] Public H.S.→Private H.S.→Private College→Another Private College
L	P	From the Philippines to Japan at the age of 7 From Japan to the Philippines at the age of 9	Because of father's job Because of father's job	[P] Private E.S.→[J] Public E.S.→[P] Private E.S.
M	J	From Japan to the Philippines at the age of 13 (Temporarily stayed in the Philippines once a year while living in Japan)	Because of father's job	[J] Public E.S.→Another public E.S.→Public S.S.→[P] Private H.S.→Private College
N	P	From the Philippines to Japan at the age of 9 From Japan to the Philippines at the age of 11 From the Philippines to Japan at the age of 12 From Japan to the Philippines after graduating college (Temporarily stayed in the Philippines once a year while living in Japan)	Because of father's job For schooling For schooling For getting job	[P] Private E.S.→[J] Public E.S.→[P] Private E.S.→[J] Private J.H.S.→Private S.H.S.→National College (graduated)

Only two of the interviewees were born in Japan and the remaining twelve were born in the Philippines. The age when they moved between the Philippines and Japan varies. Five of them moved only once and the other nine moved some times. Ten of them had stayed temporarily in the Philippines or in Japan when they had lived in the other country and some come and go at regular intervals for temporary stay.

The main reasons why they moved from the Philippines to Japan before they became 20 years old are to join their family, especially to live with their mothers who had been staying in Japan. The mothers left their children in the care of their relatives in the Philippines then they brought them to Japan after some years. Some moved to Japan because of their fathers' jobs. In this case fathers also moved to Japan before their children and wives did.

With regards to transfer of residence from Japan to the Philippines, most of the reasons are school-related. They themselves chose or had no other choice to study in the Philippines when they were in elementary or junior high school, or before they went on to senior high school or college. Others moved to the Philippines with their family because their fathers lost the opportunity to work in Japan.

All of them experienced transferring from schools in the Philippines to schools in Japan or vice versa in their primary or secondary education. Two of them transferred from schools in the Philippines to schools in Japan then moved again to schools in the Philippines during their grade-school years. Some of them transferred to another school inside the Philippines even though they did not change their address.

#### 4. Results of Survey

In this paper, the author will present: 1) Difficulties in school life, 2) Happiness in school life, and 3) What they regard as advantages of studying in each country, among what they mentioned with regards to their school lives in the interviews.

##### (1) Difficulties in School Life

###### (a) Difficulties Related to the Language Differences

They had difficulties related to the language differences when they moved from the Philippines to Japan and vice versa. All interviewees except three knew only basic expressions or none when they moved to Japan. Regarding the interviewees' Japanese language proficiency at the time of the interviews, six were at or nearly N1 level of the Japanese-Language Proficiency Test<sup>v</sup>, six were nearly N3 level or answered that they did not have problems in daily conversation but had difficulties in reading, writing and kanji (Chinese characters), and two answered that they can understand Japanese a little. The interviewees who receive or had received regular Japanese language instruction or who are or were encouraged to take the Japanese-Language Proficiency Test at school acquired relatively high proficiency.

The interviewees who had little knowledge about Japanese language when they entered Japanese schools had a hard time communicating with the others, building relations with their friends and studying. Even when they became able to communicate to some extent, they had difficulties in studying.

“The only word I knew when I came to Japan was ‘Thank you’. I became able to speak a little after studying at Japanese language school for six months. I couldn't make friends because I wasn't able to speak Japanese well. They answered when I talked to them but I couldn't make conversation. [snip] I was frustrated and tried hard to talk fluently at senior high school then I could make it.” (Interviewee D)

“It was hard to study in Japanese and I couldn't understand lessons. I can study much better in the Philippines.” (Interviewee G)

Aside from the difficulties in communicating and studying, some interviewees mentioned that they had something to give up because of the lack of Japanese competence. Interviewee I could not help but give up the school club activity because he had to study Japanese after school when he was in junior high school, and he had trouble with his teacher in senior high school because the teacher told him to study Japanese after school even though he wanted to join the club activity.

“In senior high school, Japanese language teacher taught us after school once a week and I studied with Korean and Chinese students. I had wanted to join the club but I

had to study after school so I had a little trouble with my teacher. [snip] I joined basketball club in junior high school. As our school team was strong, we had practices until seven at night. As the teacher in charge was also strict, I left the club then used time to study Japanese and kanji.” (Interviewee I)

Interviewee J wished to go to university because her father still had to work in Japan for a couple of years. However she had no choice but give it up because of her lack of Japanese competence so she went back to the Philippines with her mother.

“I wanted to go to college in Japan but it was difficult to go to senior high school because of my Japanese. My junior high school teacher recommended me to go to international school if I continued to live in Japan. But international school costs much so I came back to the Philippines with my mother.” (Interviewee J)

Both Filipino and English<sup>vi</sup> are used as the medium of instruction in the Philippines. If they could not maintain or develop the competence in Filipino and English during their stay in Japan, they also had difficulties in communicating and studying in the Philippines. Some find it difficult to handle both languages.

“When I came back to the Philippines, English, history and math were difficult because the terms used in subjects were completely different.” (Interviewee G)

“After coming back to the Philippines, I entered the first year high school. They didn’t give me special consideration. I didn’t want to go to school. About Filipino language class, I attended a class with different curriculum only when I was in the first year. When I turned the third year, I could speak and understand Filipino.” (Interviewee M)

#### (b) Difficulties Related to Bullying and Prejudice

Some of the interviewees were not bullied at all and half of them mentioned of bullying and prejudice. Those who were bullied or was not accepted by the others wish that all bullying would stop.

“It was hard to be bullied. I hope schools in Japan prevent all bullying. Some commit suicide because they are bullied. I cannot challenge bullying.” (Interviewee B)

“I was bullied by boys. They didn’t bully specific students but attacked other girls and even teachers verbally and with violence. They even turned desks inside out. They also told me ‘Why are you Filipino here’. The boys didn’t listen to the teacher. [snip] I hope all bullying can be prevented because bullying has traumatic effect on the one who was bullied.” (Interviewee G)

Interviewee C entered senior high school where many other Filipino students in the similar situation also study and some of them also bully her. Interviewee F mentioned that he had been bullied both in the Philippines and in Japan.

“In senior high school (in Japan), I was bullied also by other Filipinos.” (Interviewee C)

“Both in Japan and in the Philippines I was bullied by teasing and violence.”

(Interviewee F)

In the Philippines, interviewee K had trouble with people who approach her for her money because people in the Philippines believe that Japanese have money. She mentioned that it was difficult for her to judge whom she can trust and she cannot make much friends.

“I don’t tell I am Japanese. I don’t make friends much because I don’t want the others approach me for money.” (Interviewee K)

Interviewee H boasted about her Filipino mother when she was in Japan but she felt that the image of the Philippines in Japan was not good. Even though she answered when her friends asked her about the Philippines, she did not like to be asked.

“I was not bullied but the image of the Philippines in Japan wasn’t good so I didn’t like to be asked ‘How is it in the Philippines?’” (Interviewee H)

(2) Happiness in School Life

The relationship with friends has a great influence on whether they are able to enjoy their school life. Interviewee E could learn Japanese naturally as his friends in Japan were nice to him. Interviewee G mentioned that her female friends had been kind and she often had played with them even though she had been bullied by boys.

Some of the interviewees who had a chance to get together with the other Filipino students or who were able to go to a school where there are also a number of Filipino students mentioned that spending time with Filipino friends was enjoyable. Many of them felt grateful that their teachers were kind.

“Mother tongue class was fun. Being with Filipinos is enjoyable.” (Interviewee B)

“It is usual that I have Filipino friends around. I have fun at school as there are many Filipinos and teachers are also easy to approach and kind.” (Interviewee A)

In Japan, interviewee E and M studied at the school where students with various nationalities studied together. They mentioned that it was good to experience different cultures and to find interest in the Philippines which they had not been interested in before.

“It was good to feel various cultures close to me. For example, I had a Muslim friend. There are also Muslims in the Philippines but I didn’t have relationship with them.” (Interviewee E)

“Japanese students also had chance to know about the Philippines and it was good. I wasn’t interested in the Philippines when I lived in Japan but became interested in it from then.” (Interviewee M)

### (3) What They Regard as Advantages of Studying in Each Country

With regards to the advantages of studying in Japan, many positive comments were made about systems, facilities and disciplines. The interviewees mentioned that they could acquire basic academic skills and experience various kinds of activities.

“I think teachers’ way to teach and small size of the class are good in Japan. Japanese schools also have disciplines like duties. It was good to experience various kinds of sports and I could build my physical strength in P.E. [snip] Japanese school is more advanced in math and it was good.” (Interviewee K)

“Japanese school gets organized, is strict and well-grounded in each subject. The basic is firm and the way of teaching is well organized. [snip] It is good that students can experience various activities.” (Interviewee M)

“In Japan the lessons except for English were good. [snip] I learned sports and club activities in Japan. It was interesting to know there are many sports other than basketball. [snip] Students can absorb (various things). Teachers can tell all they know to their students. It is good that students can be disciplined as entrance exam system is well-organized.” (Interviewee I)

“When I came back to the Philippines, the learning contents in math class were easy.” (Interviewer N)

Some of the interviewees mentioned that they had chances to know Japanese language and culture.

“It was good to know the language and culture. On the other hand, the interruption of studying each subject was a disadvantage.” (Interviewee G)

Interviewee I found English classes in Japan distressing because his English skill was much higher than that of his teachers’ and classmates’ but also recognized the positive aspect of language situations in Japan.

“It cannot be helped with English (in Japan). If they made too many efforts (on English) and Japanese were influenced by English, national language will be unconfirmed like in the Philippines. The Philippines depends on the culture of US etc. [snip] I think Japan maintains its culture and language well. The way of thinking is influenced by language, right? [snip] So my thinking power improved when I acquired Japanese.” (Interviewee I)

To them, the biggest advantage of studying in the Philippines is that they are able to acquire English.

“Studying in college in the Philippines is better. [snip] English is a determining factor after all. Filipinos’ pronunciation is good.” (Interviewee H)

“I thought before I should have taken entrance exam in Japan. [snip] It would have been better if I could study in the system of Japanese universities but it should be here (the Philippines) to improve English skills.” (Interviewee I)

## 5. Discussion

All interviewees have moved between the Philippines and Japan and also have transferred to another school in the other country. They do not live and study in one location but their experiences are in a fluid situation. Even though they have difficulties in school life in both countries, they appreciate and give importance on their experiences and advantages.

It became clear that the children are faced with language-related problems if they enter Japanese schools with little knowledge about Japanese language which is the same as the other foreign national children and newcomer children. They have difficulties in acquiring especially terms in each subject and because of it they cannot choose the career options they want. It is reasonable that doing more study support for those who wish to access to higher education or to obtain employment to help them in their school subjects is necessary. On the other hand, some of the interviewees try to choose their career options not only in Japan like going to high school and college in the Philippines or in the other countries. Some also chose not to go to college but to learn skills or to get jobs. It is necessary to support them to choose the career options which they want and depending on circumstances.

With regards to bullying, some faced serious bullying and some were not bullied at all. Whether they experienced bullying or not may have a negative impact in their school life. It is also important not only let them spend enjoyable school life with Japanese friends but also give them the chance to experience various cultures close to them and to have relationship with the children who are in a similar situation.

It also revealed that many of the interviewees have positive opinions regarding Japanese school system and disciplines. The interviewees also pointed out that some of the advantages of studying in Japanese schools were acquisition of basic academic skills and various kinds of experience. More effective educational support can be provided not only by introducing new systems or new types of practice which are mentioned as necessary measures but also by making use of what they regard as advantages of studying in Japanese schools such as teachers' teaching and guidance, basic academic skills, and other various activities.

The interviewees in this research live in relatively large urban areas and many of them have gotten some support from school especially by Japanese language teachers and people who can speak their native language. The author will interview the others whose schools are/were in non-urban areas and without support systems. Further research needs to be done on the difference of their difficulties and happiness depending on the nationality of the children and their parents', whether they get some support from school or not, and whether there are other foreign students in their schools or not.

## &lt;Reference&gt;

- Ministry of Justice 2013a, *Heisei 24 nen Matsu Genzai ni Okeru Zairyu Gaikokujin Tokei (On Statistics of Foreign Residents as of the End of 2012)*, Accessed 22th November 2013, <http://www.e-stat.go.jp/SG1/estat/eStatTopPortal.do>
- Ministry of Justice 2013b, *Hompo ni Okeru Fuho Zanryushasu ni Tsuite (On Number of Foreign Nationals Staying Illegally in Japan)*, Accessed 22th November 2013, [http://www.moj.go.jp/nyuukokukanri/kouhou/nyuukokukanri04\\_00031.html](http://www.moj.go.jp/nyuukokukanri/kouhou/nyuukokukanri04_00031.html)
- Iwamoto, K 2005, 'Kokusai Kodomo Gakko no Ayumi: Filipin-jin no Kodomotachi to Tomoni (Progress of the Ecumenical Learning Center for Children: With Filipino Children)', *Kaiho Kyoiku (Liberation Education)*, vol. 456, pp.31-37.
- Japan Foundation and Japan Educational Exchanges and Services 2013, *What is the Japanese-Language Proficiency Test?*, Accessed 22th November 2013, <http://www.jlpt.jp/about/index.html>
- Ministry of Health, Labour and Welfare (MHLW) 2012a, *2011 Vital Statistics of Japan, Legitimate Live Births by Nationality of Father and Mother*, Accessed 22th November 2013, <http://www.e-stat.go.jp/SG1/estat/eStatTopPortal.do>
- Ministry of Health, Labour and Welfare (MHLW) 2012b, *2011 Vital Statistics of Japan, Trends in Live Births and Percent Distribution by Nationality of Father and Mother: Japan*, Accessed 22th November 2013, <http://www.e-stat.go.jp/SG1/estat/eStatTopPortal.do>
- Miura, A 2013, 'Philippine kei Newcomer no Network Keisei to Shakai Shigen: Kaji Rodosha no Hahaoya ni Chumokushite (Filipino Newcomers' Network Formation and Social Resources: Focused on Household Worker Mothers)', *Ibunkakan Kyoiku (Intercultural Education)*, vol.37, pp.116-126.
- Miyajima, T 2002, 'Shugaku to Sono Zassetsu ni okeru Bunka Shihon to Dokizuke no Mondai (Problems of Cultural Capital and Motivation in School Attendance and the Setback)', in T Miyajima & H Kano (eds), *Henyosuru Nihon Shakai to Bunka (Changing Japanese Society and Culture)*, Tokyo Daigaku Shuppankai, Tokyo, pp.119-144.
- Ministry of Education, Culture, Sports, Science and Technology (MEXT) 2013, *Nihongo Sido ga Hitsuyona Gaikokujin Jido Seito no Ukeire Jokyo to ni Kansuru Chosa (Heisei 24 nendo) no Kekka ni Tsuite [Gaiyo] (On Results of Research on Conditions etc. of Acceptance of Foreign National Students Who Need Japanese Instruction (School Year 2012) [Summary])*, Accessed 22th November 2013, [http://www.mext.go.jp/b\\_menu/houdou/23/08/\\_icsFiles/afieldfile/2011/08/16/1309275.pdf](http://www.mext.go.jp/b_menu/houdou/23/08/_icsFiles/afieldfile/2011/08/16/1309275.pdf)
- Nishiguchi, R 2005, 'Yuragu Boshi Kankei no Naka de: Filipin-jin no Kodomo no Ikiru Kankyo to Shugaku Mondai (In Undermining Mother-Child Relationship: Environment Where Filipino Children Live and Issues of Their School Attendance)', in T Miyajima & H Ota (eds), *Gaikokujin no Kodomo to Nihon no Kyoiku: Fushugaku Mondai to Tabunka Kyosei no Kadai (Foreign Children and Japanese Education: Issues of Non-School Attendance and Problems of Multicultural Coexistence)*, Tokyo Daigaku Shuppankai, Tokyo, pp.171-189.
- Nukaga, M 2012, 'Transnational na Kazoku no Saihen to Kyoiku Ishiki: Philippine kei Newcomer o Jirei ni (The Reconstruction of Transnational Families and Their Educational Attitudes: A Case Study of Filipino Newcomers in Japan)', *Wako Daigaku Gendai Ningengakubu Kiyo (WAKO University Bulletin of the Faculty of Human Studies)*, vol.5, pp.7-22.
- Ota, H 2000, 'Newcomer no Kodomo no Gakko Kyoiku: Nihonteki Taio no Saiko (Newcomer Children's School Education: A Study on Japanese Way of

- Response)', in T Ehara (ed.), *Tabunka Kyoiku no Kokusai Hikaku (International Comparison of Multicultural Education)*, Tamagawa Daigaku Shuppambu, Tokyo, pp.284-307.
- Ota, H 2002, 'Kyoiku Tassei ni okeru Nihongo to Bogo (Japanese Language and Mother Tongue on Achieving Education)', in T Miyajima & H Kano(eds), *Henysuru Nihon Shakai to Bunka (Changing Japanese Society and Culture)*, Tokyo Daigaku Shuppankai, Tokyo, pp.93-118.
- Sato, G 2010, *Ibunkakan Kyoiku: Bunkakan Ido to Kodomo no Kyoiku (Intercultural Education: Transfers Among Cultures and Children's Education)*, Akashi Shoten, Tokyo.
- Shikita, K 2013, 'Kokusai Kekkon Katei no Kyoiku ni Kansuru Genjo to Kadai: Kekkon Imin Josei ni Shoten o Atete (Education of Multicultural Families in Japan: Focusing on Female Marriage Migrants)', *Imin Seisaku Kenkyu (Migration Policy Review)*, vol.5, pp.113-129.
- Shimizu, K & Shimizu, M (eds) 2001, *New-comer to Kyoiku: Gakko Bunka to Ethnicity no Katto o Megutte (New-comer and Education: Over Conflicts Between School Culture and Ethnicity)*, Akashi Shoten, Tokyo.
- Takahata, S 2011a, 'The 1.5-Generation Filipinos in Japan: Focus on Adjustment to School System and Career Development', *Gendai Shakaigaku (Contemporary Sociology)*, vol.12, pp.33-46.
- Takahata, S 2011b, 'Zainichi Filipin-jin no 1.5 Sedai: Kyoiku to Rodo ga Tonariawase no Wakamonotachi (1.5 Generations of Philippine Residents in Japan: The Youth with Education and Labor Side-by-side)', *Kaiho Kyoiku (Liberation Education)*, vol.41, no.10, pp.54-63.
- Tokunaga, T 2008, "'Filipin-kei New-comer" Seito no Shinro Ishiki to Shorai Tembo: "Juyona Tasha" to "Rainichi Keii" ni Chakumokushite (Educational Expectations and Aspirations of Filipina "New-comer" Students: "Significant Others" and "Immigration Experience")', *Ibunkakan Kyoiku (Intercultural Education)*, vol.28, pp.87-99.
- Tsunogae, H, Iegami, S & Shimizu, M 2011, 'Filipin-kei New-comer no Kyoiku Ishiki ni Kansuru Ichikosatsu: Yamato-shi no Kokusai Kekkon Katei no Jirei o Chushinni (A Consideration on Educational Consciousness of Filipino New-comers: Focused on Cases of the Families of Internationally Married Couples in Yamato City)', *Toin Ronso (Toin Annals)*, vol.24, pp.89-97.
- Umezawa, O & Tsuchiya, M 2003, 'Nihon ni Okeru Gaikokujin no Kodomo no Gakko Keiken: Zainichi Filipin-jin o Rei to Shite (School Experiences of Foreign Children in Japan: Philippine Residents in Japan as an Example)', *Shizuoka University Kyoikugakubu Kenkyu Hokoku (Jimbun/Shakai Kagaku) (Research Report of Faculty of Education, Shizuoka University (Cultural/Social Science))*, vol.53, pp.247-256.
- Yano, I 2011, 'Zainichi Filipin-kei Imin Dai-1.5 Sedai no Kodomo no Hattatsu to Kyoiku Sodan Archives (A Consideration of Development of 1.5-Generation Child-Filipino Migrant and the Archives of Educational Consultation in Japan)', *Yokohama Kokuritsu Daigaku Kyoiku Ningenkagakubu Kiyo I (Bulletin of Faculty of Education and Human Sciences, Yokohama National University)*, vol.13, pp.207-216.

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Secondary school is a kind of school defined by the revised School Education Law in 1998. Secondary schools provide a six-year integrated program with a prior three-year course (equivalent to junior high school) and a latter three-year course (equivalent to senior high school). There are 50 secondary schools throughout the nation in school year 2013 (MEXT 2013).

<sup>ii</sup> Mandatory education is nine years in total, six years in elementary school and three years in junior high school.

<sup>iii</sup> Filipino refers to Filipino, the official national language of the Philippines, and Tagalog, one of the languages. Distinction will be done only when necessary.

<sup>iv</sup> I would like to extend my gratitude to the fourteen interviewees who willingly participated in this research amidst their busy schedules. I also thank my friend who proofread my English texts and gave me some feedback, and the Doctoral Program for Multicultural Innovation, Osaka University in providing grant funding for graduate students to research in the Philippines in March, 2013.

<sup>v</sup> The Japanese-Language Proficiency Test is held “to evaluate and certify proficiency in Japanese of non-native speakers” and has five levels N1 to N5 (N1 is the most difficult). (Japan Foundation and Japan Educational Exchanges and Services 2013)

<sup>vi</sup> The other languages together with Filipino are also used as the medium of instruction in the areas where Filipino is not the dominant language. Only English is used as the medium of instruction in some schools.

*A Gamification Platform to Encourage the Students Social Etiquette Improvement*

Surasak Srisawan

Rajabhat Rajanagarindra University, Thailand

0485

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Abstract

Information Technology and globalization help bring people closer. The boundary between nations are blurred and many cultures are lost or being absorbed by westernization. Thailand, like many Asian countries, has unique manners and norms that are considered old or obsoleted by some younger generations. The idea such as selflessness or the will to help people without getting paid are rarely seen in the society. Currently, many Universities in Thailand encourage the academia to reintroduce the idea of social etiquettes to the students. However, unlike the achievements in term of academic performance, the etiquette properties of students are difficult to measure. Thus, make it difficult to evaluate their improvements.

In order to enumerate the good deeds done by students, a prototype information system to keep track of students' activities will be developed and deployed at Rajabhat Rajanagarindra University in Thailand as a test site. The system will be used by both students and teachers where the objectives for each achievement are preset to follow the university's requirements. The students are encouraged to keep doing good deeds through gamification where they will be rewarded with digital trophies once the conditions are met.

Once the system is operated for an adequate period of time, it is believed that the social etiquettes of the students will be improved. It is possible that if the system is widely adopted, it will lead to the better manners of the students and improve the quality of the society as a whole.

**Keywords:** Gamification, Technology in Education, Social Etiquette

## 1. INTRODUCTION

Information Technology and globalization help bring people closer. The use of smart devices such as smartphones and tablets allow everyone to search, learn and communicate at will. The boundaries between nations are blurred thanks to the services such as maps and street view which allow everyone to explore other countries freely. The use of social networking services also allows the users to immerse themselves in other cultures easily. It is obvious that many cultures and ways of life are lost or being absorbed by westernization and the fast pace of digital world.

Thailand, like many Asian countries, has unique manners and norms that are considered old or obsoleted by some younger generations. Although Thai smile and Thai food are still widely regarded as the primary identities of Thai people, the ideas such as selflessness or the will to help people without getting paid are getting rarer to find in the society. Currently, many Universities in Thailand encourage the academia to reintroduce the idea of social etiquettes to the students in the form of the university's identity. For example, the identities of Rajabhat Rajanagarindra University's students are:

“Willing to help, Eager to learn, Love to work hard”

Unlike the achievements in term of academic performance, these etiquette properties of the students are difficult to measure. Currently, the lecturers put their effort to incorporate and promote these ideals in various courses. However, it is difficult to evaluate their improvements.

In computer games, especially in role playing games, the value such as goodness is clearly quantified based on actions of the players. The goals called quests were set and the details on how to achieve them were given in order to guide the players. Furthermore, the sense of competitiveness between players drives them to play longer and harder as can be seen in MMORPG worlds where thousands of people spend their time and real money online even though the achievements in these games may mean nothing in real world.

Another trend that blends the gaming aspects with real life called gamification recently comes into play. Unlike ordinary computer games where experiences and achievements were received through the action in the game world, the achievement such as “book worm” can only be obtained only if the player actually goes to a library physically in real world for a specific number of times. By applying this scheme, it is possible to set the conditions based on social etiquettes such as the university's identities mentioned above as well.

In order to keep track of all the deeds that the students have accomplished, a computer system is required for the data collection and information management. This study aims to design such system. By reviewing the literatures and related systems, suitable criteria were identified and used to design the prototype system. In the curricula year 2014, the system will be used at Rajabhat Rajanagarindra University and the result will be studied further.

## 2. RELATED WORK

Gamification is defined as the use of game in non-gaming contexts (Deterding, Khaled, Nacke, & Dixon, 2011). Currently, activities such as conducting business and learning in schools and universities are gamified with the hope that gamification helps improve the productivity. Aparcio, Vela, Sánchez, & Montes (2012) analyzed that the following steps should be taken in order to make an effective use of gamification: identify the main objective and the transversal objectives, selection of game mechanics, and analysis of the effectiveness of the system. These steps can be applied as a PDCA cycle and will be used as the basis for this study.

In education environments, gaming is considered nonproductive, especially when the students play unrelated computer games during the lecture sessions. The popularity and advancement of smart phones and tablets also mean that the students have access to gaming platforms all the time. In order to grasp the students' attention, lecturers may choose to gamify their materials and activities using the following scenarios as mentioned by Erenli (2012): leaderboards, badges, level-systems, achievements, rewards and geolocation-services. However, these six scenarios may be grouped into three different aspects that will be experienced by the players.

### 1. Leaderboards, Achievements and Level-systems

The use of leaderboards and level-systems are common among general computer games. A player starts playing at the lowest level in the leaderboard and usually starts at level 0 or level 1. After playing for a period of time, the player is leveled up and the position of the leaderboards changed according to the score and the level of the other players in the same game world.

A study by Decker and Lawley (2013) shown the implementation of a system that used gamification to encourage the students during their first year. The use of level-system was clearly explained. For example, the students are required to interact with faculty members as specified in the predetermined rules in order to advance to the next level. Later on, the players were given tasks and quests to perform either individually or in group to gain points allowing them to level-up. The result of their study suggested that there was a significant change in the students' behavior after introducing the achievement system.

With the use of leaderboards, the players are more engaged due to the competitive nature of human beings as specified by Burrus (2012). The study also suggested that once the players get better or leveled up, the game should give greater challenges. This makes the higher level players progress slower than the lower level ones. Otherwise, the players joining the game late may be discouraged to play because of the difficulty to catch up with the current players.

## 2. Badges and Rewards

When a player received an achievement in a game, a reward is usually given to the player. This reward may be represented as points, digital trophy or a badge. Although they have no value in real world, the player may choose to display their trophies and badges similar to the trophies from physical activities. Usually, they will post to social networking services thus making them visible to public and may introduce new players to the game.

One aspect usually found in computer games is repetitiveness. In order to receive a badge, the player is required to perform tasks for a specific number of times. With the motivation to gain new badges, it is possible that the player will improve proficiency through this process. A study by Anderson et.al, (2013) demonstrated the power of badges that even the users' behavior can be influenced by deploying badges on a social media web site.

As in the leaderboard and level-system, the basic badges are usually easier to acquire than the advanced badges to encourage new players. Some activities may require supervision. For example, a learning platform for K-6 students implemented a mechanism so that the actions of the students are explicitly recognized and rewarded by the teachers (Simões, Redondo, & Vilas, 2013). Therefore, the faculty members involved in the rewarding process is required to have computing skills and a good understanding of social gaming.

## 3. Geolocation-services

In addition to the badge and reward system, another element usually incorporated in the system is a location-based service to confirm the presence of the player. The mechanism called check-in is utilized by well-known social media web sites and services such as Facebook and Foursquare. However, there are occasions where the users did not actually resided at the claimed check-in location especially to acquire the location-specific badges.

To reduce the bogus check-in problem, it is possible to require the approval from a faculty member for each check-in. Decker and Lawley (2013) used RFID to confirm the identity of the students and later on, switched to QR code which can be identified by the teachers' smartphones. However, there are situations where the faculty members are not available to validate the check-ins. A system by Nandwani et al, (2011) demonstrated the use of NFC to physically check-in at the specific location. Thus, the players participated are required to have mobile phones equipped with NFC as well.

### 3. ENVIRONMENT

The prototype system will be developed and deployed at the department of Information Technology, Rajabhat Rajanagarindra University. Most undergraduate students in the university are comfortable with game playing and social network services such as Facebook, Foursquare and Twitter. However, the majority of the faculty members of non-technology related departments are not familiar with these services. Since the activities such as rewarding and checking-in involve both students and staff, the faculty members participating in this study are required to have the Information Technology and social networking skills. Therefore, this study will focus solely on the students and staff of the department of Information Technology.

The department of Information Technology consists of Computer Science and Information Technology programs. Currently, there are 240 full-time students and 20 faculty members in both programs. Some courses in both curriculums involve application programming for mobile devices. Thus, require the students and staff to have access to smartphones or tablets. The majority of the devices used in the department run Android. Some devices are equipped with NFC making it possible to implement location-based badges.

Although NFC is available in some devices, a unique QR code will be given to each student in the focus group. The focus group of this study is the fourth year computer science and information technology students. All the faculty members will be able to check-in the students using their own smartphones or tablets located at the related locations.

The main objective of the system is to encourage the student to behave as identified by the university's identities: willing to help, eager to learn, and love to work hard. These primary objectives will be set as the top-most level in the system. The faculty members can create new sub-objectives, badges and the related conditions to acquire them. A certificate containing all the badges acquired during the study will be given to all students once they have graduated.

## 4. SYSTEM DESIGN

Due to the nature of the system where both students and staff will be accessing the system online, it is designed as a web application. Since the devices used to access the system varied greatly, the N-tier design scheme is chosen. By separating the presentation interface from the operation layer, the devices with different screen size and operating systems can be supported easily.

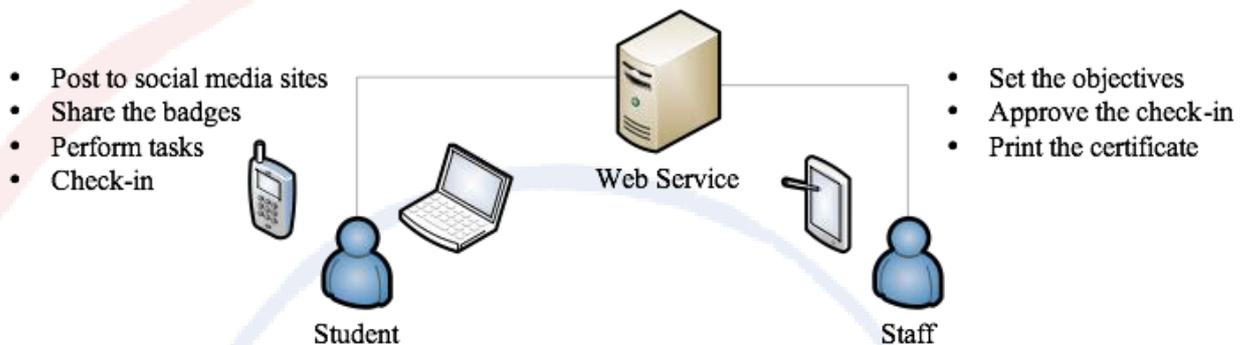


Figure 1 Roles and duties of student and staff

The system is separated into the following modules:

### A. Member Management

This module is operated mainly by the responsible faculty members. The initial information regarding the students will be imported into the system. After that, all students are encouraged to enter their detailed personal information such as home address current image and other information. Here, the first badge will be given to the students who have updated their information. To earn the first badge easily, it is possible that they will keep coming back for more chance to get another badge later on.

To make students feel more engaged, this module should incorporate the mechanisms to connect the students' profile to their external social network services. They can choose to create their new avatars or use the same ones they are currently using on other sites.

### B. Tasks and Quests Management

As mentioned earlier, the primary objectives are set according to the university's identities. The sub-objectives can be identified by any faculty members. A Quest may contain multiple tasks which may be described as a condition-based rule. Generally, the quests and tasks are identified and displayed clearly in the system so the students know what to do in order to accomplish them. However, they can also be set as hidden tasks. The students who completed the task unknowingly and get the badge may choose to distribute the news to other users. The hidden tasks like this can be used as an incentive so the students may want to venture different activities that may give them new and unique badges.

The tasks and quests are usually set according to the activities of the university, faculty and the department. For example, it may be as simple as attending a ceremony or involving physical activities such as fixing computers in the lab. The level of knowledge required to perform each task will vary to accommodate wide range of students.

### *C. Badges Management*

Badges are the graphical representative of achievements. For example, there may be a badge for the students who offer help to any faculty member twice. Once the deeds are recorded and approved, the badge is obtained and remains in the inventory. While setting up the tasks and quests, the faculty members may choose from the inventory of pre-designed badges or create a new one themselves. The students may choose to share the individual badge or the inventory on social network services. The hard copy of the certificate containing all the badges received during the academic year can also be printed and signed by a faculty member.

To keep the game alive, it is important that new badges are offered regularly. Badges may be categorized into three groups: individual badge, group badge and special occasion badge. Some badges are limited by time and some are limited by the number of participants. These properties can also be set by the faculty members who create the tasks and quests.

### *D. Reporting*

The last part of the system consists of two modules for students and staff. For students, they can login to see the leaderboard and the badge showroom. The available quests and tasks will be shown for the students. Other incidents such as swarming where many students are currently participating will also be shown on top of the report page so the students can rush to the location or action in order to join the activities.

On the other hand, the staff can view the progress of quests and tasks, the leaderboard and the rate of participation of the students. Therefore, they can adjust the difficulty of each task to keep the motivation rate high. Furthermore, the certificate with all the badges printed on the front page can be printed by the staff allowing the students to keep the hard copy of their achievements even when they have graduated.

## 5. CONCLUSION

The system is designed to be a generic platform to encourage its users. Any objectives and sub-objectives can be added and updated by the staff members as needed. However, the objective of this study focuses on improving the social etiquettes of the students. Thus, the primary objectives “willing to help, eager to learn, and love to work hard” are set as the read-only top most level objectives. The students can log in to the system to monitor their progress and check out new quests. On the other hand, the faculty members can log in to monitor the activities of the students and also approve of the check-ins.

It is believed that by motivating the students to perform the deeds repetitively with the use of gamification and badges, their behaviors can be changed according to the specified objectives. In order to measure the effectiveness of the system, the pretest-posttest method will be used. The lecturers and faculty members in charge of consulting the students in the focus group will be interviewed and the characteristics of each student will be recorded. After the study period has ended, they will be interviewed again to identify the change in the students’ behaviors.

The prototype system is currently under construction. It will be used in the academic year 2014. If the system performs as planned, the next phase is to allow open access from all the departments in the university. The system may be open for public use if the concept is proofed useful for wider audiences.

## REFERENCES

- Anderson, A., Huttenlocher, D., Kleinberg, J., & Leskovec, J. (2013). Steering user behavior with badges. In *Proceedings of the 22nd international conference on World Wide Web* (pp. 95–106). Republic and Canton of Geneva, Switzerland: International World Wide Web Conferences Steering Committee. Retrieved from <http://dl.acm.org/citation.cfm?id=2488388.2488398>
- Aparicio, A. F., Vela, F. L. G., Sánchez, J. L. G., & Montes, J. L. I. (2012). Analysis and application of gamification. In *Proceedings of the 13th International Conference on Interacción Persona-Ordenador* (pp. 17:1–17:2). New York, NY, USA: ACM. doi:10.1145/2379636.2379653
- Burrus, D. (2012). Gamification: A trend to accelerate learning. *Toledo Business Journal*, 28(12), 6.
- Decker, A., & Lawley, E. L. (2013). Life's a game and the game of life: how making a game out of it can change student behavior. In *Proceeding of the 44th ACM technical symposium on Computer science education* (pp. 233–238). New York, NY, USA: ACM. doi:10.1145/2445196.2445269
- Deterding, S., Khaled, R., Nacke, L., & Dixon, D. (2011). Gamification: Toward a Definition. In *CHI 2011 Gamification Workshop Proceedings*. Vancouver, BC, Canada.
- Erenli, K. (2012). The impact of gamification: A recommendation of scenarios for education. In *2012 15th International Conference on Interactive Collaborative Learning (ICL)* (pp. 1–8). Presented at the 2012 15th International Conference on Interactive Collaborative Learning (ICL). doi:10.1109/ICL.2012.6402106
- Nandwani, A., Coulton, P., & Edwards, R. (2011). Using the physicality of NFC to combat grokking of the check-in mechanic. In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments* (pp. 287–290). New York, NY, USA: ACM. doi:10.1145/2181037.2181087
- Simões, J., Redondo, R. D., & Vilas, A. F. (2013). A social gamification framework for a K-6 learning platform. *Computers in Human Behavior*, 29(2), 345–353. doi:10.1016/j.chb.2012.06.007

*Invigorating Literature Teaching in Taiwan through Drama*

Che-Chien Weng\*<sup>1</sup>, John O'Toole\*<sup>2</sup>, Christine Sinclair\*<sup>2</sup>

\*<sup>1</sup>WuFeng University of Technology, Taiwan,

\*<sup>2</sup>The University of Melbourne, Melbourne, Australia

0490

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Abstract

English literature courses are elective and considered minor courses in the departments of Applied English in institutes of technology in Taiwan. Teachers of English literature courses face challenges in engaging students in their classes. This paper describes how educational drama pedagogy could be used to help engage students in literature classes, based on a case study in an institute of technology in Taiwan. Although many scholars of literary studies have discussed literature teaching, their approaches tend to be focused more on discussions (led by the teachers) on topics related to a text, or written assignments as discussion starters (Langer 1992:43). The approach of using educational drama to facilitate students in literature classes has not been widely researched. This presentation presents findings of this action research inquiry and considers how strategies and conventions of process drama (such as “teacher-in-role” and “mantle of the expert”) have been employed to empower students in conducting interpretations of the texts they read, deepen their literary understanding, and assist them in taking responsibilities for their studies in the literature classes.

The research project, which informs this paper employs a qualitative research design, based on an action research approach and forms the basis of a PhD thesis. The study was entirely qualitative and contextualized naturalistic in nature and aligned closely with the fundamental principles of action research: “identifying a problematic issue, imagining a possible solution, trying it out, evaluating it (did it work?), and changing practice in the light of the evaluation.” (McNiff 2002:6). By employing this research method to guide this project, we hope to enhance the practice as teachers through the reflective cycles.

The paper will also highlight expected outcomes of this research. Namely, it is hoped that the study will provide teachers with practical professional knowledge in teaching English literature classes, such as how students’ perceptions or misconceptions may arise when experiencing a changed way of teaching, and how teaching strategies may help to promote and motivate students’ learning in the classroom. The research findings may also help to guide future professional development for teachers of English and Drama in EFL contexts.

**Keywords:** literature teaching, EFL literature instruction, action research, educational drama pedagogy, process drama conventions

## I. Introduction

In the English departments of the Taiwanese universities, students are required to take *Literature* courses such as *English Literature*, *American Literature*, and *Fiction*, as part of their English education. Although elective literature courses such as *Introduction to Western Literature* and *Drama* are not absent from the academic curriculum, they are generally considered minor courses in the departments of Applied English in institutes of technology in Taiwan. Teachers of English *Literature* courses in the above-mentioned institutes thus face challenges in engaging students in their classes. This paper describes how educational drama pedagogy could be used to help engage students in *Literature* classes, based on a case study in an institute of technology in Taiwan. Although many scholars of literary studies have discussed literature teaching, their approaches tend to be focused more on discussions (led by the teachers) on topics related to a text, or written assignments as discussion starters (Langer 1992:43). The approach of using educational drama to facilitate students in literature classes has not been widely researched.

This paper forms the basis of my PhD thesis, and depicts inquiry derived from the ongoing study, I hope to further develop the preliminary research findings illustrated in the “Results and Discussion” section of this paper as I bring my thesis to completion in the coming months. In addition, pseudonyms are used when specific participants are mentioned in this paper.

## II. Background

My interest in the topic of my research began when I was first employed to teach *Literature* courses at a university in Taipei, Taiwan. I was not trained or instructed in how to teach literature courses at colleges or universities in Taiwan, thus the teaching itself posed a great challenge to me, who was a student of English. Like some of the other teachers in the university, I combined lectures, text-discussion, and group in-class presentations on issues related to the literary works as my teaching approaches. In my experience, these approaches were successful for students whose English was of intermediate and advanced levels. Most of them would like to give it a try when it came to express what they thought about the literary text they were studying. However, for students who were not confident in their English abilities, or who lacked interest in cultures foreign to them, what the literary masters tried to convey in the text did not make much sense to them, they did not develop empathy for the characters in the text, and their responses were often insufficient.

How to teach Literature then? Carter and Long argue that there are three main reasons

for the teaching of literature: the cultural model, the language model, and the personal growth model. These models tend to be the “reasons or purposes” for teachers to teach literature (1991:2-3) and usefully inform this study. How, then, do teachers teach literature in the EFL context? Current methods described in a variety of studies mainly focus on the use of *Literature* to promote the developing of language skills, especially in the institutions of higher education including those in Taiwan where English is taught as a foreign language. Accordingly, a larger number of publications on experimental or practical integration of teaching methods into the teaching of certain literary genres or works (such as “How to teach novels”) in the EFL context have emerged than that on *Literature* pedagogy. Although such reports and research based on individual teacher’s frequently successful experiences serve the purpose of providing possible models for other teachers of *Literature* to follow, systematic *Literature* pedagogy is still not currently available in the EFL context (Timucin 2001).

### **Teaching *Literature* through Drama**

The teaching of literary texts in this research is based on employing educational drama pedagogy as an instructional method. Before the existence of academic publications focused on literature teaching, linking literature with pedagogy might be unthinkable to some people who have been teachers of literature for years (Dienst 2003). However, a rich body of scholarship in the field of drama in education has shown that the integration is possible. Teachers conduct literary explorations of stories through dramatic activities (Booth 2005) or engage learners of the English language by using drama techniques (Kao & O’Neill 1998). Although scholars of literary studies refrain from explaining explicitly how to integrate drama in the teaching of literature, nevertheless, some recognize the merits of applying drama to facilitate literary understanding. For example, when talking about drama and narrative fiction, Byron (1986) argues that narrative fiction “*reports* or *describes* selectively ‘what has happened’. Drama by contrast, *demonstrates* ‘what is happening’ “(77). In other words, narrative fiction describes events which happened in the past while drama depicts a current event at present (Byron 1986:78).

The drama mode helps people to “elaborate narrative and to expand our apprehensions of the entire pattern of events, attitude, behaviors and interactions which the narrative represents selectively.” (Byron 1986:75).

## **Drama Strategies: Process Drama, Pre-text, Teacher-in-Role, and Mantle of the Expert**

If educational drama strategies and activities could be used to enhance the literary understanding, what is *process drama* then? In the *Introduction* of the book *Drama Structures: A Practical Handbook for Teachers* (1982), drama educators Cecily O'Neill and Alan Lambert explain that process drama "like improvisation, proceeds without a written script, but includes important episodes that will be composed and rehearsed rather than improvised." (xvi). Other educators describe that "In the classroom there is no outside audience. ... 'Acting or demonstrating drama work in front of other people and being an audience are sometimes involved but the audience is often informal and the performance unscripted.'" (O'Toole & Dunn 2002:2) Simply put, process drama could be defined as "an extended classroom drama activity based on a *pre-text*." (Sinclair et al. 2009:268). And based on Sinclair et al's illustration, pre-text is "a drama term referring to the basis or subject matter for drama. A pre-text can be in many forms—for example, a picture book, a photograph, a poem, a story or a real-life incident (such as a newspaper article)".

Furthermore, in process drama, there are "conventions" which serve to indicate "time, space and presence" in the theatrical environment. They also help to put emphasis on different qualities in the exploration of the drama within the classroom. (Neelands & Goode 1990:4). Among these conventions, "Teacher in Role" (TiR) as Kao and O'Neill put it "is one of the most effective ways of beginning process drama" (1998:26). When a teacher takes on a role his/her purpose is not to demonstrate how to act, "but to invite students to enter and begin to create the fictional world." (Kao & O'Neill 1998:26). Teacher-in-role as a drama convention can thus help students engage in the text.

There are many advantages of using the conventions of "Teacher-in-Role" and "Mantle of the Expert" techniques in teaching. One benefit is that they enable and empower students to carry responsibility for their own learning. In practice, students are asked to contribute what they know about how to solve a certain problem presented by the teacher who is in role as a character in need of help or advice. Through the interaction with the teacher and each other, disbelief is suspended and the world of drama is created to explore issues presented in the text they are studying.

Then could this integration of process drama techniques be applied to the teaching of literature? The answer is positive. In her book *Dorothy Heathcote: Drama as a*

*Learning Medium*, Betty Jane Wagner (1999) describes Heathcote's ideas about possible ways of teaching literature through process drama. Wagner notes that to Heathcote, teaching students to understand what is within the literary context is like "code cracking." (1999). Through process drama conventions, the teacher could facilitate students to unlock the treasure box that contains the richness and beauty of the imaginary world of literature.

### **Studies on using process drama to facilitate literature instruction**

Yoshida (2003), Melragon (1999) and Hakaim (1993) have conducted studies on teaching approaches which manifest close relevance to this research. Yoshida's study does not actually make use of any drama conventions in the teaching of literature. She does give examples of how she would have used several process drama conventions to structure her literature course if time permitted. (Yoshida 2003:239) In her study, Yoshida explains how her Japanese students would have been more comfortable with drama activities with scripts, how Japanese EFL students tend to be shy in class, and how she could have employed the convention of "open forum theatre" in teaching narratives like "The Tell-Tale Heart"(Yoshida 2003).

Based on her description, the activities Yoshida has led in her class such as the explanation of the texts, discussion and group in-class role-playing are more aligned to traditional ways of teaching literature that students have also experienced in Taiwan. If "time" and cultural influence could be important factors in the constraints of applying dramatic approaches to the teaching of literature (Yoshida 2003), are there other possible reasons that limit English teachers' acceptance of adopting theatre based approaches to the teaching of literature?

Melragon's study tells a different story. Like Yoshida, Melragon builds her theoretical foundation on the ideas of reader response theorists like Louise Rosenblatt, and drama educators such as Cecily O'Neill. However, process drama conventions are actually applied to her teaching of literature. Her research "describes a model for incorporating response to historical fiction, process drama and computer technology into students' classroom learning." (Melragon 1999) Her research project also leads to the production of students' own web pages on which they record their reflections and design for the page based on their response and research on the fiction they read. Process drama is employed to help them negotiate the texts, get perspectives and deepen engagement in the literary texts they read. This research demonstrates a positive example of facilitating students' engagement with literary studies through

process drama.

### III. Research Questions

My primary research question is “In what ways can process drama conventions help to motivate students, deepen their understanding of English literature, and empower them to become active learners in English literature classes in Taiwan?” My experiences as an English literature teacher have also led me to ponder on research questions regarding what triggers learners’ motivation in getting engaged in literature classes and what, on the other hand, blocks their interest.

### IV. Methods

This qualitative study is based on the action research approach. It investigated how educational drama pedagogy could help to invigorate *Literature* teaching in Taiwan. This study was carried out at an institute of technology<sup>1</sup> in the south of Taiwan. The data collection period covered approximately ten months: from September 2009 to June 2010.

#### Participant

The participants in this study were two classes of Taiwanese adult students (29 of 1A class in the first semester; and 20 of 2A class in the second) from the age of eighteen onward, of the Extensive Education Division in an institute of technology. They came to the semester-based *Introduction to Western Literature* classes every Saturday or Sunday afternoon, for respectively two semesters. These students mostly came back to school to major in English after years away from the academic learning environment. They took a regular entrance examination to be admitted into the two-year institute of technology program. However, they did not need any proof or certificate of any English proficiency tests to be English majors. Students’ English levels varied immensely. In addition, prior to the literature class, only few students (5-6 students in each class) had experiences reading literary texts in English in high

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<sup>1</sup> This institute of technology in question became a university of technology in August 2010. However, in this paper, it is referred to as an “institute of technology” as the data was collected from September 2009 to June 2010.

school or previous institutes of education.

I designed and implemented similar lesson plans for both classes with improved, slightly altered drama activities and a reduction of the reading materials for the 2A class; due to the less allotted time and what I had learnt from my previous experiences with the first year students. I believe the necessary changes on the syllabus better benefited the latter students.

### Reading Materials

The reading materials for the classes were organized according to my weekly topics, with a main focus on a Shakespearean tragedy: *Hamlet*. As most of the students did not take any English literature classes prior to their study at this institute, I looked at my teaching and learning process along with these students as a journey to the Danish palace of Hamlet and other adventures into the domain of the Western *Literature*.

### Teaching Procedure

In order to assist students with their varied or emerging English abilities, I used mainly Mandarin Chinese in the classroom with frequent explanation of literary terms and phrases in English to enhance students' familiarity with the English language as well. The beginning of each new literary work was conducted in a more traditional way of teaching literary works: I would introduce the background of the author, with brief introduction to the time and place where the work originated and reference to distinctive features of the work. In addition to these general instructions, I also developed pre-reading and post-reading drama activities based on the process drama conventions and educational drama pedagogy to help deepen students' understanding of the literary text they studied. The following activities from my action research cycles briefly exemplify the drama activities integrated into the teaching of literary texts in my research.

### **Activity 1 (“Alternative *Hamlet* Treasure Hunt”)**

In order to help students grasp the storyline of the later acts in the play *Hamlet*, I designed a “Treasure Hunt” activity to initiate the group discussion and activity. I made slips of paper (containing eight sentences spoken by certain characters in the play) copied from the textbook and cut into small pieces and put those eight pieces of slips into a container and asked one student from each group to do the drawing. Students then had to check and identify the speakers of those sentences with the help of the script. Through their discussion, they were required to share with the class

content of the slips and their ideas.

### **Activity 2 (“Press Conference at Elsinore”—Teacher-in-Role)**

To help students review the Shakespearean play that they had read and to clarify some confusing points they might have about *Hamlet*, I designed this “Press Conference at Elsinore” activity. The following narrative describes the prelude and process of carrying out the activity.

*After the death of the royal family of Denmark and the family of the king’s advisor, the people of Denmark were frightened and saddened by tragedy and the dismal sight at the palace.*

*Horatio, Prince’s Hamlet’s friend, who was told by the deceased prince to tell the world the truth of what happened, decided to give a press conference to reveal the truth about the tragedy.*

#### **Getting in role:**

Before we started this activity, I asked students to discuss with their group members about what might have happened after Prince Hamlet and all the members of the royal family of Denmark died. And then I explained that we would have a press conference ten minutes later, and as caring citizens of Denmark and the press, they had the right to know what would happen to their country now. Therefore, they had to come up with a few sentences to ask Horatio, either in Chinese or English. While students were engaged in discussion, I announced that I would be the hostess to the press conference, and my job was to assist them and Horatio to sort things out and make sure that the press conference went well.

Then I asked the class of students if there was any volunteer who would like to be Horatio. Soon, “Willy,” an elder student in the class raised his hand and was very excited to be Horatio. Students’ discussion actually took more than ten minutes, and then I had to stop them and announced the beginning of the press conference at the court of Elsinore.

The following narrative from a post-lesson interview with 2A students depicts their experiences of participating in the activity.

“Jimmy”: I remember that I asked two questions. First, I asked as a reporter, then as a reporter for the paparazzi. There was one part of my question explaining why Claudius killed Hamlet’s father, and then married his sister-in-law. Was it because they were taking pictures by (*reporters*) of the tabloid about their meeting in private? Therefore I asked such a question. It meant to find out the reason why Claudius killed old Hamlet. Was it because he attempted to take over the throne or it was because of some love affair? As a result, it provoked many ideas of mine, and not just putting the focus on the narrative in the novel (*text*)....

“Sherry”: ... there was this OS [*off-screen murmuring, commonly used among Taiwanese youngsters to describe what they feel in certain situations*] going on in my mind that... maybe, I thought during the times of the Queen (Gertrude), as a fragile woman, she might be killed or there would be other sentences for her if she didn’t find a husband for herself fast! Therefore, she found herself someone she could cling to. Yes, that’s it. And when it comes to emotion, it’s really hard to judge that, it’s not necessarily true love! (*She laughs.*) Probably it’s based on benefits. And then S. [her classmate] just mentioned property! ...I didn’t thinking about anything else then, but I would like to know what they had in their minds. (29/05/10)

Students in the narrative above related how they were brought into the dramatic world of *Hamlet* and asked questions in role as reporters. This narrative seemed to indicate the function of the technique “Mantle of the Expert” which helps to deepen students’ understanding of the text here through their participation and cooperation to finish certain tasks. In this case, it was helping the public of Denmark to know the truth about the tragedy by asking questions. The narrative here highlights students’ engagement in the activity and their sound understanding of the play *Hamlet*.

In a post-lesson interview focus on the drama activity “Press Conference at Elsinore,” a student of 2A class also talked about what she thought in the narrative below.

“S”: Hamlet is a story..... In the future, if I read such a story or novel, and after my reading, I can use these techniques to my reading comprehension. Because, in the past, when I read some narration of the plot (*of a story*),

then I simply felt that, I've finished reading a story. But if like the way the teacher makes use of a press conference method, it means that you can pose your questions toward the plot yourself, or say, if there is something you don't understand, then you will ponder why it's so, then you will understand better the whole, complete connection of the plot, and you get a deeper impression (*about what you read*). (29/05/10)

In the above narrative, it appeared that drama activities help learners of Western literature. In my analysis, what the students revealed in the narrative indicates the students' attitudes towards self-directed learning. It was promising to see that students would like to apply what they learnt in the classroom to help their future learning. The third section in the above narrative also suggests that drama activities help students to get a better understanding of the literary text they study.

#### D. Data analysis

In this research, content analysis of qualitative data was undertaken. The data were analyzed inductively and deductively by using several strategies. The initial implications of the findings of this research were based on participants' responses, the results generated through a variety of research instruments and data collection methods such as Focus Group interviews, students' journals and assignments, and the teacher researcher's reflective journals and field notes.

In general, the analysis of the data aimed to identify the characteristics of classroom interactions, (e.g. discourse, the positioning of students in the drama activities integrated in the literature lessons, rapport between students and the instructor, students' perceptions and perspectives on the drama pedagogy), and their relevance to the teaching and learning process in the classroom through the help of drama pedagogy as a changed mode of literature instruction.

#### V. Results and Discussion

Throughout the participation in drama activities in the literature classes, a large number of students' responses from the questionnaires and interviews have indicated various ways in which drama activities helped learners with their learning in the *Western Literature* classroom. For the purpose of this paper, I selected two examples to illustrate students' mostly positive responses to the drama activities. They are examples of emergent findings that I hope to build on as I complete the final stages of my study. These findings include:

- Independent or student directed learning
- Development of individual textual analysis skills through group –based drama

activities

- Enhanced motivation for learning
- Development of reflective skills through engagement in drama based tasks
- Drama as a way to enhance personal relevance of Western literature in a non-Western setting

### **Independent or student directed learning**

When asked to reflect on the activity during a post-lesson interview, a student “Ching” from 1A class revealed what she thought in the following narrative.

“Ching”: The teacher chose eight sentences spoken by the characters in the play Hamlet, and asked each group to send a representative to draw two slips containing the sentences. We were required to locate the sentences in the English script, and through our group discussion to find out who said those sentences, to whom, and why?

### **Individual textual analysis skills**

“Ching” (contd)

Through this kind of class activities, we got into the situation quickly and understood the relationships among those characters, we understood the “Who, What, When, Why and How” in the plot. (03/01/10)

It seemed evident that the drama activity “Alternative Hamlet Treasure Hunt” helped students better grasp the basic facts of the play including the time, place, characters, and plot better, as opposed to reading through the assigned reading all by themselves. Likewise, empirical evidence from this study suggests that drama activities also help to empower students and enhance their motivation toward self-directed learning; and in this case study, western literature.

### **Enhanced motivation for learning**

In a post-lesson interview, “Jimmy” from 2A class, shared what he thought of their learning throughout the semester in the following narrative.

“Jimmy”: Throughout my learning in the whole semester, from the beginning, like what I just said, I felt that this (*Western Literature*) is set and rigid. Therefore, at the beginning of the semester, although I did have the motivation to learn... yet, it was not like...not like later on, like “Eating the sugar cane from the back” (“*Tao Tse Kang Che*”—*This is a Chinese idiom which*

*means: "The situation gets gradually better."*) I felt that the more I learn, the more I am interested. The main reason lies in the fact that, the teacher used various, innovative teaching methods, especially her methods are orderly and gradual.

### **Drama as a way to enhance personal relevance of Western literature in a non-Western setting**

"Jimmy" (contd)

Then after that, like last time, we were required to write a resume for Shakespeare, find him a job. This is something very innovative too. She (*the teacher*) took an ancient figure some hundreds of years ago and put him in a job application situation (*He laughs*), and then (*through the assignment*) she could understand how much students know Shakespeare, how many works he wrote, and what was his achievement.

### **Development of reflective skills through engagement in drama based tasks**

"Jimmy" (contd)

And...in fact, we learnt a lot, because they (other students) would really think these things over. Then it would not be like that we finished reading (*Shakespeare's brief biography*), and that's it. And that kind of "stuffing ducks" (*T'ien ya*) way of teaching is totally inadequate. (29/05/10)

*(T'ien ya—A Chinese idiom which refers to the way ducks were constantly stuffed with nutrients to make their livers bigger. Here he implies that kind of pouring knowledge into students without giving them time to digest the new knowledge or space to think about what they have learnt.)*

The narrative above seemed to indicate that students were motivated to help themselves with their learning. It also implies that the activity helped them to associate the text they studied (biography of William Shakespeare) with something accessible and familiar to them in their daily lives. In this way, the literary text came alive, and students were empowered to handle the task they could deal with such as finding a job.

## VI. Conclusion

This study documents a literature teacher's journey of teaching *Literature* with the

assistance of educational drama pedagogy. In light of the changing context in the EFL *Literature* classrooms in Taiwan, there is not yet a palpable formula of teaching approaches that could serve as the general guideline. The teacher's task in the *Literature* classroom thus is complex and evolving as the *Literature* pedagogy is still emerging. Additionally, the lack of intensive conversations between literary academics and educationists or adequate pedagogical preparation on helping graduate students to teach literary texts in the EFL context have necessitated the possible involvement of an alternative pedagogy, e.g. drama pedagogy, that may facilitate teachers to teach *Literature* classes.

The logo for the International Association for Educational Research (iafor) is centered on the page. It consists of the lowercase letters "iafor" in a light blue, serif font. The text is enclosed within a large, stylized circular graphic composed of two overlapping, thick, curved lines. The upper-left portion of the circle is a light red color, while the rest of the circle is a light blue color, matching the text.

## References

- Booth, D. (2005). *Story drama: creating stories through role playing, improving, and reading aloud*. (2<sup>nd</sup> ed.) Markham, ON: Pembroke.
- Byron, K. (1986) *Drama in the English classroom*. London: Methuen.
- Carter, R. & Long, M. N. (1991). *Teaching literature*. New York, NY: Longman.
- Dienst, K. "Showalter inspires conversation about teaching literature."  
*Princeton- Weekly Bulletin*. 17 February 2003. Last accessed on 18 October 2011.  
<http://www.princeton.edu/pr/pwb/03/0217/1b.shtml>
- Hakaim, C. J. Jr. (1993). "A most rare vision: improvisations on 'A Midsummer Night's Dream'". *The English Journal*, National Council of Teachers of English; November 1993, 82(7), 67-70. Last accessed on 18 October 2011.  
<http://www.jstor.org.ezp.lib.unimelb.edu.au/stable/pdfplus/819800.pdf?acceptTC=true>
- Kao, S. M. & O'Neill, C. (1998). *Words into worlds: learning a second language through process drama*. New York, NY: Ablex. Langer, J.A. (Ed.) (1992). *Literature instruction*. Urbana, NY: The National Council of Teachers of English.
- McNiff, J. (2002). *Action research for professional development: Concise advice for new action researchers*. (3<sup>rd</sup> ed). Last retrieved 27 April 2009. 1-32.  
<http://www.princeton.edu/pr/pwb/03/0217/1b.shtml>
- Melragon, M. A. (1999). *Negotiating texts, spaces and voices: response to literature, process drama and hypertext technology in a middle school classroom*. Ph.D. dissertation, The Ohio State University. (Retrieved 12 October 2008, from Dissertations & Theses: Full Text. (Publication No. AAT 9931646).
- Neelands, J. & Goode, T. (Eds). (1990). *Structuring drama work: a handbook of*

*available forms in theatre and drama*. Cambridge:

Cambridge UP.

O'Neill, C. & Lambert, A. (1982). *Drama structures: a practical handbook for teachers*. Lakewood, WA: Hutchinson Educational.

O'Toole, J. & Dunn, J. (2002). *Pretending to learn: helping children learn through drama*. French Forest, NSW: Pearson Education.

Sinclair, C., Jeanneret, N. & O'Toole, J., (Eds). (2009). *Education in the arts: teaching and learning in the contemporary curriculum*. South Melbourne, VIC: Oxford UP.

Timucin, M. (2001). Gaining insights into alternative teaching approaches employed in an EFL literature class. *CAUCE*, 24, 269-293. Last accessed 11 October 2011. [http://cvc.cervantes.es/literatura/cauce/pdf/cauce24/cauce24\\_17.pdf](http://cvc.cervantes.es/literatura/cauce/pdf/cauce24/cauce24_17.pdf)

Wagner, B. J. (1999). *Dorothy Heathcote: drama as a learning medium*. (Rev. ed) Portland, MA: Calendar Islands.

Yoshida, M. (2003). The use of process drama to promote literate and aesthetic engagements with American literature in a Japanese college classroom. Ph.D. dissertation, New York University, United States -- New York. Retrieved October 18, 2011, from Dissertations & Theses: Full Text.(Publication No. AAT 3086928).

*Are Students Our 'Customers'? : A Perspective on the Bureaucratic Implications of 'Student-Customer' Concept in Malaysian Higher Learning Institutions*

Seloamoney Palaniandy

Infrastructure University Kuala Lumpur, Malaysia

0503

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Abstract

This paper is about the use and abuse of treating students as 'customers' and implications that follow for quality assurance in Malaysian higher learning institutions. Students graduating from PhD programs in higher learning institutions are increasing in number every year. In the year 2012 alone a number of public universities have produced or have 'graduated' hundreds of students with PhD qualifications. However, the bulk of them were found to be foreign students, especially from the Middle Eastern countries. The mushrooming number of higher learning institutions over the past decade has led to stiff competitions amongst them, especially in the context of student recruitment. This paper discusses the mounting pressure to accept students who are not capable of doctoral-level work, concerns about overseas students' language difficulties and the bureaucratic difficulties of failing PhD candidates. It is inevitable that a push for quantity of PhD students leads to diminution of quality because resources never match the increases, leading to poor supervision, disappointed students and lower-quality work. It is argued that treating students as customers, especially in the context "customers are always right" would be clearly corrosive to the education industry. Although these managerial or business concept probably meant with best of intentions, it is likely to have results that are a contrary to the best interest of the students themselves.

**Keywords:** Student Customers; Private Higher Learning Institutions

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## Introduction

As Malaysian private higher learning institutions have mushroomed over the past few years, stiff competitions are observed among the institutions concerned in the context of student recruitment. This is evident from the amount of money spent by educational institutions of higher learning in their participation of education fares and road shows every year. Apart from involving their regular personnel from their marketing departments, the institutions concerned are forcing their academic personnel into these operations. While it might take a substantial number of years for universities and academic institutions to introduce post graduate programs after their initial establishments, we could notice most private institutions of higher learning in Malaysia have introduced Masters and PhD programs upon their initial or first year of commencement.

Corporatization and privatization of higher education in Malaysia allows for a shift from state controlled sector to a state-supervised sector dictated by market-based policies. With the gradual shift in the relationship between the government and the institutions of higher learning, the former through the ministry of higher education, no longer regulates access conditions, the curriculum, degree requirements, examination systems, the appointment and remuneration of staff, the selection and admission of students and other administrative matters. The growth of private higher educational institutions in the past two decades reflect the global trend where private institutions represent the fastest growing area of post secondary education.

The irony about this phenomenon is that the competing institutions are prepared to recruit students who have absolutely no knowledge about research methods, who have never attempted or resorted to do a dissertations or a project paper even at Masters level and those lacked language proficiency in English. A recent local news paper report indicated that a bulk of those who have graduated from their Masters and PhD programs in public universities happened to be students from Middle-Eastern Countries (The Star, 2012). This is neither the intention of the writer nor the purpose of this paper to generalize the idea that all students from middle-eastern countries lack the necessary language proficiency and thinking skills to pursue studies at postgraduate level for any reasons. However, the perspectives of the academic personnel involved in this small scale study acknowledged the fact that many of the Middle Eastern students in their respective institutions suffered severe language difficulties, thinking skills and their ability to articulate thesis matters as well as meeting other academic requirements at post graduate level. The worst part of their ordeal was the students' non-acceptance of these facts, and their unscrupulous demand to get higher grades for poor quality work. The academic personnel concerned allegedly suffer frustrations and demoralizing effects having to deal with such cases while having to meet the organizational demands of their institutions which adopt the student customer concept in their recruitment process. This paper

discusses the mounting pressure to accept students who are not capable of doctoral-level work, concerns about overseas students' language difficulties and the bureaucratic difficulties of failing PhD candidates.

### **Literature Review**

Although a major commitment, relatively little is known about what actually motivates students to enroll for doctoral programs or what they subsequently look forward to it as its benefits in the future (Leonard et al., 2005) and we know even less about what might be the effects of gaining a doctorate on their lives subsequently. We also have little idea whether the experience or usefulness of a doctorate may have changed over time.

Globalization and free market economy have led to commoditization of knowledge and of education in general. Higher learning institutions especially, in the private sector are adopting the corporate culture whereby students are perceived as customers or clients (Franz, 1998). Consumer or customer is a person who shops for products in the market place. Consumerism implies that the desires of customer are supreme. In other words 'customer sovereignty' and that the consumer should be promptly satisfied. If we apply this concept or model in education, particularly to higher education, students react predictably. That is to say they tend to develop a typical attitude which implies perceiving education as a product to be bought like an item from the shop or store. Students who regard themselves as customer study only when it is convenient for them, a pursuit that symbolizes 'shopping', expect satisfaction regardless of effort, want knowledge served up in 'easily digestible' forms. They assume that when they undertake a course of study, academic success must be guaranteed.

It might not be an exaggeration anymore to say that we are into an era whereby we experience the transformation of tertiary institutions becoming 'education bazaars' offering various 'academic products' ranging from Diplomas, Degrees, Masters as well as PhDs. According to Mukherjee (2010), in these academic market, the role and obligation of the 'academics' is strictly treating students as customers and satisfying their respective needs as clients. As more and more education bazaars are mushrooming day by day bearing the name of universities, PhD and Masters Student clients are free to choose institutions that confirm to their standards and norms. The serious implications of this pervasive phenomenon that academics are forced to prove themselves for survival in the way the academic system wants.

Pursuing a subject is not a matter of passion anymore but rather a compulsion, a means to achieve a career path. Human enrichment through education has become purposive. It tends to be a matter of status or means to achieve lucrative career if not a compulsion. In other words people are aspiring to upgrade their academic status for material benefits and of social status. To put it in a nutshell people tend to learn more in order to earn more. The urge for status and recognition is definitely withering away the practice of cognition. Education and human enrichment is becoming more purposive and not spontaneous as

what it used to be in the past. The materialistic greed of consumerist society is all set to take on the emancipating forces of education. As a result, academics are forced to adhere to the corporate ethics of satisfying their student customers. There is no place for true academics; they have to prove themselves for their survival in the way the academic system expects them to be.

Eagle and Brennen (2007) are of the opinion that it might be alright to place students as customers under the Total Quality Management (TQM) concept. This means providing quality education for students' best money value. According to the authors the concept might also be extended to the provision of the best academic environment with all the necessary state of the art facilities. The concept should also include the humanitarian treatment the students deserve in all their dealings and communications with the institutions.

### **The Method**

Qualitative interviews were held with nine (N=9) academic staff from three private institutions of higher learning in the Klang Valley area. The respondents concerned are full-fledged professors [(Four (4))] and associate professors [(Five (5))] with at least three years of experience, teaching middle-eastern students at PhD and Masters level. In the pursuit of striking a balance for the number of respondents, the writer chose to interview three academics from each institution. Subsequently the institutions were visited and the basic purpose of the study was discussed. Out of this number, five of them were ladies with a professional status of associate professorship. The participation of these academic personnel in this short study was solely on the basis of willingness. All the three private academic institutions of higher learning where the respondents worked have been upgraded from university colleges to the status of full-fledged universities within the last three years. The interviews were held face to face at their respective offices in their institutions. The names of the institutions are not disclosed for ethical reasons.

### **Findings and Discussions**

Although the scope of this study does not include the public institutions of higher learning in Malaysia, many of those universities, are jumping on to the band wagon along with private institutions in their massive campaign to recruit more and more of Masters and PhD candidates. This takes precedence from the government's idea of bringing about a frog leap approach in increasing the number of PhD holders in lieu of Vision 2020 that will see Malaysia as a fully developed nation in the near future.

However, the irony is that students who have absolutely no knowledge about research methods (an essential criterion for understanding the PhD concept and contribution to new knowledge) and who have never attempted or resorted to do a project paper even at Masters level are increasingly showing interest in pursuing their PhDs. When asked what

is the major issue in recruiting middle-eastern students for post graduate studies, one senior professor said:

“The obvious characteristics that we could notice, especially those among the foreign students are their lack of English proficiency to undertake studies at post graduate levels. According to a number of lecturers interviewed, these students never bother to master their language skills and are of the impression that their basic communicational English will suffice”.

All the nine respondents shared a common notion: “They are not here for studying”. In this respect, one of the lady respondents expressed her views in the following manner:

“If at all they think of studying in its true sense, they could have remained in their own respective countries to complete their education. The marketisation of education and the drive to attract more PhD students who pay full fees is indeed damaging.” In this regard another professors added :

"In this case, the PhD student becomes a 'customer' who expects to get something at the end of four years of time investment, regardless of the quality of the work - which is, of course, problematic."

Supporting the above, another professor related the phenomenon to reasons as to why private institutions of higher learning set organizational demands to treat students as customers. He said:

“On the other hand the university management perceive that it might be detrimental to the image of their institutions if students are retained longer than the minimum duration for graduation, having to repeat the modules to better their marks. There is a tendency on the part of the institutions to feel that if they retained students for too long, students might drop out in the process or leave to join other institutions where their customer demands are easily met. Moreover, student drop out or failure rates might send out the wrong message to some of their fellow countrymen who might have interest in joining the institutions for the same pursuit. This might affect the university’s reputation and popularity as the strength of corporate universities is based on the student number” .

When asked for evidence for the prevalence, or how the student customer concept works in her institution, one associate professor mentioned that:

“Students are given the flexibility to register for subjects any time between the start of the semester and the final exams. Although universities have rules on this, such rules are not followed as student interests and demands are valued as customers”.

In voicing her grievances on the pressing issue of student customer concept, one professor related her experiences in the following manner:

“The obvious characteristics that we could notice, especially those among the foreign students are their lack of English proficiency to undertake studies at post graduate levels. Language proficiency is the basic requirement for undertaking postgraduate studies. How is it possible for people like us to work with such students?”

According to the academics interviewed, these students never bother to master their language skills and are of the impression that their basic communicational English will suffice. In this regard another respondent said:

“When comes to assignments they resort to the ‘copy paste’ culture using the internet, with no, structure and sense of direction as to what they are doing or supposed to be doing.”

Some of the academics interviewed even claimed that on most occasions students even ‘buy’ their assignments by asking outsiders (syndicates) to write their assignments and academic projects. Likewise it was also learnt that the students concerned produce poor answer scripts in their final examinations. In this respect another respondent added that:

“In their exams, they produce poor quality answer scripts, with no relevance to questions asked, with no grammar and proper sentence structure. We can scarcely notice any difference in their work, although we go all our way out to provide the maximum ‘exam tips’ suggesting as how the answers should be”.

From the analysis of the respondents’ perspectives it was noted that many of the students are confident that, at the end of the day, they will somehow ‘swim through’ the process to get their degrees. The students concerned are of the staunch believe that the university system will somehow come to a compromise to accept them as graduates for the mere fact that they are ‘paying for the studies’, portraying the typical ‘customer characteristics’. There have been cases where lectures are intimidated or having to give in to students demand for better marks.

Many of the academics who participated in the study expressed dissatisfaction on the attitude of the foreign post graduate students, especially those hail from middle-eastern countries. The students concerned who are engaged in the writing of their thesis or project paper expect academics to ‘acknowledge’ their work even though the work concerned do not meet the quality requirements. According to some of the academics, the students concerned make such demands because most of them are government scholars and they are to return to their respective home countries within three years, that is to say the minimum time required to complete their studies. Should they take extra duration to repeat their papers, then they have to bear their own cost for tuition and living expenses in Malaysia. This might be difficult and would certainly add to their frustrations because the current immigration policies do not allow foreign students to work and study in Malaysia.

Another interesting notion that surfaced from this study is a reason why many middle eastern students of poor academic calibre come to Malaysia to pursue higher education. As Malaysia is a Muslim country, it attracts a considerable number of female students from the middle-eastern countries in the pursuit of higher education. However, as per the policies of many Arabic nations, women scholars are not allowed to leave their respective countries if they are not married. It was learnt from the perspectives of the respondents that female students tend to fare well in education compared to their male counterparts. As such on most occasions, the female students gain admission in professional fields such as medicine, accountancy etc., in public institutions of higher learning in Malaysia. The governments of the respective countries also provide scholarships for their husbands to undertake an academic degree while they remain in Malaysia accompanying their spouses. The male students who normally hold poor credentials hardly qualify for admission in public institutions and hence often end up in private higher learning institutions where they are treated as student customers. When the wives have completed their degrees in public institutions, the husbands demand for the completion of their degrees in private institutions as well.

### **Conclusions:**

The present study was intended to capture the perspectives of academic personnel in Malaysian private higher learning institutions on the issue and treatment of student customer concept. As mentioned qualitative interviews were held with the participants and there was a general consensus among the participants that the 'student customer' concept was indeed embedded in their institutional policies. Many private institutions of higher learning in Malaysia belong to gigantic corporate organizations. As such they are profit orientated and tend to treat their students as customers.

As in line with perpetuation of knowledge, it might be good or even noble on the part of universities increasing the number of candidates for tertiary institutions. It might be even alright to lower the entry requirements in the pursuit of attaining the intended student number, quantity wise. However, university authorities (whether public or private) should ensure that, their students fulfill the quality requirements and meet the minimum academic standards before they are allowed to graduate. Using the customer concept to compromise quality to meet student demands and aspirations is certainly against the academic norms of academic institutions. The incursion of the customer concept into higher education degrades educational standards and damage educator-student relationships. By no means should universities churn out worthless graduates who might flood the existing unemployment market.

### **Limitations of the Study**

Originally the present study was intended to use both quantitative and qualitative methods to capture the perspectives of a larger number of respondents. While many of the academic staff in private higher learning institutions declined to participate, time constrains restricted access to other willing respondents.

The logo for the International Association for Educational Research (iafor) is centered on the page. It consists of the lowercase letters "iafor" in a light blue, serif font. The text is surrounded by two large, overlapping, semi-transparent circular arcs. The outer arc is a light red color, and the inner arc is a light blue color, matching the text. The arcs are positioned such that they appear to frame the text, with the red arc on the left and the blue arc on the right, creating a sense of depth and focus on the central text.

iafor

### References:

Eagle, L and Brennan, R (2007) "Are students customers? TQM and marketing perspectives", *Quality Assurance in Education*, Vol. 15 Iss: 1, pp.44 – 60

Franz, R. (1998). Whatever you do, don't treat your students like customers!. *Journal of Management Education*, 22(1), pp. 63-69.

Leornard, D., Becker, R., and Coate, K. (2005) To prove myself at the highest level: The benefits of doctoral study. *Higher Education Research & Development* Vol. 24, No. 2, May 2005, pp.135–149

Mukherjee, A.N. (2010) Commoditization of Education-Study of an Emerging Culture with Special Reference to Management in Education. *ISDA Journal* 20 (1), pp.9-23.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The text is overlaid on a large, faint circular graphic that is composed of two concentric arcs: an outer light blue arc and an inner light red arc.

*Training of Technical Teachers through Integration of Information & Communication  
Technology in India*

PK Tulsi, MP Poonia, SS Pattnaik

National Institute of Technical Teachers Training and Research, India

0504

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Abstract

Technology has provided the platform for learning i.e anyone can learn anything, any where any time. The potential of technology was exploited to train technical teachers in order to enable them to understand the quality issues in technical education, plan and deliver instruction effectively, and also to evolve strategies for developing creativity and entrepreneurial competencies among students. About 4689 technical teachers have attended the programme from September 2012 to April, 2013. Four different modalities were used to conduct the programme namely live interaction through videoconferencing and google hang out& pre-recorded video lectures; pre-recorded videos and face- to- face interaction and pre-recorded video lectures only in the northern region of the country. Evaluation of the programme was done by seeking reactions of the participants on extent of achievement of objectives, extent to which their expectations were met, quality of various aspects, problems faced. Their suggestions were also sought to improve the quality of the programme. Majority of the participants have expressed their satisfaction with the programme and assigned ratings on various aspects between 4 and 5 on a five point rating scale. However, the quality of transmission in live interaction remained the major issue. Very little interest has been shown by participants in recorded videos.

**Keywords:** Technical Teachers Training Information & Communication Technology

## 1. Introduction

Since independence in 1947, Technical Education System has grown into a fairly large-sized system, offering opportunities for education and training in a wide variety of trades and disciplines at certificate, diploma, degree, postgraduate degree and doctoral levels in institutions located throughout the country. Technical education system in India comprises of 81 centrally funded institutes of National importance including Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), National Institutes of Technology (NITs), Indian Institutes of Information Technology (IIITs), Indian Institutes of Science and Research (IISERs) and National Institutes of Technical Teachers Training and Research (NITTTRs). There are 8536 degree level and 3524 diploma level technical institutions offering courses in Engineering and Technology, Applied Arts and Crafts, Architecture & Town Planning, Hotel Management and Catering Technology, Management, Master's in Computer Application, Pharmacy etc. The intake capacity of these institutions is 23 lakh and 12 lakh respectively. Realizing the importance of technical education in the further development of the nation, the Government of India is keen on developing some more institutes on the lines of IITs, IIMs and IISERs.

However, quality of technical education is a major concern with stakeholders. Serious concerns have been expressed regarding the quality of curriculum, instructional processes, evaluation, technical graduates from these institutions, quality of linkages with world of work and feedback. The employability of the technical graduates is declining (McKinsey Global Institute, 2005; Aspiring Minds, 2010 and Blom and Saikhe, 2011) and majority of the students are leaving their core branches of engineering and entering into IT and ITeS sector. It has been invariably expressed that graduates from technical institutions lack generic skills and higher order cognitive skills such as ability to analyze, evaluate and create as well as the practical skills. Blom and Saikhe (2011) and UK Commission for Employment and Skills (2008) advocated for bringing changes in curriculum and teaching learning and evaluation to enhance employability of graduates from technical institutions.

A series of panel discussions were organized by the institute to know the expectations of industry from technical graduates. Panelists included the industry personnel from a wide variety of industries such as automobile, infrastructure, pharmaceutical, biotechnology, electronics and manufacturing. Panelists opined that students lack fundamental knowledge of terminology, concepts, principles etc. in their own disciplines, lack knowledge of current developments in their disciplines and technology, lack practical skills, are unable to read engineering drawings, lack analytical ability, ability to work in teams, willingness to learn, communication skills, managerial skills and creativity, lack positive attitude and have become more materialistic, prefer to look for white collar jobs and prefer to work in IT or ITeS sector and do not continue in the core engineering branches. They suggested that changes should be introduced from time to time in the curricula for enhancing its relevance; industry personnel should be involved in curriculum design; instructional methods such as seminar, group discussion, brainstorming, collaborative project work, and case study should be used to develop higher order cognitive abilities teachers should acquire proficiency in handling practical work and should facilitate the acquisition of skills by the students; projects should be live problems from the industry or the society; structured industrial training should be provided to students;

teachers also need to be provided industrial exposure and training to enable them impart more practical knowledge to students and industry and academia should work in close collaboration. Industry must support the institutions in providing training places for both students and teachers, contribute to R&D and establish or create laboratories at institution level (Tulsi and Poonia, 2013).

Teachers are the backbone of the technical education system. Quality of instruction, to a large extent, depends upon the competence, commitment, and resourcefulness of teachers. Knowledge explosion leading to decline in the shelf values of degrees, rapidly changing technology, modern communication revolution and rapidly changing structures, processes and procedures in the world of work demand that teachers must update and upgrade their knowledge on a continuous basis. However, during the last two decades with proliferation of technical institutions, many fresh graduates have been inducted into the system and they though possess the subject matter knowledge but lack knowledge of pedagogy or andragogy. In addition to this, lack of industrial exposure is a serious concern to provide effective instruction and optimize learning to students.

Minister of Human Resource Development has announced National Mission on Teacher and Teaching during Twelfth Five Year Plan to improve quality of higher education in the country. During recent past, different approaches have been tried to train teachers in masses as per the mandate of the Ministry of Human Resource Development, Government of India. In this series, A-VIEW software has provided a rich interactive environment for e-learning. It has provided seamless connection among different colleges spread all over the country and the teachers at Indian Institute of Technology (IIT), Bombay. In fact, it was virtually a classroom with each remote centre functioning as a student entity. This facilitated each remote centre to follow the chat session with every other remote centre, thus providing a virtual classroom spread over the entire country. Indian Institute of Technology, Bombay used both satellite (EDUSAT) and internet technology to reach out to a large number of college teachers through thirty remote centers. About 93% of the teachers were introduced first time to new teaching aids and technology (MOODLE and clicker). Survey findings indicated that 43% of the respondents said that the overall experience was excellent and 52% rated the experience as good. 90% of the teachers agreed that they would adopt the teaching material and methodology in their teaching (Kannan and Narayanan, 2010).

Capper (2000) reported the major findings of three case studies conducted with the support of World Bank Info Dev Programme intended to document various models of teacher training and technology. Armenia's The Three Pomegranite Network (3PN), a global online learning programme connected Armenian students and teachers throughout the world by engaging them in collaborative project based learning. It led to the conclusion that this could be the cost effective approach to training teachers than face-to-face particularly when large number of teachers were involved. The two case studies in China focused on use of television as one of the delivery modes to provide in-service training to teachers. Both studies found that TV programmes were seldom used and teachers preferred direct review of the material due to pressure of passing an examination at the end of each year of coursework. It was found that teachers lived quite a distance from the study centres and did not have time to go to study centres.

Video tapes were expensive for teachers. National Institute of Education, Singapore was able to integrate the use of information technology in their pre-service teacher training programme due to availability of adequate resources and clear direction from the top.

## **2. National Institute of Technical Teachers Training and Research**

National Institute of Technical Teachers Training and Research (NITTTR), Chandigarh, an ISO 9001-2008 certified institution, was set up in the year 1967 by MHRD, Government of India to bring qualitative improvement in technical education especially in the northern region of the country. The other three institutions catering to eastern, southern and western region of the country are at Kolkata, Chennai and Bhopal respectively. Recognizing the contribution made by the institute in improving quality of technical education, the institute was accorded the status of National Institute in the year 2003. The broad objectives of the institute are:

- To provide professional education and training for teachers of Engineering and Technology disciplines in technical institutions for advancement of learning towards promoting excellence in technical education and industry
- To strive for continuous improvement in instruction and research in engineering and technology and research in management of technical education
- To actively support the growth and quality improvement of technical education in the country through involvement in activities at national and state levels

The institute caters to the needs of education and training of faculty and staff, curriculum development, instructional material development, and research and development of technical institutions (both degree and diploma level) in the northern region and thus the clientele of the system consists of the following eight states and a union territory: Delhi, Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand and Chandigarh . In addition, the institute is catering to the training needs of industry in the region.

The institute undertakes the following six major activities to cater to the needs of clientele system:

- Education and Training Programmes
  - Long Term Programmes
  - Short term Programmes
- Curriculum Development
- Instructional Material Development
- Research and Development
- Extension Services
- Consultancy in Technical Education and Technology Areas

The institute offers long term programmes (ME/MTech) in six disciplines namely: Engineering Education, Computer Science and Engineering, Construction Technology and Management, Instrumentation and Control, Electronics and Communication Engineering and Manufacturing Technology. The programmes are offered through

regular contact mode and on modular basis. Fifty six students are pursuing PhD in various disciplines of engineering and technology. The institute offers short term courses of one to four weeks duration in a wide variety of areas. About 400 short term courses are organized in a year.

### **3. Training of Technical Teachers through Integration of Information and Communication Technologies**

In the year 2012, MHRD, Govt. of India assigned a mandate of training 20,000 technical teachers in the region to the institute. The objectives of the programme are to enable the participating teachers to understand the quality issues in technical education, understand the process of planning and delivering effective instruction, evolve strategies for developing creativity and entrepreneurial skills among students and understand the process of generating video lectures and integration of those in teaching learning.

The institute has been training technical teachers through face-to-face contact mode since its inception. The institute has one of the largest set-up of Education Television Studio in northern region with latest equipment as shown in Fig.1. The department has all the facilities and resources (human and technical) to offer programmes through video conferencing. Thus, the institute decided to exploit the potential of technology to fulfill the mandate of training 20,000 technical teachers in the northern region.

**Fig.1: Educational Television Studio, NITTTR**

The minimum facilities and resources, which were required at the technical institutions in the region for networking with NITTTR, are given in Table 1.



Service Provider Official Conference Proceedings	Institution	NITTTR, Chandigarh	Google Hangout Osaka, Japan
<ul style="list-style-type: none"> <li>▪ TCP ports to be opened Range 60000-64999</li> <li>▪ UDP ports to be opened Range 60000-64999</li> <li>▪ TCP 1720 to be opened</li> <li>▪ H 239 to be enabled</li> <li>▪ H 323 to be enabled</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cabling from gate way(server) to the place (Seminar room) of training without having any router, switches and firewall or any securities in between.</li> <li>▪ A LCD projector having HDMI input ( in case of a normal LCD (vga) a converter is required).</li> <li>▪ 1 mbps real IP based dedicated bandwidth during the period of the programme. The bandwidth should not be shared.</li> <li>▪ Ampli speaker for the audience to listen and a good</li> <li>▪ Seminar room with proper lighting facilities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Video conferencing equipment.</li> </ul>	<p>For interaction through Google Hangout:</p> <ul style="list-style-type: none"> <li>▪ A laptop with inbuilt web camera</li> <li>▪ An external speaker (good quality) to listen</li> <li>▪ An external mike to speak</li> <li>▪ A good quality LCD projector (HDMI input) to see on big screen.</li> <li>▪ A good seminar room with proper lighting facilities.</li> <li>▪ Prefer to have a web cam with inbuilt mic properly installed in your desktop for a better interaction (This is in place of laptop)</li> <li>▪ Dedicated bandwidth of 500 kbps for Google hangout</li> </ul>

**Table 1: Hardware Requirements for Video Conferencing & Google hangout**

The only limitation of the adopted technology (video conferencing) is the requirement of dedicated 1mbps bandwidth as the transmission is in HD (High Definition-1920x1080P), which is bandwidth hungry technology. Hence, maintaining 1mbps bandwidth was a hard requirement of the network institutes. From September 2012 till April, 2013, 4689 technical teachers participated in the programme.

Since September 2012, the institute started offering programmes through four different modalities:

- live online interaction through video conferencing & pre-recorded video lectures
- live online interaction through use of Google Hang out & pre-recorded video lectures
- face- to- face interaction and pre-recorded video lectures
- use of pre-recorded video lectures only

Live lectures were delivered in the ETV studio of the institute and two to seven technical institutions acted as nodal centres for the various programmes. The potential of social media (Google hangout) has also been exploited to overcome the problems faced on account of limited availability of video conferencing facility and low bandwidth problem at network/nodal centres.

The contents covered in the programme included: Technical Education System: Challenges and Quality Issues, Curriculum Implementation, Teaching Effectiveness, Instructional Planning & Delivery, Instructional Methods-Brainstorming, Case Study and Role Play, e-content Generation and its distribution, Oral Communication, Creativity & Innovation, Entrepreneurship Development & Industry Institute Interaction, NVEQF, Schemes of Community Development through Polytechnics, Mainstreaming Persons with Disabilities in Technical Education, Accreditation Process, Writing Research Proposals and Papers, Sustainable Development and Management Skills. In addition, a panel discussion on the theme 'Expectations of Industry from Technical Graduates' formed a part of the programme.

Programme evaluation proforma was designed and it included various aspects of programme namely: extent of achievement of objectives, extent to which expectations met, experience of participating in the programme, relevance of the contents covered, clarity of objectives, arousal of interest, use of examples, communication skills of presenters, involvement of participants, opportunities to clarify doubts, use of questions, quality of presentation, quality of audio, video, & power point presentations, learning and over all rating. The participating teachers at the end of the programme did programme evaluation. In total, 2000 evaluation proforma complete in all respect were analysed for this purpose.

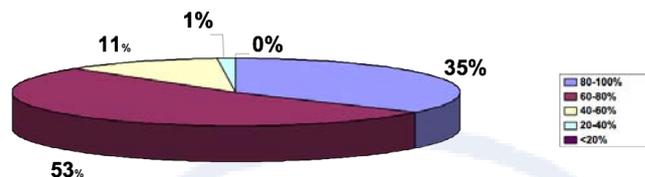
#### **4. Major Findings**

Major findings related to various aspects of the programme are summarised below under the following headings:

- Extent of achievement of objectives
- Extent to which expectations met
- Quality of various aspects
- Overall rating & Experience of participating in the programme
- Problems faced
- Suggestions provided by the participants

▪ **Extent of achievement of objectives**

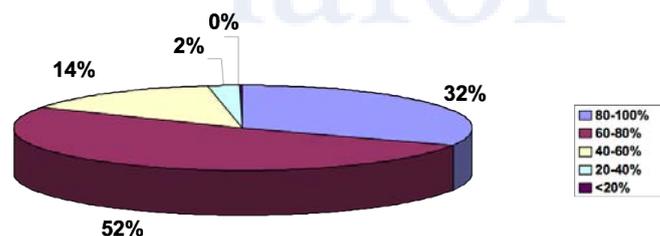
On the basis of analysis of evaluation performa received from the participants, it was found that 35% of the participants felt that 80-100% programme objectives were achieved and 53% were of the opinion that 60-80% of the objectives were achieved. However, 11% and 1% of the participants felt that the extent of achievement of objectives was between 40-60% and 20-40% respectively as shown in Fig.2.



**Figure 2: Achievement of Programme Objectives**

**Extent to which expectations met**

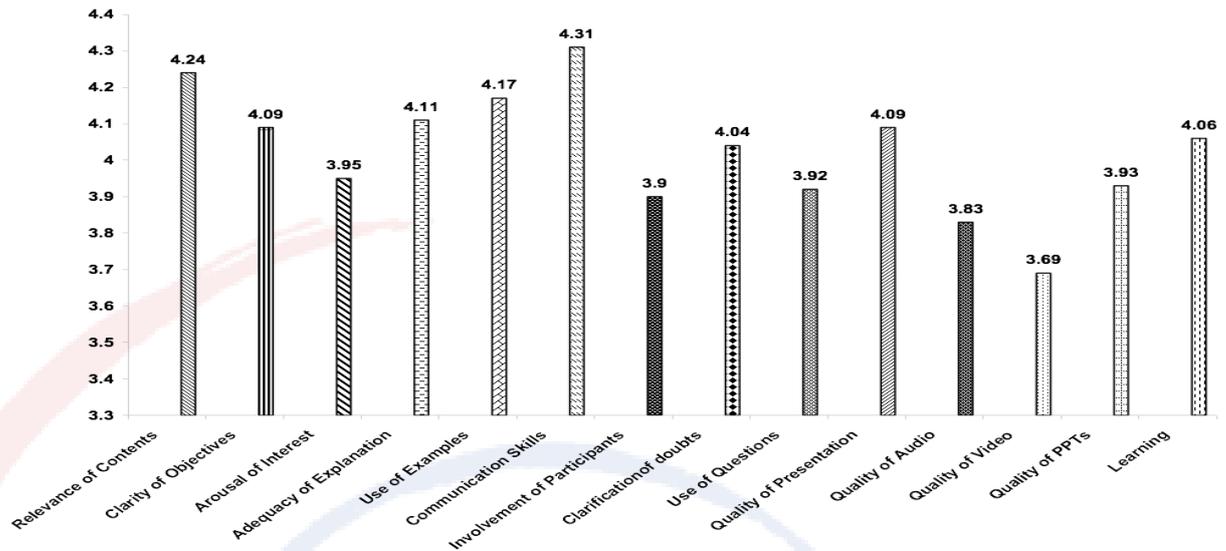
84% of the participants opined that programme met more than 60% of their expectations (Fig. 3). Participants felt that greater emphasis could be on teaching and learning.



**Figure3: Extent to which Expectations Met**

**Quality of various aspects of the programme**

The quality of various aspects of the programme -relevance of the contents covered, clarity of objectives, arousal of interest, use of examples, communication skills of presenters, involvement of participants, opportunities to clarify doubts, use of questions, quality of presentation, quality of audio, video & power point presentations and learning was rated on a five point scale namely: Excellent(5), Very Good(4), Good(3), Satisfactory(2) and Poor(1). The ratings to various aspects of the programme ranged between 3.69 (quality of video) and 4.31(communication skills of presenters). On eight of the fourteen aspects namely relevance of contents, clarity of objectives, adequacy of explanation, use of examples, communication skills, clarification of doubts, quality of presentation, and learning, the average rating was between 4 and 5 (Fig.4).



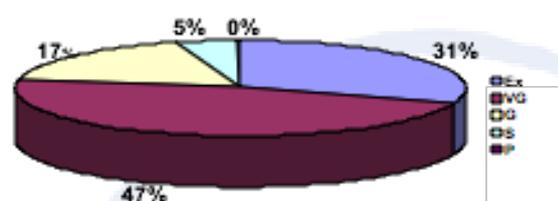
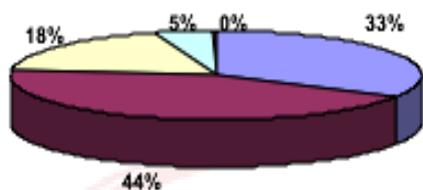
**Figure 4: Quality of Various Aspects of the Programme**

The problem in the quality of video faced by the participants was mainly due to low bandwidth available at the network centers in the region. At times, the participants were not able to hear audio, see the power points and suggested that quality of power points should be improved and greater involvement of participants should be ensured during sessions.

Participants opined that video conferencing facility helped them in interacting with experts and other technical teachers at different nodal centres. They found the programme informative, interactive and interesting.

**Overall rating and experience of participating in the programme**

95% of the participants rated their experience of participating in the programme between good to excellent with an overall rating of 4.08 on a five point scale (Fig. 5)..Participants assigned an overall rating of 4.04 to the training programme (Fig.6).



**Figure 5: Rating to Overall Experience to Programme**

**Figure 6: Overall Rating to Programme**

**Some remarks of the participants**

- ‘A great learning experience-----‘
- ‘It was a wonderful experience and will help us to improve teaching’
- ‘It was a nice experience . I learnt so many good things that will help me as a teacher’
- ‘The programme was well designed and delivered.-----‘.
- ‘It was one of the best experiences of my life. I have learnt many important aspects of teaching and life’.
- ‘Such type of courses must be organized on a regular basis’
- ‘Such programmes should be organized in future because it was really very novel and enriching event altogether’.
- ‘Overall programme was good. We would like to attend such programmes periodically’.
- ‘Looking forward to more programmes to enhance teaching learning process’.
- ‘Such programmes are very informative and useful in enhancing knowledge and skills’.
- ‘Commendable endeavour-very beneficial’.
- ‘Faculty members from remote areas can gain insight and are able to share their views with esteemed experts/ faculty -----and with their colleagues’.
- ‘I really felt great after attending the Induction Programme through ICT. I came to know of three pillar strategy of ICT namely transformation, innovativeness and connectivity’
- ‘In A class cities and metros, resource persons are available where as in B &C class cities, they are not available. As such, technology is required to share experiences and great ideas with resource persons and implement

logistics in our daily life and take our country on the path of good governance and prosperity’.

### **Problems Faced**

During the conduct of the programme through integration of information technologies, the following problems were faced:

#### **Network Centres**

- Availability of low bandwidth of internet
- Frequent breaking up of link during the initial programmes
- Poor quality of audio and video reception
- Power failure at times leading to missing a part of the programme by participants
- Acoustics problem at nodal centres
- Lack of AC in seminar halls
- Lack of eye contact with speaker
- Certain presentations were allocated inadequate time
- Participants at centers connected through Google Hangout were not clearly visible due to fixed position of camera as in built camera of the laptop was used.

#### **Centres where only pre-recorded video lectures were used**

- Difficulty faced by participating teachers to view pre-recorded video lectures continuously for six hours a day
- Inability to clarify doubts due to non- availability of experts

#### **Suggestions provided by the participants**

Some of the significant suggestions put forth by the participants of various courses include the following:

- Such type of courses should be mandatory for all technical teachers
- Duration of pre recorded videos should be short
- More examples should be integrated in the presentations
- Interaction with industry experts/personnel should be increased
- Involvement of participants should be ensured in all sessions. More time should be allocated for question answer session and discussion. Participants’ questions should be adequately dealt with to generate satisfaction among them.
- A copy of DVDs or the course material should be provided to the participants.
- In case of teachers from engineering colleges, more emphasis should be laid on research and development
- Participants were of the opinion that they had a novel experience but also pointed out that face- to- face interaction cannot be replaced. They enjoyed live interaction with experts and not the screening of pre-recorded lectures except a few and thus suggested that face to face interaction or live interaction

with the experts should be preferred over screening of pre-recorded video lectures. If DVD is used, presenter should be available to take on questions from the participants.

- Courses in technical subjects may also be conducted through videoconferencing
- Practical components for sessions like generation of e-content and media tools should also be included in the programme.
- The experts for the convenience of the participants may use mixed language.
- Video conferencing facility should be set up in institutions
- States should be requested to formulate training policies to ensure continuous professional development of teachers.

### **Conclusions**

The feedback has been quite encouraging. On the fourteen aspects of the programme, eight have been rated between 4 and 5 on a five- point scale. It has helped the institute to widen the reach of its programmes and train a large number of teachers in northern region and bring some attitudinal change among teachers regarding integration of technology in teaching learning. Technology has the potential to break geographical and time barriers and allows seamless integration of resources without physical movement of the same. The initiative taken by the institute to offer training programmes through ICT is a step in the right direction as the Ministry of Human Resource Development, Govt. of India has launched a Mission on Teacher and Teaching during the twelfth five year plan and the target is to train teachers through ICT. Technical institutions must take the advantage of National Mission on Teacher and Teaching, National Mission on Education through ICT and National Programme on Technology Enhanced Learning and create networking facilities and share resources and expertise for improving quality of technical education in the country.

**References**

Aspiring Minds 2010 *National Employability Study IT/ITeS Sector: Key findings and Intervention Indicators*. Gurgaon: Aspiring Minds Assessment Pvt. Ltd.

Blom, Andreas and Saeki, Hiroshi 2011 *Employability and Skill Set of Newly Graduated Engineers in India*. USA: World Bank. Retrieved from <https://openknowledge.worldbank.org/handle/10986/3404>

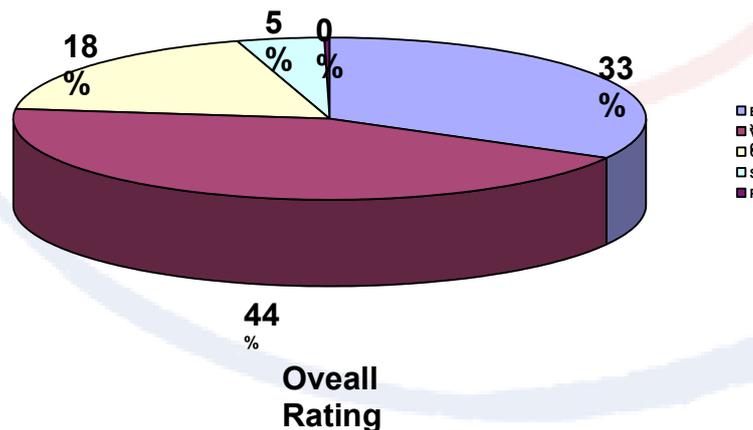
Capper, Joanne 2000. *Teacher training and technology: An overview of case studies and lessons learnt*. TechKnowLogia, November/December, 2000. [www.TechknowLogia.org](http://www.TechknowLogia.org).

Kannan, Kalpana and Narayanan, K. 2010. *ICT enabled teacher training for Human capital formation: A study of IIT Bombay initiative*. Retrieved from [http://www.hss.iitb.ac.in/FGKS\\_IITB\\_2010/papers/Kalpana.pdf](http://www.hss.iitb.ac.in/FGKS_IITB_2010/papers/Kalpana.pdf) on 19 August, 2012.

Tulsi, PK and Poonia, MP. 2013. *Creating an Enabling Environment in Technical Institutions for Hands on, Minds on and Hearts on*. Journal of Engineering & Technology Education, 6:2, pp.1-8

UK Commission for Employment and Skills. 2008. *Employability Skills Project: Review of Evidence on Best Practice in Teaching and Assessing Employability Skills*. UK: Policy Research Institute.

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*Planning and Evaluation Skills: A Search with the Teachers of Italian Schools*

R. Tamaro, A. D'Alessio, I. Cikatelli, M. Calenda

University of Salerno, Italia

0511

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Abstract

This contribution proposes a reflection on the centrality of the construct of competence, which, especially in the last twenty years, has taken a decisive role in educational contexts. The implications of this innovation are important from the point of view of planning and evaluation of training interventions. The work attempts to reconcile the theoretical aspects and those teaching practices that require an adaptation of the methodological choices underlying the processes of teaching and learning. "In redefining the formative school task" and that this centrality is demonstrated by the growing attention, recognized both nationally and internationally, to the theme of key skills for active citizenship "(Carroll, 2010, p. 16). The second part presents an experience aimed at training teachers and aims to lead and assist teachers in the various education degrees to acquire, enhance and develop knowledge and skills related to the construction of valid and reliable assessment tools, with reference both to knowledge and skills.

**Keywords:** competence, evaluation, verification tests, authentic task

## Introduction

In recent years there has been a sort of Copernican revolution in relation to the idea of teaching/learning: from geocentric vision ", which assumed as cornerstone the" logic of teaching "(i.e. logical and chronological structure of cultural contents), it is passed to a heliocentric" vision ", which takes as a cornerstone the" logic " of learning (that is how the person who learns and cultural contents meet) (Castoldi, 2007). The revolution's reflexes can be recognized both in the evolution of learning conceptions, and in the development of teaching strategies, both in terms and in the functions assigned to the evaluation. The professional culture of teachers reacted in different ways to this revolution.

In particular, it highlights an increasingly troubling gap between the cultural awareness of teachers-who have assimilated more or less convinced the key concepts of a constructivist approach to learning, teaching methodology, a key training and evaluation guidance – and operating practices, often remained substantially unchanged and untouched. The construct that better collects the various meanings involved in a constructive, social-cultural, situated learning perspective, is "competence" as it has come in developing pedagogical language.

The concept of competence is very used in the psychological, sociological, linguistic and pedagogical fields to describe the ability to behaviour in a particular scope. Even in the professional sector have been made different interpretations of the powers which lay an emphasis on professional quality of an individual in terms of knowledge, skills, abilities, professional and personal qualities Quaglino (1990); now on the relevance related to situations and effectiveness with regard to the issues to be faced, as stated by S. Meghnagi (1992).

The concept of competence, in particular, is as a cornerstone of the school training model in relation to the key moments of the training event, i.e. in relation to teaching, learning and assessment. In relation to this concept has developed, over the last two decades, a debate that produced a multiplicity of approaches and interpretive horizons with important repercussions in the school educational practice.

We can say, recovering some clarifications of Coggi (Coggi, Notti, 2002) that the expertise:

- does not mean only the possession of knowledge and techniques, or management capacity of the same even if it supposed them;
- involves knowing how to integrate knowledge and knowing how to implement within the framework of the action concerning a family of problematic situations;
- involves the mobilization of knowledge and know-how; the core of the concept lies in the mobilization of these resources and not in the resources themselves;
- it is individual characteristic that builds from attitudes (through training and experience) about a certain scope of problems.

Castoldi says that we can consider the matter from three directories:

1) from the simple to the complex when you enable an integration of student-owned assets "that involves the activation of knowledge, skills and personal dispositions relating to both the cognitive level, and strong-willed and socio emotive one" (Castoldi, 2009, p. 19).

2) from outside to inside puts focus on student's internal components. Each subject sets in motion its own internal resources to accomplish a task respecting his personality. Last but not least, the size

3) from the abstract to the set that includes the use of ability to deal with specific tasks.

After Pelleray (2010) the competence can be understood considering it as the ability to cope with one or more tasks using their affective, volitional and cognitive potential resources. Mason (1996, 1997), on the other hand, invites us to consider the cognitive, motivational and meta cognitive components as "allies" against the backdrop of a constructivist perspective. Therefore, considered the differences between knowledge, skills and competence, where knowledge refers to the results of the assimilation of information and can be divided into theoretical and/or factual; for skill refers to the ability to apply the knowledge in order to solve problems; finally to skills refers to the use of knowledge, skills, capacity for personal, social and/or methodological work, in work or study and professional development and/or personal ". (Castoldi M.,2009, p. 19).

It is persistently highlighted the need to know what together with the need to know how to transfer expertise from one context to another. In fact, the emphasis may be placed, depending on definitions, on different aspects: the knowledge, skills, emotional intelligence, on the link with the context, on transferability in different contexts of the skills acquired. In more purely educational context, the concept of competence is traced to the educational model of active schools advised to pay central and privileged attention to the student, to emphasize the practical activities, to develop strategies of thought, ability to mobilize their knowledge and skills in different situations.

The competence consists of several elements: knowledge, metaknowledge, metacognitive adjustments, these elements are organized into operating schemes aimed at effectively solving a range of problems or problematic situations; according to the definition provided by Gillet competence is a system of procedural and conceptual knowledge, contextual, organized, even through metacognition, operational schemes (or networks or tops) aimed at identifying and resolving a family of problems with effective action. (Coggi, Notti, 2002, p. 121)

This definition covers the basics elements and is also shared by other authors: the competence includes knowledge in relation to each other and also with the metaknowledge network to build response patterns that are activated in the resolution of family problems. Thanks to the experience and the exercise, these patterns are used over time with greater expertise, speed and security of the parties and constitute what sociologists with Bourdieu called habitus: the schema collection available at a given time of life that allows you to create any number of practices that can be adapted to different situations.

The definition of Allal (1989, 1991) includes in addition to cognitive aspects of human behavior, even those social and affective, sensomotor ones, providing a comprehensive framework in its entirety. Competence is thus defined as an integrated and functional network composed of cognitive, social, affective, sensomotor behaviors which can be mobilized to cope with a family of problematic situations based on acquisition ways of interaction and cultural instruments. The cognitive components consist of declarative knowledge (knowledge), procedural knowledge (knowing how to do) and contextual knowledge; the affective components include attitudes and motivation; the social components refer to the field of interaction and consultation and finally the motor and sensory components are those related to the coordination of gestures.

The Council of Europe (2006) delved into the issue of competences, and to identify the eight key competences for lifelong learning "of which everyone needs for personal development, active citizenship, social inclusion and employment": communication in the mother tongue, communication in foreign languages, mathematical competence and basic competences in science and technology, digital competence, learning to learn social and civic competences, sense of initiative and entrepreneurship, cultural awareness and expression.

By the time various organizations and research institutes both nationally and internationally are questioning on what are the key skills to possess in order to promote the inclusion of people in society to cultural, economic and business. Mario Castoldi asserts that the construct of competence is central in the redefinition of the educational task of the school "and that this centrality is demonstrated by the growing attention, recognized both nationally and internationally, to the theme of key skills for active citizenship" (Castoldi, 2010, p. 16).

In 1993 the World Health Organization with the document entitled Life Skills education in school attempts to provide a response to the needs of various countries, committed to combating and preventing various forms of deviance and social hardship which increasingly live the younger generations. In a subsequent document, the expression is replaced with life skills psychosocial skills, identified a set of personal, interpersonal, cognitive, social, affective, universal skills. The World Health Organization recognizes ten skills, anticipating, with a response that considers compelling both the size of personal identity, since those social relations, the identification of core competencies. Meanwhile, in Europe the main orientation is to move towards an investment in human capital that is not limited to formation of school type, but it is actually a hard training to lifelong learning, in order to cope with the emerging challenges of full employment and a permanent educational project as Delors says (1994).

He begins to make his way the concept of competence, called for overcoming a static conception of knowledge, in favor of a new vision in which through the knowledge subjects can adapt to changing social and living conditions.

In 1997 the OECD promotes a project called DeSeCo aiming to reach a conceptual synthesis on what are the key skills necessary for adulthood, including providing more timely reference on which to conduct international surveys of skills assessment. The reference values of this project consists of the principles of democracy and sustainable development, recognizing both the importance of realizing the potential of

individuals, acting mutually respecting each other and cooperating to create a fairer society. Key competences defined in DeSeCo are based on three fundamental criteria, in virtue of which we can say that they:

- contribute to results of great value at the individual level and in terms of social life in all its length and proper functioning of the company;
- play a functional role in the fulfilment of important and complex demands and challenges in a variety of contexts;
- are important for all individuals.

The competencies identified are nine, grouped into three categories: use of tools in an interactive way, interact into heterogeneous groups act autonomously. With this background, the Council and the European Parliament approve the December 18, 2006 the recommendation that contains the European reference framework for key competences for lifelong learning. The framework outlines eight skills that everyone needs for personal development, active citizenship, social inclusion and employment. In particular, social and civic competences as defined include personal skills, interpersonal and intercultural and cover all forms of behavior that enable people to participate effectively and constructively in social life and work, in particular to live in increasingly different societies, and to resolve conflict where necessary. Civic competence equips individuals to fully participate in civic life thanks to the knowledge of the socio-political concepts and structures and a commitment to active and democratic participation. Rychen, about the significance of key competences says: "With the myriad of social differences between individuals conceivable within and/or between countries, is there a common ground on which to define a set of core competencies (or universally applicable)? Is it justifiable for the basic premise that you cannot build and even justify a limited number of common key skills? Several contributions to DeSeCo have produced an important reply: diversity does not preclude the establishment of a common vision, sharing of ideals and the recognition of processes and global challenges (Rychen, 2007, pp. 103-104).

Within the debate about competence and evaluation Maccario (2012) highlights for competency assessment the need of a new and articulated approach that can rely on the use of complex tests for the evaluation of competences that invokes an integration of learning on the move, with an attention to true even of basic learnings that compose it. Obviously everything is based on the realization that the need to evaluate in depth and to use multiple tools, depends not only on nature and composite structure of competence, but also in view of the primary task of the school to encourage personal growth and preparing to deal with tasks and problems related to real life as well as shared by Gérard (2009), Joannert (2006), Tardif (2006), Durand, Roch (2006), Rey, Carette, Defrance, Kahan (2003).

In the practice of school contexts, therefore, there has been a progressive shift of focus from knowledge/skill acquired in the acquisition of skills related to mobilization and integration to tackle complex tasks both internal and external to schools. Wiggins (1998) synthesizing this position asserts that "it is not to ascertain what the students know, but what they can do with what they know". Educational contexts, training schools and in general, are seeing the advent of the new millennium to a progressive enhancement of the concept of competence, which raised quite a few problem areas

for those working in educational institutions, both in terms of design and evaluation of skills. First and foremost are the teachers who face new educational needs in order to promote the full acquisition of job, social and cultural skills of future generations, placing at the centre of reflection also their training needs to meet social expectations in relation to this new task.

The "human resources", if placed in the right place and according to policy, can fit into a high productivity and progression. They may be considered a real estate to be used in a strategic way. The "worker", in our case the "teacher" is, first and foremost, a human action. The action set in motion by the teacher is indeed aimed to solve a problem, to achieve a goal or for the performance of a standard request, but is also marked by purely human characters, that characterize the dynamism expressed. The employee may be considered according to different dimensions: cognitive, motivational, the strong-willed or willing and the affective-emotional dimension.

"The intention to act, to commit their energies in one direction, results from the interaction between the system itself (conceptual and operational skills; reasons, values and beliefs; value mission towards oneself, of others and of the context of professional activity etc.) and the perception of action or specific situation of professional task to be addressed and its features "(Pellerey, Orio, 2001, p. 15) more specifically, with regard to the teaching profession, it is basically undisputed educational function of evaluation and dynamic interweaving between evaluation and teaching/learning processes to the extent that it should not be considered only as a mechanism of external control connected to the learning process, rather than it can be regarded as an information tool to support the student and knowledge and understanding the teacher is required to implement to achieve the educational action, always aimed at promoting learning and growth of students. In relation to that expressed so far, real and operative situations arises, urgently, for teachers the problem of how to build tools to evaluate what pupils do.

## **The Research**

On the heels of these considerations, it has been carried out a formative experience that sees as protagonists the USR – regional school office in Campania (Italy) in collaboration with the DISUFF – Department of Human, Philosophy and Education sciences at the University of Salerno in implementing the project called Teacher Training on design and construction of verification tests for the evaluation of skills, which took place from May 2012 to May 2013 in ten Schools Polo in Campania: Torre del Greco - VI Circolo, Quarto - II Circolo, Pollena Trocchia - IPSAER Tognazzi, Napoli - IPSCT Isabella D'Este, Napoli - Liceo classico Umberto I, Nocera Inferiore - III Circolo, Battipaglia - I CD, Benevento - ISIS Galilei Vetrone, Aversa - ISIS Jommelli, Avella - IC Guerriero. The purpose of the research carried out was to conduct and assist the teachers of the various school grades to acquire, enhance and develop knowledge and skills related to the construction of valid and reliable assessment tools, with reference both to knowledge and skills.

The interventions were divided into frontal lectures, tutorials and best practices-analysis (presentation, discussion and analysis of national and international good practices).

To this end, the path pursued the following objectives:

- to acquire basic techniques for the measurement of learning;
- to improve the use of evaluation tools, reducing the risk of subjectivity and increasing the number of items available for the evaluation;
- to Know the competency assessment models;
- to carry out tests aimed at assessing skills in various disciplines.

The moments of the investigation and verification must be distinguished from the assessment of competencies. Investigation and verification concerning the detection of learnings from knowledge and skills and are performed through tools such as consolidated systematic observation, questioning, testing, written, authentic test. The assessment makes possible to interpret all data collected, understanding the sense taken together and in relations between them and thus to express a judgement founded about the degree of mastery of the person with regard to competence.

Actually achieved competency can be tested only in authentic situations (see. G. Wiggins, 1998). In the tests will be offered to students homework problems that lead to reliable results, that is supported by effective and probative feedback demonstration. You must bring real problems "opened" to multiple interpretations, enabling more solution strategies and invite students to assess their action, reflecting on strategies adopted.

In those circumstances, the route was divided into five modules:

1. evaluation of learning;
2. learning objectives in National Guidelines and the Guidelines for the secondary schools of first and second grade;
3. the concept of expertise: designing and evaluating for skills;
4. profit tests: structured and semi structured;
5. authentic assessment and build tasks for the evaluation of skills.

In the first module were addressed issues relating to the fundamental problems of education, education, theories of learning, the introduction to the assessment and evaluation of learning. It was also dealt with the process of reform of the Italian Educational System. As regards the theories of training were addressed the main theories of both teaching and learning with particular reference to the distinction between constructivist and objectivist conception. Within the objectivist conception, were considered the contributions of behaviorists Watson, Skinner, Pavlov, Thordike and cognitive Neisser and Tolman. In reference to the constructivist conception, dominant in the current scenery, we consolidate conceptions of Piaget, Bruner and

Vigotskij. In the second form the attention has been focused on building specific learning goals and educational objectives. To define and build an objective, in terms of induced behavioral and performance, it is essential to be able to lay down the criteria that make possible to collect significant information, define the level of learning achieved through comparison of the results achieved and planned objectives, between observed and expected behaviors. The third module is based on the discussion of the concept of competence, in particular from the epistemological point of view, from its spread in the general context of education and main problems connected to its use in the teaching/learning relationship. Were analyzed, in addition, the main models of competence and their classifications with regard to the Community legislation in force.

In the fourth module has been deepened the methods and tools for measurement and evaluation of knowledge, skills and competences from both a theoretical and practical laboratory exercises dedicated to the processing of testing tools in the various disciplines for teachers belonging to each order and degree. During the lectures were discussed, in particular, profit tests with closed and open response stimulus (semi structured) and those with closed stimulus and response (objective or structured), bearing in mind the reference model of the OECD-PISA test. The fifth module has been provided the basic elements of statistics in relation to the coding, processing and analysis of data. The working groups exercised when calculating measures of central tendency and dispersion indices of (mean, median, mode, standard deviation, etc.). In the same module has been presented, discussed and analyzed the materials relating to national and international good practices concerning the skills assessment.

The route was divided into fifteen meetings including five lectures and ten laboratory exercises. Laboratory exercises have seen teachers involved in:

1. construction of objectives;
2. construction of profit objective tests;
3. construction of profit semi structured tests;
4. construction of tests for authentic assessment, real performance tasks;

the laboratory activities have led to the production of a large number of elaborate, here we provide some.

**Some examples of test for the evaluation of competences in the school.**

Test n° 1

Test theme: archipelagos

Recipients: students of the fourth year of a liceo scientifico

Purposes: from National Ministerial Directions for high school courses "... in terms of methodology, the initial approach of phenomenological and mainly descriptive type you can navigate to an approach that puts the focus on the laws, on models, on

formalization on the relationship between the various factors of the same phenomenon and between different phenomena. Upon completion of this course the student will have therefore acquired the following skills: to make logical connections, to recognize and establish relationships, to categorize, ... "



In the picture we can see an archipelago of our peninsula : this is the archipelago of islands.... An archipelago is a group of islands that can be more or less far apart, sometimes so far as not to be visible to the naked eye between them!

Mario is in Alimara, one of the main islands of the archipelago that also includes Belterra and Collaria. The island of Belterra is famous for its lighthouse 50 meters high and it is from the island of Collaria 10 km. Mario decides to take a trip with his boat to Collaria but does not know how far Alimara is and thus cannot calculate the time of the crossing. He calls Guido, the lighthouse keeper of Belterra. The information Guido has got are the distance of Belterra from Alimara (5 km) and the angle that Belterra shapes with the Alimara and Collaria ( $60^\circ$ ). Mario is not discouraged because he knows how to find the required distance with information received!

Question 1: calculate the distance between Alimara and the nearest Collaria a decametre. Explicit solution procedure.

Question 2: calculate the angle under which the lighthouse of Belterra is seen by Alimara in radians. Explicit solution procedure.

Question 3: express in sexagesimal notation an angle equal to  $33.52^\circ$ . Explicit solution procedure.

Correct Answers:

Question 1: [applies the law of cosines or cosine: 8.66 km]

Question 2: [apply the second law of right triangles:  $\text{tg}\alpha = 0.01$ ]

Question 3: [ $72^\circ 33' 30''$ ]

Test n° 2

Theme: environment greenhouse

Recipients: students of the second year of a secondary education institution.

Purpose: the National Ministerial Guidance for high school courses "... in terms of methodology, the initial approach of phenomenological and mainly descriptive type you can navigate to an approach that puts the focus on the laws, on models, formalizing, on relations between the different factors of the same phenomenon and between different phenomena. Upon completion of this course the student will have therefore acquired the following skills: to make logical connections, recognize and establish relationships, categorize, ...".

Specific objective of learning: Learn about weather phenomena and Earth's climates

The gases identified as directly responsible for the greenhouse gases are carbon dioxide, methane, chlorofluorocarbons, nitrogen dioxide, ozone.

1. What is the less relevant to the greenhouse effect quantitatively?

a) carbon dioxide b) ozone c) nitrogen dioxide d) chlorofluorocarbons. What is the direct consequence of the increase of greenhouse gases in the atmosphere?

t) the temperature rise b) variations of the hydrological system c) melting glaciers d) Onset of diseases

3. Greenhouse gas emissions produced by human activities are growing at a rate of 0.5 -0.7% per annum. If the trend of growth will not be limited, by 2100 the concentration in the atmosphere of greenhouse gases could reach 700 ppm.

Determines their average concentration measured in the year 2000. Motivates the answer.

4. from the graphic the energy sector appears to have greater importance in the production of greenhouse gases. In your opinion what is the reason?

### **Conclusions**

On the basis of this experience we can say that school context today is the need to work to continue to spread a culture of evaluation in which the main idea is planning and assessing for competence. The establishment of the constructivist school paradigm requires adapting educational practices, specifically educational action, setting the design around the complex system that revolves around competency acquisition processes in its different levels.

Conceptual changes that have been referred to show that verification tests for competency assessment form, in particular, the operational turnaround and thought, as well as the task with which the Italian and European school held, is called to respond in order to acquire the fundamental elements of a methodology that allows to reach an assessment not only of the presence of a skill but also his level.

## References

- [1] Allal L. (1991), *Vers une pratique de l'évaluation formative. Matériel de formation continue des enseignants*, Bruxelles.
- [2] Allal L., Bain D., Perrenoud P. (éd. Par) (1989), *Évaluation formative dans un enseignement différencié*, Lang, Berne.
- [3] Baldassarre V.A. (2004), *Progettare la formazione*, Carocci, Roma.
- [4] Brockmann M. (2007), *Qualifications, learning outcomes and competences: a review of European divergences in vocational education and training (VET)*, WQorking paper. Disponibile sul sito. [www.kcl.ac.uk/content/1/c6/01/57/15/literature review.pdf](http://www.kcl.ac.uk/content/1/c6/01/57/15/literature%20review.pdf)
- [5] Castoldi M. (2010), *Didattica generale*, Mondadori, Milano, p. 104.
- [6] Castoldi M., (2009), *Valutare le competenze*, Carocci, Roma, p. 16.
- [7] Coggi C., Notti A. M. (2002), *Docimologia*, Pensa Multimedia, Lecce. p. 118.
- [8] Deci E. L. , Moller A.C. (2007), *The concept of competence*. in J. Elliot e C.S. Dweck (a cura di), *Hanbook of Motivation and Competence*, New York: Guilford, pp.579-597.
- [9] Delors J. (1994), *Crescita, competitività, occupazione*, Il Saggiatore, Milano.
- [10] Durand M. J., Roch C. (2006), *L'évaluation des apprentissages de la planification de la demarche à la communication des resultants*, Hurtubise, Montréal.
- [11] Gerard F.M. (2009), *Évaluer des compétences. Guide pratique*, Bruxelles: De Boeck.
- [12] Jonnaert P. (2006), *Dis-moi ce que tu évalues et je te dirai ce que tu as voulu enseigner: où sont les connaissances et les compétences des étudiants*. In Raucant B., Vander Borgh C. (sous la direction de), *Être enseignant. Magister? Metteur en scène?* (pp. 274-286), Bruxelles: De Boeck – Université.
- [13] Maccario D. (2012), *A scuola di competenze. verso un nuovo modello didattico*, SEI, Torino.
- [14] Mason L. (1996), *Valutare a scuola. Prodotti processi e contesti dell'apprendimento*, Cleup, Padova.
- [15] Mason L. (1997), *Valutare a scuola*, Cleup, Padova.
- [16] Meghnagi S. (1992) , *Conoscenza e competenza*, Loescher, Torino.
- [17] Minichiello G. (2003), *Elementi di didattica generale*, Edisud, Salerno.

- [18] Pellerey M. (2002), *Processi di transfer delle competenze e formazione professionale*. in ISFOL, *Le dimensioni metacurricolari dell'agire formativo*, (a cura di C. Montedoro), Milano, F. Angeli, 2002, 113-153.
- [19] Pellerey M. (2004), *Le competenze individuali e il portfolio*, La Nuova Italia, Firenze.
- [20] Pellerey M. (2010), *Competenze. Conoscenze, abilità, atteggiamenti.*, Tecnodid, Napoli.
- [21] Pellerey M., Orio F. (2001), *QPCC- Il Questionario di percezione delle proprie competenze e convinzioni*, Edizioni Lavoro, Roma, p.15.
- [22] Perrenoud P. (2002), *Dieci nuove competenze per insegnare*, Anicia, Roma.
- [23] Quaglino G. P. (1990) , *Competenza*, in *Appunti sul comportamento organizzativo*, Tirrenia, Torino.
- [24] Raccomandazione del Parlamento europeo e del Consiglio del 18 dicembre 2006 relativa a competenze chiave per l'apprendimento permanente (2006/962/CE).
- [25] Rey B., Carette V., Defrance A., Kahan S. (2003), *Les compétences à l'école. Apprentissage et evaluation*, Bruxelles: De Boeck – Université.
- [26] Rychen D. S. – Salganik L. H. (a cura di) (2007), *Agire le competenze chiave*, Angeli, Milano, pp. 103-107.
- [27] Tardif J. (2006), *L'évaluation des competences. Documenter le parcours de développement*, Montréal: Chenelière Education.
- [28] Wiggins G. (1998), *Educative assessment: Designing assessments to inform and improve student performance*. San Francisco: Jossey-Bass.

*The First Step of Implementation of a Software to Facilitate Italian Children in Learning English*

Giuseppe Città, Lucia Collerone

University of Messina, Italy

0512

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## **Introduction**

This work presents the theoretical basis and first steps for the realization of an educational software to learn English in the first classes of the Italian Primary School: MOLKI (More Language for Kids).

This software was created starting from the way in which the high-frequency words are usually uttered, perceived, used and acquired by children on the basis of the input they receive. The choices to implement these information in an educational technological tool arises from the necessity to create functional teaching tools to support inclusive didactic choices and to give children a strong motivation for using English in gaming context, even outside the school time as to enlarge the time of L2 exposure text.

The scientific model used by the Italian research group named “Brain, Cognition & Education” is “Educational Neuroscience” a new field of interdisciplinary research that correlates the neurobiology and the researches on brain functioning, to educational sciences.

The main steps for the realization of the final work of the research project presented here are:

- the study of bilingualism through the different information given by the researches in Cognitive Science as regard to the neurobiology of bilingualism,
- the importance of the linguistic input.
- the methodological and didactical choices made up on these scientific information
- the first steps for the creation of MOLKI.

## **1. BIOLINGUISTIC STUDIES**

### **1.1 The acquisition of L2 in the brain**

This part of the article is a review of the recent studies on the most important neurobiological and neurocognitive mechanisms at the basis of the acquisition of a L2.

Studying the bilingual brain, from the neurobiological point of view, means to concentrate the attention on the cerebral structures that underline the L2 learning, to understand how these structures are functionally used and which are the changes that happen in the structures that traditionally are considered at the basis of the linguistic process and finally, what are the possible interferences in the use of the two languages.

Other factors that can or can not influence a “native like” use of L2 are:

- the constraints to which the cerebral structure is submitted and the “critical

- period ” for learning a L2;
- the correlations with the age of acquisition of L2, the “proficiency” and the modalities of exposition to L2;
- individual factors and the impact of context in learning a L2.

In general, the idea at the basis of the researches is that bilingualism needs an adaptation of cerebral structures that are used traditionally for language processing (Zou *et al.* 2012), and that speak a second or more languages is possible thanks to the neural plasticity and to a functionally different use of the neural networks, activated in linking the different brain areas, that can be used for different functions, without qualitative, but only quantitative variations of the brain matter (Parker Jones 2011).

Abutalebi e Green (2007) studied the mechanism of bilingual language production and specified a model that integrates distinct neural systems responsible of different aspects of the cognitive control involved in the production of bilingual language. The neural systems involved in the production of bilingual language includes the prefrontal cortex (updating of language, inhibition of language not in use, error correction), the anterior cingulate cortex (attention, monitoring of conflict, error erasing) the basal ganglia (selection of language) and the inferior-parietal lobule (maintaining of representations and working memory).

The representation of the two languages is mediated by a structure of control (including the anterior cingulate cortex, the basal ganglia, the inferior parietal lobule and predominantly, the prefrontal cortex) that is able to maintain the two linguistic systems separated, avoiding the interferences (Gollan *et al.* 2011).

The work of this network depends on the proficiency in L2 (Leonard *et al.* 2011), that is accompanied by a shifting from controlled processing to automatic ones and by a reduction of the prefrontal activity; as the proficiency increase, the neuronal difference between native speaker and bilingual decreases.

Many neuroimaging studies confirmed that when the proficiency in L2 is like in L1, neuronal common activations in similar cerebral areas are registered, that are even used by monolingual while doing the same tasks, for example in producing single words (Hernandez *et al.* 2007) or in retrieval tasks (Stein *et al.*, 2009).

If the proficiency is low some non usual areas, just like the posterior bilateral visual regions, are recruited for word processing, both in writing and in oral form (Leonard *et al.* 2011). Even exposure to L2 can have great importance in influencing a greater or lesser dependence on the lexical-semantic system in bilinguals. Perani *et al.* (2003) have shown that those who have greater exposure to L2, requires less activation of the left prefrontal cortex, moreover, he indicates that there is a possibility of reversibility of the system of language learning in the early years of children's lives, within 3 and 8 years, for example in the case of adoption, when the L1 is forgotten and replaced with L2.

Puberty seems to be considerable as the time limit for the acquisition of another language in a "native-like" way (Lennenberg, 1967), but a certain plasticity continues even after this time limit and allows to learn another language, causing changes in the brain even after short periods (5 months) of intensive training for the general use of the L2 (Stein *et al.* 2010;) and just 5 days of training for the acquisition of new words

in L2 (Dobel *et al.* 2010).

Summarizing we can say that the competence in L2 and exposure may be critical for the lexical-semantic processing, and the age of acquisition has not much influence on it. Instead, in the grammatical domain the neural substrate seems to be more dependent on the effects of age of acquisition, rather than on competence. While the acquisition of competence relating to the cognitive aspects of language, such as syntax and vocabulary, seems to be possible for those who learn a L2 in adulthood, when the L2 is learned after the first years of a child's life, the control of the rules of pronunciation can not reach the level of competence of the native speakers.

The pronunciation is the only part of "natural" language with neuromuscular complex needs and proper pronunciation depends largely on sensory feedback, how and where the articulator muscles move, with specific timing and sequences (Scovel, 2000). Golestani *et al.* (2007) have shown that the ability to produce and articulate sounds of a foreign language can be correlated to the activation of different structures in the prefrontal cortex, in the left insula, in the left temporal cortex and in the bilateral parietal cortices.

Some studies proved that in the processes, such as the articulation and the post-articulatory monitoring, there was a larger activation of brain areas for bilinguals than for monolinguals (Parker Jones *et al.* 2011), greater activation that could directly reflect the lack of familiarity with the motor commands needed to produce the target sound.

In the case that the L2 sound does not exist in the native language or is very difficult to discriminate and reproduce, there is the involvement of the areas of the motor representation (premotor cortex), areas of the oro-sensory, articulatory and auditory cues mapping that allow the connection of the movements of mouth to the emission of sounds (Port, 2010).

There are strong evidences that the motor system generates internal representations of speech sounds (Wilson and Iacoboni, 2006), and in a native speaker, these internal representations, that the motor system makes of the sounds of language, correspond to the auditory input received.

The oral movements necessary for producing the sounds of the native language are very well learned and automatic, because they integrate the pre-controls motors and the feedback of auditory and somato-sensory information. Instead, in a foreign language, auditory and somato-sensory inputs do not match the internal representations, and there is the need to do a mapping of new insights into their internal representations, in order to be able to produce the sounds of the foreign language.

At the beginning of learning a L2, the sounds of the new language are processed as auditory stimuli similar to non-words, with a greater involvement of the right hemisphere (Sugiural *et al.* 2011). Finally, studies on the neurocognitive motor representations of language sounds, the language related to the action (Wilson and Iacoboni, 2006) and the co-speech gestures (Hagoort and van Berkum, 2007) have shown a correlation in the brain that includes language, action and gesture.

The brain is not only able to process the flow of a lot of information, but it does it in a qualitatively similar way even if they have different perceptual features and involve different brain areas. The processing of unimodal perceptual data is acted in a way that could be called a-modal, in brain hubs that have the precisely task of integrating information.

For example, in the case of language understanding, the brain uses many kinds of information, in a qualitatively similar manner, to achieve understanding. The information used are those that come precisely from the knowledge of words, co-language gestures, from images, from information provided by the characteristics of the voice or from previous speeches.

## 1.2 Age of acquisition (AA) and “critical period”

AA is referred to the age at which a concept or skill is acquired, that is called the "critical period" or "sensitive period" of learning. It defines the time constraints that affect the acquisition of a skilled competence in the foreign language. There are many studies that attempted to outline the best time to learn a L2 and gave different indications which can be summarized as follows: before the age of 5 the exposition to bilingualism allows the development of both languages and their mastery, and there is an overlap of the language cerebral areas, without any supplementary cognitive efforts to process the two languages (Petitto and Dunbar 2004), with a lengthening of the period of stabilization of the lateralization of language, which lasts up to 6 years and, therefore, there is a use of both hemispheres in processing the two languages (Peng *et al.* 2011).

Children, who at birth are exposed exclusively to L1 and after learn a L2 between the age of 2 to 9, can learn the morpho-syntax bases of the new language, from the first year of exposure, but only if they are subjected to an extensive and systematic exposure, in different environmental and communicative contexts.

In any case the complete mastery of L2 is not acquired if learners are exposed only to a teaching activity in a school context (Kovelman *et al.* 2008). Children and adults differ, both qualitatively and quantitatively, in their ability to acquire a new language. Bley-Vroman (1990) affirmed that there is a fundamental difference between the acquisition of the first and the second language in children, in fact L1 is driven by innate language-specific acquisition procedures and, conversely, in adult learning is driven by mechanisms of general domain learning.

Another possibility, which justifies the difference between children and adults is that they differ profoundly in their cognitive abilities and in the linguistic input. Children have lower cognitive abilities, such as memory and in the speed processing, which could help children to learn the new language, avoiding the hyper regularization of inconsistent input (Hudson and Newport 2005). Another possibility is that learning a second language is more difficult in relation to the interference due to the first language, as evidenced by several recent studies and research as well (for a summary of studies see Bardovi-Härlig and Stringer 2010).

During the 32th Annual Meeting of the Cognitive Science Society of Portland in 2010, Amy Perfors and David Dunbar identified in the ability to distinguish phonological sounds, the basic skills that would activate cascade effects on language

skills and would condition the acquisition or the functioning of other aspects of higher level language, with which the basic function has a bond of interdependence, especially in the acquisition of L2 at a later age to 9 years. The researchers conclude that a phonological training activity improves learning ability of words, thus proving their contention that puts the basis of learning difficulties of a competent L2, over the age of 5 years, in the inappropriate level of phonological competence in L2 which has a domino effect on all other abilities.

## **2. THE ROLE OF INPUT**

In this section we will examine, in particular, a trait that has a strong influence in linguistic ontogeny. We will focus first on the nature of linguistic input addressed to the child by the parents in a family setting, and then on the nature of linguistic input by the teacher who, in a new communicative context (school), plays a similar role that parents play in a familiar context.

### **2.1 The role of Child Directed Speech**

The set of individual linguistic input is also referred with the expression 'Child Directed Speech' (CDS) and is the language environment within which the child lives and from which, both at the production level and at comprehension level, the organization of linguistic knowledge starts. It is a key factor that determines the age of acquisition, the rhythm of growth, the size of productive vocabulary - as regards the phase of the explosion of vocabulary - and the formation of abstract categories of language - as regards the first period of schooling (Huttenlocher 1998, Roy *et al.* 2009, Roy 2009). School is, in fact, the first real organized social group with a degree of stability in which the children live, apart from their family group.

In order to make the argument more clear we will proceed by dividing it into two sequences, the first of which will have as its core the role of parents' linguistic input at four years of age, while the second will focus on the central role that teacher's linguistic input plays, during the first schooling period, in the learning of particular language skills. This is because, according to the stage of language development and according to the social actors involved, we can draw from the CDS different elements. Different aspects of syntax, in fact, may exhibit a sensitivity to different forms of linguistic input in different stages of development. Consequently, skills which, at an early stage, are less related to linguistic input, could be considered as more closely linked to it in more mature stages.

### *Parental CDS*

For example, during explosion of vocabulary, the frequency with which elements such as verbs occur in the parental speech seems to be a key factor in the linguistic input: the child tends to use more verbs that occur most frequently in maternal speech (Naigles-Hoff 2006). In a more mature phase (after three years of age) the complexity of utterances takes the role of main feature of influence. At the age of four, the frequency of use of specific terms in the speech that the child perceives is no longer a primary predictor of the internal organization of child's expressions. It (this internal organization) receives a direct influence from the way in which expressions are structured in the input. In other words, the ability of the child to master complex expressions will be directly proportional to the number of utterances of the CDS formed by sentences logically stratified.

We can summarize as follows:

- up to three years of age, in the stream of the CDS, the frequency of use of words in specific contexts is a component of primary influence and provides results as (a) the increase of the amount of words that are part of the child's productive vocabulary; (b) the acquisition of elementary and telegraphic compositions of words used by the child in restricted contexts of use in which the verb is in a prominent position;
- up to four years of age, in the flow of CDS, conversational complexity - the way in which the different sentences within the discourse are related to each other - is the primary factor of influence and returns, as the most evident result acquired by the child, the skill to bind the sentences to each other in a more or less stratified way. For example, the analysis of the input returns that the number of subordinate clauses present in the child's utterances is directly proportional to the number of subordinate clauses belonging to the CDS (Huttenlocher *et al.* 2002).

The results of several experiments (Huttenlocher *et al.* 2002) show, in fact, a precise relationship between parental speech and child utterances on some aspects of syntax: for example, there is a proportional correlation between the number of noun phrases used by the child and the number of noun phrases in the CDS.

### *The teacher's CDS*

However, to complete the framework we are drawing, we must now consider how schooling (especially in relation to early years) influences, at the level of linguistic input, the development of the child's abstract language skills. We can, in fact, draw interesting indications on the quality of the development of various language elements: vocabulary, morphology, syntax. At this stage (4-6 years), in fact, the school CDS plays a central role, joining the parental CDS, with its specific traits, in communicative context of each child.

The main feature that distinguishes school inputs and parental inputs is to be found in the fact that syntactic skill of the child, at the beginning of schooling, it is not related to the syntax of teacher's linguistic input. They are separate, unrelated, unlike what happens, as mentioned above, for the relationship between parental CDS and child's

speech comprehension/production. This mutual lack of initial report allows us to examine the structure of the teacher input not as a factor in proportional relationship with the expressiveness of the child but as a decisive and powerful resource of development in the acquisition process. Some studies (Huttenlocher *et al.* 2002: 367), in fact, have shown that the teacher's speech is a critical factor in the development of language comprehension. There is a relationship of direct influence exerted by the composition (structure) of the teacher's utterances on the development of syntactic skills that the child shows from his first year of school. These skills are related to understanding and later to the production of multi-propositional expressions within which the sentences are linked to each other on the basis of different syntactic logical relations: phrases, coordination, subordination, use of relative clauses as well as quantitative increase of lexicon especially in relation to words whose use are closely tied to specific contexts. Further confirmation of the direct influence of the teacher's CDS on language and cognitive development comes from the fact that it is very sensitive to internal changes of the same input. Several experimental data (Bowers and Vasilyeva 2011, Huttenlocher *et al.* 2002) show that substantial changes in the composition of the linguistic inputs influence in different ways the language development of the child. This is most evident especially in reference to the increase of vocabulary during the early school years. Around 4-5 years old, in connection with the acquisition of specific words (words not in common use, linked to specific contexts of use and not frequently recurring) children whose teacher speaks to them through logically structured and rich expressions are lexically more advantaged. Essentially, although the total number of words of the teacher, and not only the logical-syntactic organization in which these words occur, is a factor of direct influence of lexical growth in this particular phase of the acquisition process (Bowers and Vasilyeva 2011).

### **3. DEVELOPING APPROPRIATE TEACHING METHODS IN THE LEARNING OF A SECOND LANGUAGE: THE CONTRIBUTION OF LINGUISTIC CORPORA IN THE REALIZATION OF A TEACHING-LEARNING SOFTWARE.**

Among the contributions provided by Cognitive Sciences in the study of language learning and of L2 learning, the contribution from the computational analysis of linguistic data collected in databases (corpora), in terms of research methodology, is very important. The realization of a derived linguistic corpus, on the model of the corpora that are part of the CHILDES database (MacWhinney 2011), therefore, could play a key role in the development of efficient educational strategies involving the use of appropriate educational tools. According to the perspective that we are arguing, in fact, having a large set of linguistic data facilitates the understanding of a complex phenomenon which is the influence of the input (CDS) in structuring linguistic and cognitive system, and also allows, on the basis of empirical evidence from concrete linguistic data, the creation of appropriate methods of teaching-learning. In the specific case of second language learning the work that we propose to do is the realization of a software with a particular database: MOLKI (More Language for Kids). An educational software equipped with a linguistic derived corpus as database, made from different subjects in a particular age, generated by spontaneous conversation and morphologically annotated.

Having data from several subjects depends on the need to create a mutual control

function that allows us to limit the individual particularities and to conduct a detailed study of common linguistic characteristics that emerge during the process of ontogenesis.

### **3.1 The first steps of implementation of MOLKI**

From these theoretical assumptions, we have developed the project to create an educational software that makes easier learning a second language in the early age of Italian primary schools. The realization of an educational software that works starting from cognitive and linguistic processes involved in a L2 learning.

This project has taken its start from some linguistic corpora that collect 3 years old native English-speaking children expressions.

The main aim that produced the choice of such corpora is to put an Italian child in direct connection with an English-speaking child's input during his first steps of language production.

The aim we are pursuing is set up a direct relationship between the Italian children and the contexts and co-texts of English language through linguistic input that native English-speaking children receive.

Moreover, we are pursuing this aim by adapting it to the stages of language development inside the mother tongue of Italian children.

This means that, in constructing a derived corpus that will be the software linguistic database, in addition to considerations concerning cerebral processes involved in learning a language, we will take into account language skills of the child, who will interact with MOLKI.

### **Conclusion**

The next two steps of our project will be (a) the development of the architecture of software MOLKI and (b) the interactive tasks with which it will interface with the child.

The ultimate goal will then be represented by the classroom level where both the theoretical perspective and MOLKI will be tested.

## References

- Abutalebi, J. and Green, D. (2007). 'Bilingual language production: The neurocognition of language representation and control'. *Journal of Neurolinguistics* 20, 3: 242–275.
- Bardovi-Harlig, K. and Stringer D. (2010). 'Variables In Second Language attrition. Advancing The State Of The Art'. *Studies In Second Language Acquisition* 32: 1–45.
- Bley-Vroman, R. (1990). The logical problem of foreign language learning. *Linguistic Analysis*, 20: 3–49.
- Bowers, E.P. Vasilyeva, M. (2011). 'The relation between teacher input and lexical growth of preschooler'. *Applied Psycholinguistic*, 32: 221-241.
- Dobel, C. Junghöfer, M. Breitenstein, C. Klauke, B. Knecht, S. Pantev, C. and Zwisler, P. (2010). 'New Names for Known Things: On the Association of Novel Word Forms with Existing Semantic Information'. *Journal of Cognitive Neuroscience*, 22, 6: 1251–126.
- Gollan, T.H. Sandoval, T. and Salmon, D.P. (2011). 'Cross-Language Intrusion Errors in Aging Bilinguals Reveal the Link Between Executive Control and Language Selection'. *Psychological Science*, vol. 22 no. 9: 1155-1164.
- Hagoort, P. and van Berkum, J.J. (2007). 'Beyond the sentence given'. *Philos Trans R Soc Lond B Biol Science*, 362, 1481: 801–811.
- Hernandez, A. and Li, P. (2007). Age of Acquisition: Its Neural and Computational Mechanisms. *Psychological Bulletin*, 133, 4: 638–650.
- Hudson, K. C. and Newport, E. (2005). 'Regularizing unpredictable variation: The roles of adult and child learners in language formation and change'. *Language Learning and Development*, 1, 2: 151–195.
- Huttenlocher, J. Vasilyeva, M. Cymerman, E. Levine, S. (2002). 'Language input and child syntax'. *Cognitive Psychology*, 45: 337-374.
- Huttenlocher, J. (1998). 'Language Input and Language Growth'. *Preventive Medicine* 27: 195-199.
- Kovelman, I. Baker, S.A. Petitto, L.A. (2009). 'Age of first bilingual language exposure as a new window into bilingual reading development'. *Biling (Camb Engl)* 1, 11, 2: 203–223.
- Lenneberg, E. H. (1967). *Biological foundations of language*. New York: Wiley.
- Leonard, M.K. Torres, C. Travis, K.E. Brown, T.T. Hagler, D.J. Jr (2011). 'Language Proficiency Modulates the Recruitment of Non-Classical Language Areas in Bilinguals'. *PLoS ONE*, 6, 3: e18240.
- Naigles, L.R. and Hoff, E. (2006). 'Verbs at the very beginning: parallels between comprehension and input'. In: Hirsh-Pasek, K. Golinkoff, R.(eds.). *Action meets word: How children learn verbs*. Oxford: University Press.
- Parker Jones, O. Green, D.W. Grogan, A. Pliatsikas, C. Filippopolitis, K. Ali, N. Lee, H.L. Ramsden, S. Gazarian, K. Prejawa, S. Seghier, M.L. Price, C.J. (2011). 'Where, When and Why Brain Activation Differs for Bilinguals and Monolinguals during Picture Naming and Reading Aloud'. *Cereb Cortex*. Jun 24.
- Pattern, K.E and Campbell, S.R. (2011). 'Introduction: Educational Neuroscience'. *Educational Philosophy and Theory*, 43 (1).
- Peng, G. Wang, S.Y. (2011). 'Hemisphere lateralization is influenced by bilingual status and composition of words'. *Neuropsychologia*, 49, 7: 1981-1986.
- Perani, D. and Abutalebi, J. (2005). 'The neural basis of first and second language processing'. *Current Opinion in Neurobiology*, 15, 2: 202–206.
- Perfors, A. and Dunbar, A. (2010). Phonetic training makes word learning easier'.

*Cognition in flux: Proceedings of the 32nd Annual Meeting of the Cognitive Science Society Portland*, Oregon, August 11-14, / S. Ohlsson and R. Catrambone (eds.): 1613-1618.

Petitto, L-A. and Dunbar, K. (2004). 'New findings from Educational Neuroscience on Bilingual Brains, Scientific Brains, and the Educated Mind'. *Conference on Building Usable Knowledge in Mind, Brain, & Education Harvard Graduate School of Education*, Oct. 6- 8.

Port, R.F. (2010). 'Rich memory and distributed phonology'. *Language Sciences*, 32: 43-55.

Scovel, T. (2000). 'A critical review of critical period researches'. *Annual Review of Applied Linguistics*, 20: 213-223.

Roy, D. (2009). 'New Horizons in the Study of Child Language Acquisition'. *Keynote at Interspeech 2009*, Brighton: UK.

Roy, D. Roy, C.B. Frank, M.C. (2009). 'Exploring Word Learning in a High-Density Longitudinal Corpus'. *Proceedings of the 31st Annual Cognitive Science Conference*. Amsterdam: Netherlands.

Stein, M. Federspiel, A. Koenig, T. Wirth, M. Lehmann, C. Wiest, R. Strik, W. Brandeis, D. Dierks, T. (2009). 'Reduced frontal activation with increasing 2nd language proficiency'. *Neuropsychologia*, 47, 13: 2712-20.

Sugiura, L. S. Matsuba-Kurita, H. Ippeta, D. I. Hagiwara, H. (2011). 'Sound to Language: Different Cortical Processing for First and Second Languages in Elementary School Children as Revealed by a Large-Scale Study Using fNIRS'. *Cereb. Cortex* 21 (10): 2374- 2393.

Wilson, S.M. Iacoboni, M. (2006). 'Neural responses to non-native phonemes varying in producibility: Evidence for the sensorimotor nature of speech perception'. *NeuroImage*, 33, 1: 316-325.

Zou, L. Abutalebi, J. Zinszer, B. Yan, X. Shu, H. Peng, D. Ding, G. (2012). 'Second language experience modulates functional brain network for the native language production in bimodal bilinguals'. *NeuroImage*, 62, 3: 1367-1375.

*Determining Demand in Thai Job Market for Communications-Related Degree Title:  
A Survey of an Online Job Website*

George T. Amurao

Mahidol University International College, Thailand

0521

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Abstract

This study sought to determine the extent of the demand for graduates of communication-related academic degrees in the Thai job market. To accomplish this, the study utilized content analysis, which involved monitoring on a weekly basis (for six consecutive weeks) the number of available job ads that require a communications-related academic degree in the Thailand version of online job search website, JobsDB.com. The results were tabulated using the SPSS program.

This study found that BA Communication Arts is the degree title that job recruiters in the job search website most often sought for vacant job positions in communications. Most of the work functions of said jobs indicated those involving public relations. Almost all the vacant job positions are staff level and are mostly found in private companies.

**Keywords:** communication, degree, career

## CHAPTER I INTRODUCTION

### A. Background of the Study

In the past, most job positions in media companies were filled up by graduates of a variety of bachelor's degree courses. In recent decades, with the increase in the number of media companies—whether in print, broadcast or new media—and the deepening academic interest into mass media and their role in and impact on society, bachelor's degree programs in the field, whether these come under the academic degree titles of Journalism, Mass Communication, Communication Arts or Media Studies, have been introduced in the program offerings of numerous universities.

Such a degree program properly equips a student, in both academic aptitude and technical skills, and prepares him/her for a job in the mass media industry.

Employers, whether in the private sector, the government service, or non-government organizations, have also recognized the value of hiring a graduate of a communications-related academic degree to perform communication tasks in their respective organizations. A quick scan of the websites of the leading universities in Thailand revealed that they offer such a degree program albeit under varying titles.

Thammasat University's international program offers BA Journalism (Thammasat University, n.d.); Chulalongkorn University's international program has BA Communication Management (Chulalongkorn University, n.d.); Bangkok University International College offers BA Communication Arts (Bangkok University International College, n.d.); Assumption University likewise offers BA Communication Arts (Assumption University, n.d.); as does Rangsit International College (n.d.); while Webster University offers BA Media Communications (Webster University, n.d.) and Stamford University (Thailand) offers BA Communication Arts with a specialization in Advertising (Stamford University, n.d.).

Aside from print publications like newspapers, employers can now also tap the power of the Internet in announcing vacant positions in their organizations. Online job search websites have become one of the tools through which new personnel can be selected and hired.

According to surveys done in the Philippines (Cortado, 2010), and in the UK (Peacock, 2011; and Sedghi, 2011), graduates of degrees in communication have a very high chance of being employed.

A research study (Olufemi and Adebola, n.d.) found that an appropriate academic degree for the job vacancy is crucial in the decision-making process of recruiters.

Giang (2013) wrote that degrees which develop public relations and social media skills will be highly marketable in 2013. On the other hand, Rampul (2012) wrote that job functions like technical writing and specialization in media are among the top in-demand jobs in the future.

## **B. Research Objectives**

This study aims to answer the following research questions:

1. How many vacant positions requiring graduates of communications-related degrees appear on the two job search websites over a six-week period;
2. How much of these vacancies are for staff positions and how many are for management positions;
3. What specific academic degree titles are job recruiters looking for?
4. What types of organizations are seeking graduates of communications-related academic degrees, whether they are government agencies, private companies or non-government organizations / international agencies?
5. What communication functions (i.e. providing print and online news content, broadcasting tasks, advertising and public relations functions) do job recruiters seek to fill up in their respective companies?

## **C. Significance of the Study**

This study will be beneficial to the following:

1. The MUIC Executive Committee: That results of this study will provide concrete data of market demand for graduates of a communication-related bachelor's degree;
2. The MUIC Academic Division: That results of this study will serve as a guide to which academic degree title is in demand among job recruiters (i.e. BA Communication Arts, BA Mass Communication, BA Journalism, etc.)
3. The MUIC Academic Division: That results of this study will serve as a guide on what communications job functions companies are looking for in graduates of a communications-related bachelor's degree, whether it is providing news and other content to and/or performing related tasks to print, online and broadcast media, or performing advertising and public relations duties, hence giving the MUIC Academic Division a clear idea to construct corresponding curricula and syllabi for such an academic program.
4. Scholars and Other Academicians: This study will serve as a resource for scholars and other academicians as they pursue their respective researches that also touch on the same field.

## **CHAPTER II REVIEW OF RELATED LITERATURE**

Content analysis has been defined as “a methodology by which the researcher seeks to determine the manifest content of written, spoken or published communication by systematic, objective and quantitative analysis” (Zito, 1975, as cited in Berger, 2000.) Charles Wright (1986, as cited in Berger, 2000) states that “Content analysis is a research technique for the systematic classification and description of communication content according to certain usually predetermined categories”(p. 173). Wright clarified also the limitations of this type of research design: “Content analysis itself provides no direct data about the nature of the communicator, audience or effects. Therefore, great caution must be exercised whenever this technique is used for any purpose other than the classification, description and analysis of the manifest content of the communication”(p. 173).

Berger (2000) states that content analysis as a research method has the following advantages: unobtrusive, relatively inexpensive, uses material that is relatively easy to obtain and work with, and yields data that can be quantified.

Williams (2007) noted that 14% of hirings came about as a result of using job search websites. Though research showed that job ads posted in employers’ respective websites facilitated a higher number of hiring, it has been decided that job search websites will be used as the primary survey material for this study, as Johnson (2012) notes that these websites offer better “funneling” or “qualifying” tool. She also quoted a study undertaken by Microsoft that said 79% of all employers now search for applicants through job websites and databases.

## **CHAPTER III METHODOLOGY**

### **A. Research Design**

The study will use content analysis as its research design. Under this design, media content (i.e. job ads) will be monitored and tabulated in order to spot trends or any indication about the phenomenon being investigated. Job ads in one ~~two~~ job search websites in Thailand, namely, JobsDB.com ([www.thai.jobsdb.com](http://www.thai.jobsdb.com)) will be monitored because it offers the most number of job ads that require graduates of communications-related degrees.

### **B. Data-gathering Instruments**

#### **1. Online Job Ad Monitoring**

The researcher will monitor classified ads of vacant job positions requiring applicants who are graduates of communications-related academic degrees on JobsDB.com <http://th.jobsdb.com/th>

The website will be monitored once a week. The researcher will note down relevant job listings and tabulate them.

The monitoring process will have a duration of six weeks, to ensure that there is a variety of relevant job listings.

#### **2. Tabulation – the data gathered will be tabulated.**

- #### **3. Content Analysis - The content analysis will be conducted in such a way as to:**
- a. Determine the total number of job vacancies on Thaijobsdb.com [www.th.jobsdb.com](http://www.th.jobsdb.com) which specifically require candidates who hold a communications-related degree

- b. Tabulate the demand for specific bachelor's degree title (i.e. Communication Arts, Mass Communication, Journalism, etc.)
- c. Note the level of each vacancy indicating if the vacant post is staff- or management-level;
- d. Classify the job recruiters by their organizational nature: private companies, government agencies, or non-government organizations
- e. Classify the job functions of the vacant positions (providing content for print, broadcast or online media, or performing advertising or public relations duties).

## CHAPTER IV

### RESULTS AND ANALYSIS

#### Academic Degree Titles

	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Total
Communication Arts	14	13	18	17	14	13	89
Mass Communication	5	6	21	10	11	9	62
Journalism	7	9	12	6	16	12	62
Advertising	6	12	11	10	7	5	51
Public Relations	8	10	14	6	7	5	50
<b>Total</b>	40	50	76	49	55	44	<b>314</b>

Eighty-nine out of 314 or 28.34% of posted job vacancies require a bachelor's degree in Communication Arts.

Sixty-two out of 314 or 19.74% of posted job vacancies require a bachelor's degree in Mass Communication.

The same percentage goes for a bachelor's degree in Journalism.

Fifty-one out of 314 or 16.24% of posted job vacancies require a bachelor's degree in Advertising.

Fifty out of 314 or 15.92% of posted job vacancies require a bachelor's degree in Public Relations.

**Level**

	<b>Wk 1</b>	<b>Wk 2</b>	<b>Wk 3</b>	<b>Wk 4</b>	<b>Wk 5</b>	<b>Wk 6</b>	<b>Total</b>
Staff	13	20	28	21	24	13	113
Managerial	11	13	25	15	9	14	87
<b>Total</b>	24	33	53	36	33	27	200

One hundred-thirteen out of 200 or 56.49% posted job vacancies are staff positions while 87 out of 200 or 43.5% are managerial positions.

**Type of Organization**

	<b>Wk 1</b>	<b>Wk 2</b>	<b>Wk 3</b>	<b>Wk 4</b>	<b>Wk 5</b>	<b>Wk 6</b>	<b>Total</b>
Private	23	31	52	36	33	27	202
Government	0	0	1	0	0	0	1
Non-Government Organization	1	2	0	0	0	0	3
<b>Total</b>	24	33	53	36	33	27	206

Two hundred-two out of 206 or 98% of posted job vacancies are from private companies while 1 out of 206 or 0.48% of posted job vacancies is from a government agency. 3 out of 206 or 1.45% of posted job vacancies are from non-government organizations.

**Type of Media Function**

	<b>Wk 1</b>	<b>Wk 2</b>	<b>Wk 3</b>	<b>Wk 4</b>	<b>Wk 5</b>	<b>Wk 6</b>	<b>Total</b>
Public Relations	21	27	39	29	28	16	160
Advertising	4	6	4	4	2	2	22
Print	0	0	2	0	3	2	7
Online	0	0	5	2	0	0	7
Broadcasting	0	0	0	0	0	3	3
Others	0	0	3	0	0	4	7
<b>Total</b>	25	33	53	35	33	27	206

One hundred-sixty out of 206 posted job vacancies or 77.66% have a public relations function.

Twenty-two out of 206 posted job vacancies or 10.67% have an advertising function. Seventeen out of 206 job vacancies or 8.25% are concerned with the function of providing content for print, online and broadcast media. Seven out of 206 posted job vacancies or 3.39% have functions in other fields.

## **CHAPTER V RECOMMENDATIONS**

Based on the research findings:

1. More than a fourth of all degree titles in the job vacancies posted during the survey period in the website used “BA Communication Arts.” Hence, it is the most familiar, if not the most marketable, among the degree titles used. The degree titles “BA Mass Communications” and “BA Journalism” are tied in second place, indicating that they can be alternative degree titles that can be offered by the university, with the latter more geared towards skills training in news gathering, writing, and disseminating.
2. Majority of job vacancies posted in the website during the survey period were staff positions, indicating the bigger demand for graduates of bachelor’s degree courses in communication who are trained in basic skills required for entry-level positions.
3. Almost all vacant job positions posted on the website during the survey period came from private companies, indicating the higher demand for the type of skills set that are required in private companies as opposed to government or non-government types of skills set. This result also implies that the salary rates available to graduates of communications degrees are based on private sector standards.
4. More than  $\frac{3}{4}$  of the vacant job positions posted on the website during the survey period required chosen candidates to perform public relations functions. This indicates that whereas BA Communication Arts is the most popular degree title, offering a specialization in public relations is advisable in order to make the graduates more competitive in the job market. Another specialization, this time in advertising, is also recommended, as 10% of vacant job positions surveyed indicated that they require advertising work functions (coming in second place after public relations).

## BIBLIOGRAPHY

- Berger, Arthur Asa. *Media and Communication Research Methods*. Thousand Oaks, California: Sage Publications, 2000.
- Cortado, Christopher Jay. "A Tracer Study of Mass Communication Graduates of Centro Escolar University from School Years 1998-2000" published in *SELAMS Works*  
<http://selams.wordpress.com/2011/10/25/142/>
- Giang, Vivian. "7 In-Demand Skills That Will Get You Hired in 2013," AOL Jobs, 3 March 2013,  
<http://jobs.aol.com/articles/2013/03/03/in-demand-skills-find-job/>
- Heick, Terry. "6 Factors for College Hire-ability," Edudemic, 13 June 2012,  
<http://edudemic.com/2012/06/6-top-factors-for-college-grad-hire-ability/>
- Johnson, Amy. "Job Candidates and Employers Find Success Using Job Search Engines,"  
*Business2Community*, 17 May 2012,  
<http://www.business2community.com/strategy/job-candidates-and-employers-find-success-using-job-search-engines-0180871>
- Olufemi, Adeyeye J. and Tugbobo N. Adebola. "An Analysis of Factors Influencing Hiring / Placement of University Graduates in Nigeria,"(n.d.)  
<http://www.ilo.org/public/english/iira/documents/congresses/regional/lagos2011/1stparallel/session1b/factorsinfluencing.pdf>
- Peacock, Louisa. "One in 10 Graduates Unemployed Amid Fragile Jobs Market," *The Telegraph*, 15 July 2011,  
<http://www.telegraph.co.uk/finance/jobs/8639677/One-in-10-graduates-unemployed-amid-fragile-jobs-market.html>.
- Rampur, Stephen. "Top Jobs In Demand for the Future," *Buzzle*,  
<http://www.buzzle.com/articles/top-jobs-in-demand-for-the-future.html>
- Sedghi, Ami. "How Likely Are You To Be Employed? By University and Course,"  
The Guardian, 18 July 2011.  
<http://www.guardian.co.uk/news/datablog/2011/jul/18/graduate-employment-by-university-and-subject>
- Williams, Chuck. *Management*, 4<sup>th</sup> ed. Mason, Ohio: Thomson South-Western, 2007.
- \_\_\_\_\_. Thailand Jobsdb.com official website.  
<http://thai.jobsdb.com>
- \_\_\_\_\_. Assumption University official website.

<http://www.au.edu/faculty-of-communication-arts.html>

\_\_\_\_\_. Bangkok University International College official website.

<http://www.buic.bu.ac.th/index.php/majors-creative-course/communication-arts-bachelor-of-arts>

\_\_\_\_\_. Chulalongkorn University official website.

<http://www.inter.commarts.chula.ac.th/about-us.html>

\_\_\_\_\_. Rangsit International College official website.

<http://www.rsu.ac.th/ric/ARThome.html>

\_\_\_\_\_. Webster University (Thailand) official website.

<http://www.webster.ac.th/academics/undergraduate/media-communications/ba-media-communications/>

\_\_\_\_\_. Thammasat University official website.

<http://www2.tu.ac.th/tueng/index.php/academics-3/degrees-programs?id=128>

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*Trees and Rhizomes: Students as Masters of Learning*

David O'Brien, Warren Sellers

The University of Melbourne, Australia

0522

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Abstract

This paper analyzes an innovative university based studio based learning program, called the Bower Studio, that offers architecture students real-world experience in consulting and building consilience with client partners from marginalized and poorly resourced communities in remote Australia and Papua New Guinea. It both documents the strategies used to build meaningful, cross-cultural partnerships and sets out this innovative approach informed by relevant post-graduate learning pedagogies. Students participate with a unique and powerful learning experience that perturbs their typical day-to-day experiences by introducing them to real world issues of inequality, race, poverty and marginalization. Students are quite confronted by the contemporary Indigenous world and the lifestyles of Indigenous people. This culture shock is however quite empowering and invigorating – forcing students from their comfort zones to address a raft of complex issues. The consilience of a number of factors, many of which are generated by the students themselves as they work with their partners, are best understood in a non-hierarchical pedagogical framework best described by theorists such as Deleuze and Guattari as 'rhizomatic'. The paper demonstrates that students have great capacity to dismantle the barriers between the 'academic' and 'real' worlds and take significant responsibility for driving projects to their fruition and guiding their own learning.

**Keywords:** Design studio pedagogy, consilience, marginalized communities, Bower Studio, Indigenous development

## 1. Introduction

The typical architectural design studio education involves the academic studio leader creating hypothetical scenarios and an imaginary client for the class of students to design 'solutions'. The studio leader is most likely to provide the students with a written brief and program. Students may, or may not, be able to visit the proposed site and will most commonly rely on their web-based research to imagine the needs of the client and search for appropriate precedent on which to model their own scheme. This constrained process limits the 'real-world' interaction between designer, client and site that practicing architects grapple with on a regular basis and rarely addresses key issues of constructability, process and budgets.

By contrast the Bower Studio model was initiated in 2008 as a design studio bringing together groups of students to work directly with indigenous groups in remote communities in Australia, Thailand and Papua New Guinea to improve housing and infrastructure. In this distinctive format, the students take a project through to construction and delivery of these infrastructure elements, working with the communities to frame the aims of the project and achieve their desired outcomes. Together, the teams have built a variety of much needed community infrastructure in eight different locations. To date, they have renovated houses, constructed an early childhood learning center, a computer center, additions to a health clinic as well as provided healthy toilets and water infrastructure. This series of studios has provided students with transformative learning opportunities where they take much responsibility for the learning and teaching that occurs within the design studio. This learning has been facilitated by extensive collaboration with government and indigenous development agencies that have provided guidance and facilitation, as well as industry partners who have supplied materials and technical support. Formal teaching and learning strategies, that have been the mainstay of studio teaching for generations, must be reconfigured due to the open-ended nature of the projects and the gradual, complex and ongoing nature of the collaboration of the parties involved. The overarching question we keep in mind is: *Given student's desires to participate in complex 'real world' problems what are the most appropriate models for teaching and learning?*

## 2. How Does the Bower Studio Operate?

### 2.1 The 'Bower'

A 'bower' is a simple structure traditionally used by indigenous Australians to shelter from sun, rain and wind. The 'Bower Studio' projects undertaken by postgraduate students at the Faculty of Architecture, Building and Planning at the University of Melbourne reference the bower as the basic component of shelter and seeks to build upon its relevance for contemporary indigenous development and housing in Australia and neighbouring countries. While a basic bower structure may not represent the aspirations of all indigenous peoples, it does help us understand the key issue of shelter for the climate, culture and technologies (which in turn link with spatial forms and their capacities to define 'place'). In many respects the bower is a powerful metaphor for the pedagogical approach that grounds the Bower Studio's teaching and learning practices. The bower is a gathering place for the coming together of peoples in teaching and learning across contexts and cultures, but with disciplinary purpose.

## 2.2 The Bower Experience

The Bower Studio is committed to providing students with a unique and powerful learning experience – our initial approach is to perturb student's typical day-to-day experiences by introducing them to real world issues of race, poverty, inequality and marginalization. We look to readdress issues of 'top-down' engagement and poor communication. Students are initially quite confronted by the contemporary Indigenous world and the lifestyles Indigenous people contend with. This culture shock is however quite empowering and invigorating – forcing students from their comfort zones to address the complex issues. We do not shy away from their discomfort and endeavour to keep the interaction as real, and sometimes as raw, as possible.

The co-constructivist learning and teaching philosophy for the Bower Studio uses the physical construction processes and outcomes as a way for students to stimulate ongoing discussions with our indigenous partners. Co-constructivism in education has recently been characterised by various contextual aspects of co-constructive activity including: 'productive dialog such as exploratory talk and collective argumentation, collaborative negotiation after sociocognitive conflict or as a process of reciprocal sense-making, joint construction of a shared understanding, elaboration on mutual knowledge and ideas, giving and receiving help, tutoring and scaffolding'(Reusser 2001). Generally speaking, students find it difficult to build opportunities to engage with people from marginalized communities. Similarly, marginalized peoples find it difficult to make decisions about their environments and their community infrastructure. Our Bower projects address these difficulties by enabling a process whereby talking, designing and then building together opens up opportunities for useful dialogues leading to new ideas, processes and ultimately relevant outcomes tailored to the needs of the communities by well-informed student designs. With each project the Bower team grows stronger and we achieve better results. Our Indigenous friends are also gaining communication skills and confidence with practices to improve their own infrastructure and their own community programs. We are all learning together.

The Bower Projects attract students wishing to engage with and address inequality, hardships and the barriers to Indigenous development. It has traditionally been very difficult for non-Indigenous people (particularly those residing in Australia's southern states) to have the opportunity to work with Indigenous communities. However our Bower Studio program is one of the very few in Australia that has been able to provide these opportunities – due in part to our development of strong partnerships with Indigenous organisations.

## 2.3 The Student's Obligations

In recognition of the experience and prior learning of our postgraduate-level students and our own high expectations at this point in their learning, we have designed this studio so that students progressively take on increasingly significant responsibilities as the project proceeds. This is accompanied by a gradual diminishing of the subject coordinators leading role. The pedagogical aim here is to have students graduate from the subject as leaders in the disciplinary field with a strong philosophical and ethical basis for influencing future initiatives, a strong skill set and the intellectual basis to have their voice heard and actions identified as a model of best practice.

The Bower Studio leadership team has found that it is not difficult to motivate students to learn and to participate. Projects begin with idealistic student input that is instituted at first within tight frameworks and with tight leadership control. As the project progresses and the students build confidence and knowledge the project processes become more self-directed. The students are well prepared for the consultation processes they undertake and are taught ways to ask questions and the importance of listening carefully with their 'clients'. After their consultation with the community they have strong commitment to the final projects and encourage local community members to work alongside them.

Conversations with the student cohort have indicated that the students are keen to engage with Indigenous Australians. For most this is their first opportunity to do so. Students wish to go beyond formal conversations and engage with community members as individuals and in informal settings. For the local Indigenous students alike, it broadens their horizons and facilitates their positive engagement with 'whitefellas' of their own age. The combined groups break down barriers of preconception and difference.

### **2.3 The Studio Processes**

Prior to working on-site with communities the architecture students are invited to work in groups to design and document prototypes and then pass these to their peers for actual construction. Again this 'problem based learning' pedagogy is not new to the university but it does work very well with this type of project. Students learn to take high levels of responsibility, respect another's design and appreciate having their ideas built by others. They also respect and expect good documentation from their peers. These processes of negotiation provide a forum for students to set clear goals for their learning, work constructively with their Indigenous partners and work to produce fruitful and sustainable outcomes.

Our students are well trained in Indigenous protocol issues, design and construction before arriving on-site to work in communities. Alongside formal lectures and guest presentations the students prepare their own seminars, design prototypes, document the construction process and schedule and source construction materials. They are then able to confidently begin prefabricating building elements in the university workshop. Once the prefabricated components are complete the teams move to the university's rural campus at Creswick for on-site construction training. Here the students gain confidence, familiarity with the tools and materials grows and their problem solving skills are put to the test over a three-day period. These preliminary exercises lead towards the main component of each project – students forming partnerships to work outside the university on outreach projects with the Indigenous partners.

The local Indigenous students, studying for their trade certificates and finding their feet in the workplace, have also commented on the learning processes they use to work with the 'whitefella' students. Both the local workers and university students are required to find new ways to engage and communicate with their clients and workmates. From this process many strong leaders emerge and we take advantage of a mentoring system. Of key importance to our program is for high achieving university students to be able to provide intellectual leadership and go on to mentor students participating in following Bower Studio projects. These student mentors,

generally one or two per year, remain connected with the program. We endeavour to empower them as much as practicable and rely upon their expertise to maintain relationships with our large number of partners.

### **3. What Sets the Bower Studio Apart?**

While other Australian and International universities have subjects with significant Indigenous input and themes, this project is innovative in its strong reliance on student input and activity. Furthermore the Bower Studio builds on the traditions of Samuel Mockbee's 'Rural Studio' where students consult and build for the poor and marginalized in America's south. In both studio programs the student's physical labour leads towards the built outcome alongside the client's own input and 'sweat equity'. However, there is another, even more important aspect to the Bower Studio program: along with a sense of responsibility to provide sustainable infrastructure to the Indigenous community with which they are working, the teachers also ask students to be responsible to their future colleagues – they are required to share their intellectual output, in the form of research, consultations, designs and reports, with the following year's Bower students. Student mentoring has a significant value. Without this, the studio would not have the basis to form the following year's projects. Students are thus engaged in and have membership of several overlapping learning communities at once: with their own year's cohort, with the Indigenous community they work with and with the following year's students.

#### **3.1 Inverting the Process – Building and Consulting Before Designing**

A key feature that distinguishes the Bower Studio from other projects that have students construct buildings is our desire to empower students to make well-informed decisions over a protracted time frame. Unlike the standard design process, which has students designing and then building, we have inverted the process so that students begin by engaging with their client and taking part in the building process simultaneously. Only once they have this experience do they undertake the major design work and produce a proposal – presented as a ten-page booklet with full documentation and budgets. These design proposals are then disseminated to our partner organizations to help them choose the next project for construction. Hence each cohort of students can strive to have their design proposal selected for construction and win the opportunity to help mentor and lead the new cohort of students. This reliance on student leadership has enabled us to build a strong team of committed and enthusiastic students who remain connected to the projects and outcomes over consecutive years.



Figure. 1 Each new student cohort does not prepare any formal design submissions until they have completed the building stages alongside their new clients.

### 3.2 Knowing ‘How’

Professional schools, and architecture programs within them, traditionally view a significant part of their role as teaching to transfer information. Preparing students for professional life requires a great deal of content-heavy instruction relevant to the particular discipline and professional accreditation bodies see their role as ensuring that regulatory standards are maintained. Schon (1987) explains this as a state where ‘Knowing that’ tends to take priority over ‘knowing how’. However design pedagogy has long been centered on ‘problem based learning’ strategies with the accompanying range of learning techniques that include peer learning and collective, collaborative teams working to ‘know how’ (Boud & Feletti 1997, Hmelo-Silver & Barrows 2006).

Furthermore, the importance of ‘tacit knowledge’ as complementary to ‘codified’ or ‘explicit’ knowledge (Polanyi 1967) is a central concern in architectural design studio pedagogy. Tacit knowledge is the underlying practical ‘know how’ knowledge that is difficult to put into words and is mostly learnt through ‘communities of practice’ (Wenger 1998). Ways of knowing and knowing how are co-implicated - each is recursively implicated in the other to allow learning to evolve and progress. These complex and interrelated ways of knowing underpin teaching and learning in the design studio where students’ working collectively is regarded as the most sophisticated model for learning about design.

### 3.3 Broad Stakeholder Input Affirms Quality

Facilitating the interaction between students and Indigenous communities is a highly rewarding intellectual pursuit for the academic team. Although there is a broad range of interests and concerns represented at various stages, uniform ways of benchmarking quality and success remain – we require rigorous evidence-based research and seminar presentations of a high standard. Panels of academics, community representatives and funding agencies assess submitted design work and provide invaluable feedback to the students. Such assessment affirms the authenticity of the project learning process through real-world evaluation procedures and feedback on the merits and issues of design proposals. The quality of this work – in both its content and presentation – equals and even exceeds that of professionals in the field. Most importantly the work has been prepared in a consultative framework.



Figure. 2 The students gain a great deal of tacit knowledge building their relationships with a range of stakeholders.

### 3.4 Encouraging Informal Interaction for Enactive Learning

In addition to affirmative action in formal academic activities, we also encourage additional less formal, less traditional academic pursuits within the Bower studio. Time spent with our community partners playing football, introducing children to painting (and cleaning paintbrushes) or just informally chatting is encouraged. The interpersonal relationships that are built between the students and the community are recognized as a significant part of the learning experience for all and are valued alongside the academic pursuits and the completion of the built structure. Educational research affirms the high value of 'enactive' approaches to learning that, by combining reflection with physical activities, can affect learning engagement and retention (Varela *et al* 1991). In discussing a personal view of enactivism, Begg (2000) notes: 'it is not knowledge-as-object but knowledge-as-action'. Begg's view affirms the generative, interrelated actions of knowing how and ways of knowing.



Figure. 3 The wider community enjoyed participating in the construction process.

### 3.5 Making Teaching Appear Invisible Through Learning Engagement

Students participating in the Bower Studio are selected on the basis of demonstrating their commitment to issues of community development and empowerment. Peers who have previously completed the program, and the student mentors who shepherd the new cohort, clearly outline the obligations and responsibilities students will face during the studio program. It is important for students to understand that expectation of their contribution is not only substantial but is also taken very seriously by the Indigenous stakeholders and their support agencies. Consequently the students become very involved with the program and focused on achieving the built outcomes as well as contributing intellectually, and possibly even physically, in the ongoing projects.



Figure. 4 Three composting toilets were built in Papua New Guinea with students taking more control of the process as the construction phase moved forward.

The key to facilitating independent learning is to providing the space for the students themselves to drive their own response to the learning task at hand, in other words to practice self-initiated learning (Swann 2012). Within the Bower Studio structure the staff take a very active and engaging role at the beginning of the project but deliberately and progressively step back as the project proceeds. By the end of the on-site construction phase the teaching team aims to become invisible leaving the student team to 'complete' the building phase alongside the local workers.

### **3.6 Dual/Oppositional Orientations and Rhizomes**

Schon (1987), writing about educating the reflective practitioner, criticises the dual orientation of the Professional School that has a binary relationship within the world of the university and the world of practice. He characterizes this binary as a tension between 'discipline' and 'practice' based orientations. This is frequently observed in architectural education where rigorous intellectual pursuits sit in parallel with the multifaceted demands of the physical world that includes a range of clients, pragmatic issues related to site, climate, construction technologies and materials and the economics of the construction process.

The Bower Studio model addresses Schon's (1987) concerns in an easily reconcilable manner. Rather than regarding the disciplinary and practical orientations as a polarizing disjuncture between the two it prefers to see both as co-involved in a dynamic process that is actively contiguous and intertwined. Throughout the project the students use the knowledge obtained through the theoretical interrogation of the subject matter and layer this on top of the work they conduct 'in the field' to form a non-hierarchical, dynamic 'rhizomatic' model. Deleuze and Guattari (1987) describe such a model that contrasts the hierarchical, bi-polar, closed system structure of the tree – practical v disciplinary – with the arrangement of a botanical rhizome as an open system that continuously propagates in many directions and dimensions without any definite beginning or end. Snippets of the classroom based research and learning become layered onto each day's activities on-site and help inform the myriad complex negotiations between the key client interactions, the construction processes and the vision of the completed building as a relevant artifact. These negotiations, in turn, are then brought back to the design studio at the university when they are ordered into a design submission, which is then in turn, taken back to site to form the basis of new negotiations with the partner community.

It is this strong recursion through cycles of reflective disciplinary understandings, active practical experiences, collaborative negotiations and cooperative actions, forwards and backwards over time, that empowers the students, the partner communities and the overall ongoing projects alike. The relationships are seamless and transparent and readily understood by all.

#### 4. Conclusions

For five years spanning eight projects and across three countries, the Bower Studio has successfully completed cooperative planning, design and construction over a range of infrastructure programs. University students, including students from host countries, work alongside community groups and with the support of industry partners and both the government and non-government sectors. These teams have been highly efficient and organized to work within budgets and against strict timelines to achieve their goals.

The projects combine both teaching/learning objectives alongside research outcomes addressing the most sustainable ways to develop relevant community infrastructure. Of key importance to the academic leadership team is the need to develop a powerful model for high quality learning.

The Bower Studio pedagogy is woven from three complementary approaches: Knowing how, ways of knowing, and enactivism, which re-prioritize processes of learning and experiencing 'how' over the 'what' and 'why' explicit knowledge transfer pedagogies of the professionally focused architecture school. While we argue that both tacit and explicit knowledge are very important and highly relevant to design students we believe that there are few programs where this occurs in an intellectually and operationally robust manner. In our experience a 'rhizomatic' approach that embraces open, inclusive and flexible ways of knowing and working, affords a more consilient alternative to the limitations of the 'discipline' and 'practice' binary. We argue that students are most empowered and effective when the barriers between the 'academic' and 'real world' events are dismantled thereby providing the opportunity to move back and forth weaving the worlds together and taking the responsibility to drive the project to fruition.

## 5. References and Citations

- Begg, A. (2000). Enactivism: a personal interpretation. Unpublished manuscript. Retrieved July 3rd, 2013 from <http://www.docstoc.com/docs/35871274/ENACTIVISM-A-PERSONAL-INTERPRETATION>
- Boud, D. & Feletti, G. (Eds.). (1997). *The challenge of problem-based learning*. Kogan Page, London.
- Deleuze, G and Guattari, F. (1987). *A thousand plateaus*. Brian Massumi (tr). University of Minnesota Press, Minneapolis.
- Hmelo-Silver, C. E. & Barrows, H. S. (2006). *Problem-based learning: What and how do students learn?* Educational Psychology Review, 16, pp 235-266.
- Polanyi, M. (1967). *The tacit dimension*. Routledge & K. Paul, London.
- Reusser, K. (2001). Co-constructivism in educational theory and practice. In Smelser, N. J. & Baltes, P. B. (eds.). *International Encyclopedia of the Social and Behavioral Sciences*. Elsevier Science, Oxford. pp 2058-2062.
- Schon, D. (1987). *Educating the reflective practitioner*. Jossey-Bass, San Francisco.
- Swann, J. (2012). *Learning, teaching, and education research in the 21st century: an evolutionary analysis of the role of teachers*. Continuum International Publishing Group, New York, NY.
- Varela, F. J. Thompson, E. & Rosch, E. (1991) *The embodied mind: cognitive science and human experience*. MIT Press, Cambridge MA.
- Wenger, E. (1998). *Communities of practice: learning, meaning, and identity*. Cambridge University Press, Cambridge MA.

*Diversity and Assistive Technology: An Analysis of Special Education Magazines  
from 1999 to 2000 in Japan and the United States*

Ji Young Seo, Kiyomasa Ikemoto, Jie Qi

Utsunomiya University, Japan

0529

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### **Introduction**

Assistive Technology, (hereafter AT) is, in general, any technology that can be used to receive information and communications support services regardless of person, place or time. AT is not only used by people without disabilities, but also more and more by disabled persons. The usage of AT by people with disabilities has increased little by little and the need for it is still growing. In addition, research on AT that targets people with disabilities in particular has also been advancing in recent years. However, we suspect that the general public's awareness of the needs for, and possibilities of use of AT for people with disabilities is not yet sufficient.

According to Rose and Meyer (2002), the more people with disabilities use AT, the more actively they can increase their participation in society.<sup>1)</sup> That is to say, that by making good use of AT, we can encourage the possibility of participation in society. In other words, AT could be said to be 'a tool of hope'. In the United States, the development of new AT-related equipment coming from ordinary companies which is geared towards people with disabilities, has progressed right alongside the recognition of special education teachers and welfare services officials associated with people with disabilities (including those in regular schools).

In America in the 1990s, two policies named the *Universal Design for Learning* (UDL) and the *Individual Education Program* (IEP) were incorporated into the education system in order to better allow children with disabilities to receive education in Information Technology.<sup>2)</sup> In addition, in the United States in 1973, legislation related to Assistive Technology was enacted, currently enabling, even within IEP, AT to be provided and applied. That legislation is: the *Americans with Disabilities Act* (ADA), the *Assistive Technology Act of 1998* (ATA), and the *Individuals with Disabilities Education Act Amendments of 1997* (IDEA). In contrast, laws related to AT for persons with disabilities have not yet been enacted in Japan.

In Japan, according to Chapter I of the General Provisions of Special Needs School Curriculum Guidelines issued in 2008, during the formation and implementation of school curriculums, a matter to be considered is that even at school, computers and Information Technology networking are to be treated as teaching materials and tools. Also, in Japan, the Ministry of Health, Labour and Welfare has conducted business related to information communication support equipment since May 1996. Providing information about communication support equipment and assistive devices has also been cited as a feature of business in the municipality services supporting the daily life of people with disabilities as "support to enhance the social ability and use of social resources."

In the business contents of those implementation guidelines, concerning information communication support equipment services as "concrete examples of the support necessary to take advantage of social resources," the following is mentioned:

advice on use of welfare equipment, guidance on information equipment, support related to information and communication equipment required by people with disabilities, communication support, home renovation advice, and providing information on living in the community.

In this study, in order to understand how people with disabilities in Japan and the

United States make use of AT, we examine the research trends in special education journals related to AT. Rather than making persons with disabilities adapt to the advanced information society of AT, it is important that society makes an environment where persons with disabilities are more able to securely and safely use AT. Throughout this study we refer to how to create an environment within the information society for people with disabilities in Japan and the United States. In other words, the primary concern of this study is to consider the environment where AT is used in Japan and the United States and about the usability of that new technology. The perspective of this study is that by comparing the environment, the system usage, and the social and general system for AT in both countries through special education information magazines, we can better orient ourselves toward a "barrier-free" information communication society for persons with disabilities in a diversity society in the future.

#### ***Purpose and methods of this study***

The purpose of this study is to reveal the trend of needs for AT in the field of special education by analyzing two special educational journals: "Teaching exceptional children" in United States and "The Practices in Special Education (*Zitsen Syougaiji Kyoiku in Japanese*)" in Japan. We analyzed whole contents relating to AT in these journals from 1999 to 2009. An overview of the target journals are shown in Table 1 (on the next page).

In America, laws and social systems vary from state to state, but nevertheless, in comparison to other countries, the United States as a whole was the earliest to introduce legislation concerning education policies for AT for persons with disabilities. In order for persons with disabilities to take advantage of AT, various government and local public bodies have offered support. In the target American journal, "Teaching Exceptional Children," various reports, practices and case studies were introduced.

On the one hand, in each region of Japan, support for AT continues with each Rehabilitation Center playing a central and active role in allowing persons with disabilities to better make use of AT in a more secure environment. In the Japanese journal "*Zitsen Syougaiji Kyoiku*" ("Practices in Special Education"), there were a lot of articles about the importance of the creation of special social environments for persons with disabilities to use AT. Table 1. Overview of special education magazines in Japan and the United States

	Japan	United State
<i>Journal Title</i>	Practices in Special Education	Teaching exceptional children
<i>Year First Published</i>	1972(Monthly□	1920(Bi-Monthly□
<i>Publisher</i>	Gakken	CEC

<i>Scope</i>	Apr 1999 - Oct 2009	Apr/May 1999 - 2009 Sep/Oct
<i>Composition</i>	<p>From 1990 □</p> <p>Special Feature - Language - Arithmetic - Mathematics lectures - autism lectures</p> <p>From 2006 □</p> <p>- Special Feature series</p> <p>Changed from:                      "The Future of Practices in Special Education"                      to "The Future of Information Practices in Special Education"</p>	<p>From 1990 □</p> <p>Special Feature series</p> <p>□ Introducing new papers</p> <p>□ How to create IEP for special needs teachers                      (the theme for IEP differs each time □</p> <p>□ Support and information for parents</p> <p>□ New special education information</p>
<i>Primary Special Feature Theme</i>	<p>2000</p> <p>-Class management of energetic Special Education Classes</p> <p>-Calling in specialists during the Period for Integrated Study</p> <p>-Words for spending life with children</p> <p>-Making practical teaching materials using IT</p> <p>- Raising the power to live with independence using food preparation</p>	<p>2000</p> <p>□ Diversity in the new millennium</p> <ul style="list-style-type: none"> <li>• Continuing Professional Education</li> <li>• Curriculum</li> <li>• First-Year Teachers and Retention</li> <li>• Collaborative Strategies                             <ul style="list-style-type: none"> <li>• Changes at CEC</li> </ul> </li> <li>• Cultural and Linguistic Diversity</li> <li>• Designing Instruction to Support</li> </ul> <p>The Success of All Students</p>

As well as examining the commonalities, differences, and the nature of the use of AT in both countries, research trends in AT concerning children with disabilities in the United States and Japan, they are also analyzed from the following points of view:

- Number of papers written on AT
- Age levels and subject
- Type of disability
- Target audience of each paper
- AT which is covered
- AT and its 4 areas

### Results

#### *The number of articles concerning AT*

After the examination of 10 years worth of special education magazines, it was found that the Japanese journal "Practices in Special Education" contained 30 topics concerning AT, and the American journal "Teaching Exceptional Children" contained 45 topics. Concerning the number of topics on AT, the Japanese journal had fewer contents. (See Fig. 1)

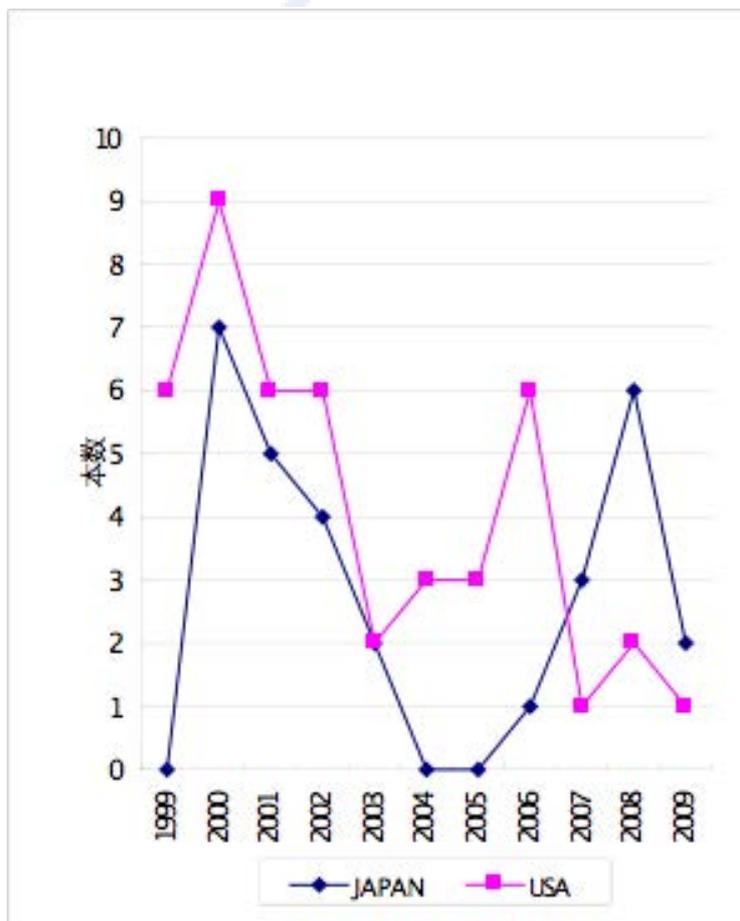


Fig.1 Number of topics concerning AT

Also, as shown in Table 2, the number of papers in "Practices in Special Education" totaled 380, while the number of papers in "Teaching Exceptional Children" totaled 1350. In "Practices in Special Education" the year in which the most papers concerning AT appeared was the year 2000 with a total of 7 papers. From 1990, many topics related to computers appeared. From 2000 onwards, topics such as "Mobile Phone Life" and "Making Use of the Internet" gradually started to appear. The

contents of the main topics were: "from the field of personal computing," "development environment of teaching software," "conditions of easy-to-use AT," "multi-media in vocational training," "your computer usage guide" and etc.

Table 2. Number of papers

	Japan	No.	United States	No.
1999	<i>vol. 320 □ vol. 322</i>	42	<i>vol. 31 /NO. 4 □ vol. 32/ NO. 3</i>	40
2000	<i>vol. 323 □ vol. 325</i>	63	<i>vol. 32/ NO. 3 □ vol. 33/ NO. 3</i>	40
2001	<i>vol. 336 □ vol. 350</i>	300	<i>vol. 33/ NO. 3 □ vol.34/ NO□1</i>	20
2002	<i>vol.351 □ vol. 356</i>	120	<i>vol. 34/ NO. 4 □ vol.35/ NO□3</i>	40
2003	<i>vol. 357 □ vol. 364</i>	165	<i>vol. 35/ NO. 3 □ vol.36/ NO□2</i>	30
2004	<i>vol.377 □</i>	20	<i>vol. 36/ NO. 3 □ vol.37/ NO□2</i>	30
2005	<i>vol.388 □</i>	20	<i>vol. 37/ NO. 3 □ vol.38/ NO. 3</i>	40
2006	<i>vol. 392 □ vol. 403</i>	240	<i>vol. 38/NO. 3 □ vol.39/NO□1</i>	20
2007	<i>vol. 404 □ vol. 411</i>	160	<i>vol. 39/NO. 3 □ vol.40/NO. 2</i>	30
2008	<i>vol. 418 □ vol. 426</i>	180	<i>vol. 40/NO. 3 □ vol.41/NO. 2</i>	30
2009	<i>vol. 428 □ vol. 429</i>	40	<i>vol. 41/NO. 4 □ vol.41/NO. 5</i>	60
		1350		380

□ Due to missing issues, we could only analyze one issue for 2004 and 2005

In the American journal "Teaching Exceptional Children," the year with the most subjects related to AT was 2000 with 9 times. Since the 1980s, many subjects relating to "PC users" have been issued, and from the 1990s, many subjects with reference to various forms of AT have been issued. Upon entering 2000, topics covering how we can safely use AT at home and at school, the rules for using AT, and AT which can be used for work and home start to appear.

### Target age levels

An analysis was done of the age levels of the target children and adults in each paper. The classifications used were "INFANT," CHILD (Including Preschool), "SCHOOL AGE," "YOUNG," "ADULT," "ELDER" and "ALL (Including children and adults with disabilities)."

The percentages are shown in Fig. 2.

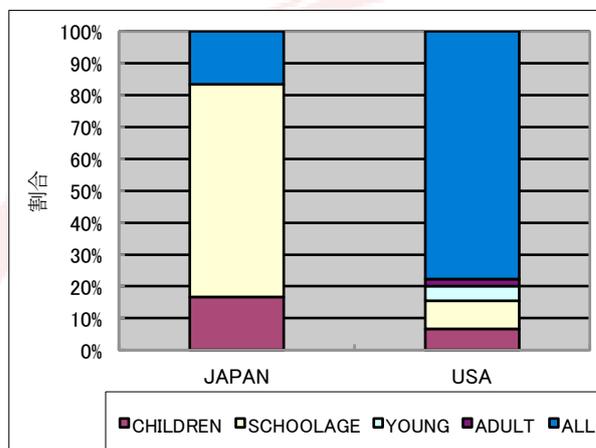


Fig. 2 Targeted age levels

In "Practices in Special Education," the most frequent age level targeted for essays to do with AT was "school-age." For example, the most common topics were those that discussed the utilization of personal computers at special needs schools and school elementary schools collaborative learning using groupware or "study notes," special education software that can be downloaded, groupware or "study notes," and case studies which can be implemented at the school, and software for special needs schools. Topics about AT were found a total of 30 times: 20 times for "school-age," 5 times for "children," and 5 times for "all."

In the American journal, "Teaching Exceptional Children," the highest number of essays was found in the "all" category. For example, there were such articles as "Monitoring Literacy Learning, Using the Internet," "Look! I am on TV" and "Using Videotaped Self-Modeling to change Behavior." The next largest category was "school-age." however, essays which were focused on special education (inclusive education) were most common. In contrast to "Practices in Special Education," "Teaching exceptional children" included a large amount of content discussing "AT for persons with disabilities," as well as describing AT utilization for adults. For example, although there are two articles titled "That's the job! I Want!" and "How Technology Helps young People in Transition" which describe the use of AT in employment, they also cover various areas such as using AT as a means of communication, reducing potential problems in the workforce for disabled people by utilizing AT, and finding a job by using AT.<sup>3)</sup>

On the other hand in the Japanese Journal, "Practices in Special Education," the main content was the use of AT in special needs schools. Content related to AT which can be used by persons with disabilities in adulthood and pre-school-age childhood, were almost entirely absent. Moreover, there were many cases in which the age was unknown.

**Disability of interest**

In "Practices in Special Education," there were 30 essays which covered the target issue of AT for disability. Of the 30 essays, there were 24 which included content for the category "all." However, 80% of them had not been classified with respect to the type of disorder. As for the remaining essays, there was 1 essay for children with LD or ADHD, and 2 essays with content on PDD and autism.

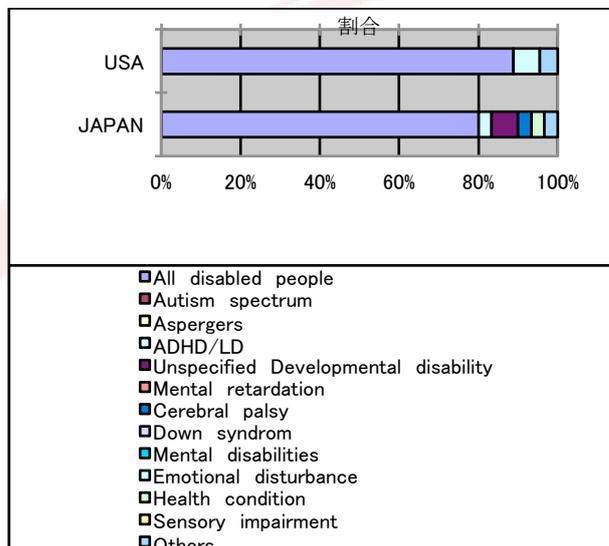


Fig. 3 Type of disability

Following the same trend, in the American Journal "Teaching Exceptional Children" the category containing the largest number of papers to do with AT was the "All" category, and of the remaining 5 papers, 3 papers were on LD and ADHD, and the remaining 2 were reviews. Both countries had similar results regarding the use of AT and disability. There is guidance for children with ADHD on making use of websites to promote leadership, lessons on how children with LD can use "Self Monitoring Systems," and the like. For autism, there is "Self-Modeling" and providing support while using the television. So far, regarding the use of AT, the research which has come out has been centered on AAC, VOCA etc. which has it's own challenges, but in recent years studies have been coming out on the use of AT for all children, and not only the physically handicapped.

**Target audience of each paper**

There are four categories for “Target Audience,” “Special education teachers,” “Parent,” “Disabled people/children” and “All.” The most common target audience in "Practices in Special Education" was "special needs school teachers." For example, the main contents included such topics as: guidance in using AAC, guidance in using computers, (introduction of coaching contents). The next largest category was “All,” however, contents aimed at teachers and parents, therapists, special needs schools, and the disabled have only been issued from June 2001. It must be noted that although parents are included in the “All” category, there were no contents specifically for parents.

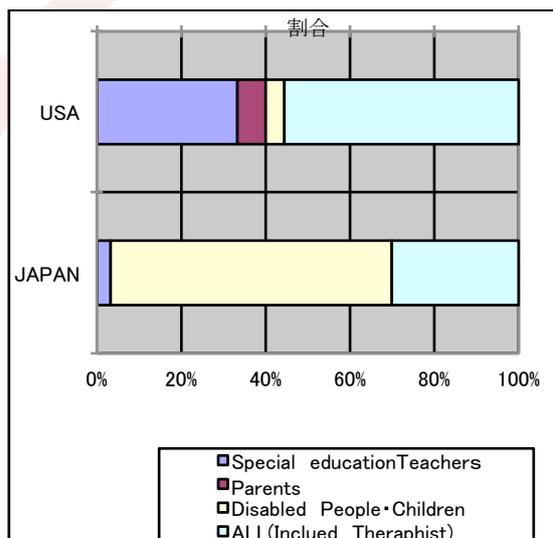


Fig.4 Target audience of each paper

On the other hand, in the American Journal, "Teaching Exceptional children," there was also content aimed at parents about the use of AT in the home. How to make use of AT in the home is described in detail. For example, there were such titles as: "What Should We Expect of Assistive Technology?," "Being Sensitive to Family Goals," "School-To-Home Notebooks - What Parents Have to Say" and the like. Among them, how the parents can mentor about AT is written in detail, as well as measures and issues related to technology use in the past. In addition, the largest category was “All” with the second largest being “Special Education Teacher.” To state it clearly, in America, there are many articles describing how to take advantage of AT for which the target audience is not only the special needs school teachers, but also special needs class teachers and regular teachers in regular schools, therapists, and the like.

**Types of AT which are taken up**

AT was divided into 8 types: "PC," "Mobile Phone," "DVDs and CDROM," "Software," "Internet and Websites," "TV and Video," "All Types of AT" and "Other." Looking at the type of AT taken up in "Practices in Special Education", the largest category was "PC." For example, "From the field of personal computing," "Guidance on the use of computers" and so forth. In particular, the series called "From the field of personal computing" from March of 1997 to the March of 1998, various methods and teaching materials (course materials using a PC) related to the personal computer were introduced. The case was stated that the PC is a medium of expression and texting, which can be used by friends, and about how it can be utilized in special needs schools in particular (see Fig.5).

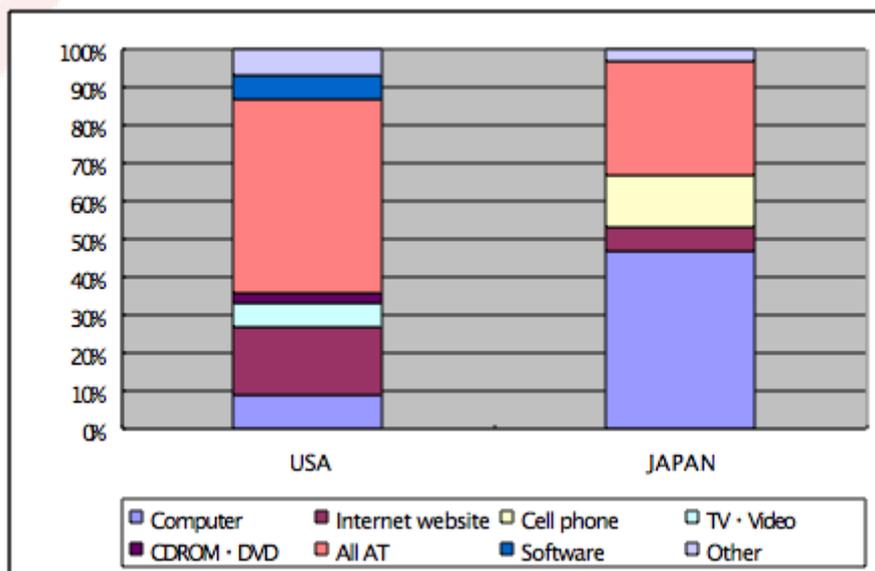


Fig. 5 Types of AT which are taken up

The second largest category was "All Types of AT." Those articles included titles such as "Assisting Children with Developmental Disabilities who Feel Troubled" and "Efforts to Expand Textbooks Toward the Goal of Barrier Free Textbooks." From the late 1990s to the early 2000s, the contents concentrated on personal computers and software etc., but currently, articles describe general usage of AT and digital textbooks. In particular, in 2003 "Do Disabled Children Also Need Cell Phones?" became a hot topic. Mobile phones were included as a form of AT and examples of application were also described.

On the other hand, the largest category in the American Journal was "All Types of AT." For example, "AT Competencies for Special Education." Here, ideas such as the relationship between IDEA and AT, the plans from now for the utilization of AT, and precautions to take while using AT are described. The next largest category was "Internet Websites", but it is important to note that internet usage in the United States was extremely high. Examples are: "Using Collaboration" and "The Web to Implement the CEC Standards", "Accessing The Curriculum-E-PAL WRITING" , "Using the Internet to Improve Homework Communication" and etc. In "Using Collaboration and The Web to Implement the CEC Standards, " how to make use of AT in inclusive education was described.<sup>4)</sup> In addition, "Accessing The Curriculum-E-

PAL WRITING” included content which encouraged people whose disabilities make it difficult to make friends to actively use web sites for making friends and improving human relations.<sup>5)</sup>

"Using the Internet to Improve Homework Communication", the authors describe certain problems which can be solved by using websites. For example, to perform more effectively at home when students receive an assignment from their special needs school, when students come across a difficult section, or when students have a question for the class teacher. Especially in America, within AT, there is content on utilization of CD-ROM and TV, but that utilization method is the "Self-Modeling" method. The "Self-Modeling" method is a way for children with disabilities to check their own problem behavior by watching a recording of themselves while they were doing the behavior. In the United States, this "Self-Modeling Support" is said to have been effective for children prone to problem behavior.<sup>6)</sup> This method of assessment makes active use of AT, and it was utilized not only in child development centers in the United States, but also in special needs schools. In addition, there are also methods such as "Video Therapy." The support devices mentioned in the Japanese journal "Practices in Special Education" were cameras, the digital mouse, the digital pen blackboard etc.

#### ***AT and its four Areas***

In this study, we have analyzed both educational journals from 5 points of view. We have seen the characteristics, both the similarities and the differences, of both magazines. At this point, we decided to use as a reference the concept of International Classification of Function is an international life functional classification, to reorganize the divisions (personal area, environment space, activities and social participation area, mind and body functional area) of AT into four areas. This is because it can be evaluated according to the needs for the features and contents of special education magazines in both countries. That is to say, that by using the four areas, it is possible to evaluate the changes in inhibition and social policies and the promotion of performance and environmental assessment concerning AT. Papers on AT were analyzed according to the four areas. For each region of classification criteria, the educational magazine's contents relating to AT were read, and for each content the corresponding regions were tabulated separately. The concepts and standards of each area is as follows: The "Health and Mental/Physical Functioning" area includes disease/modulation. The "Environment Space" are includes Social structure and social attitudes. The "Personal" area includes age/experience. The "Activities and Participation" area includes challenges and each individuals life situation.

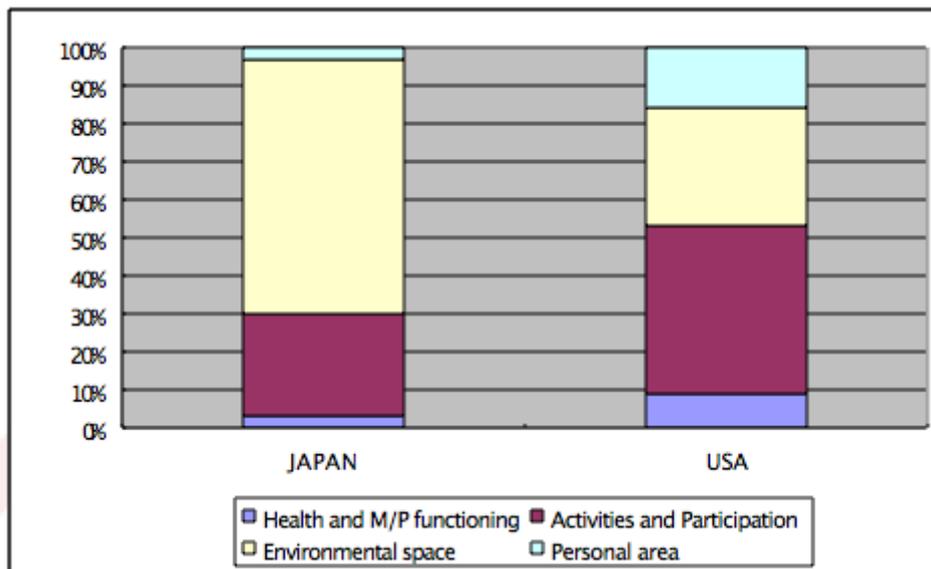


Fig. 6 The four areas of AT

In "Practices in Special Education," the largest areas were "Environment Space." The authors described the same primary contents which stated that for children to utilize AT, the key factor is creating the environment. This idea appeared many times in "Practices in Special Education." Example titles include: "From the Field of Personal Computing," and "Educational Use of Hypertext Multimedia Software made by Children," "Practices in Personal Computing," "Personal Computers as a Means to Use Video Conferencing Over a Network," and etc.

In the current study, there were many articles that stated for the sake of "school activities and social participation," creation of the environment should take precedence. "Efforts to expand textbooks toward the goal of barrier-free textbooks," and "digital information sharing systems" is also seen in recent years. There were areas in common between the American Journal and the Japanese Journal, but articles in "Activities and Social Participation," and "Environment Space" were the most common.

### ***Challenges and considerations***

According to Rose and Meyer (2002) et al, in the United States where AT and ICT is talked about in terms of "The New Role of AT / ICT," these terms mean AT and ICT will perform a new role as information communication support equipment for people with disabilities. It is not only a single technique, but a means to present the possibility of a new form of social participation for people with disabilities. However, it is a fact that persons with disabilities, in reality have difficulties in school activities and social participation. <sup>7)</sup>

In "Teaching Exceptional Children" and also in the results of this study, it is shown that an important characterization has been made in school activities and social participation, which is similar to what Rose and Meyer have said, that AT gives the disabled the possibility to sooner participate socially. Concerning the AT so far, our thinking have been centered on how to enable humans to access the devices (Device Accessibility). In other words, we placed great importance on how to make the button

easier to push or how to make the Japanese characters easier to see.

It can be said that this is an approach from the point of view of an improvement of environmental factors as a mitigation of “function form failure.” However, for the AT in the future, there is a need for a comprehensive technology to reduce various difficulties according to the needs of persons with disabilities. In addition, for the majority of people with disabilities in the United States, the very first time they receive services is at rehabilitation centers and hospitals.

In this manner, the movement to educate experts using PT, OT and ST in facilities, and also people who will become experienced with knowledge of AT to work among teachers involved in special education in schools, is actively seen in all regions of the United States in education programs designed to teach AT.<sup>8)</sup> Also in Japan, development centers where educators can learn about AT are in short supply and according to the All-Japan Information Learning Promotion Board (2010), currently in Japan, welfare information technology coordinators who support the independence of persons with disabilities are trained to be those coaches.<sup>9)</sup> This is the work to be done for persons with disabilities and the elderly: to teach technology competency in order to be able to support independence, depending on the disability, with AT teaching aides.

Lastly, content relating to AT in “Practices in Special Education” and “Teaching Exceptional children” is shown in Table 3 as “Keywords for Persons with Disabilities and AT.” In “Practices in Special Education,” there were many reports concerned with creating an environment for the use of AT in the future. On the other hand, in “Teaching exceptional children,” there were many case reports on the actual use of AT. The difference with Japan is the “cooperation of home and school.” In addition, in the United States, there were notes and information written in great detail on actual usage for parents using AT in the home. Also, by looking at IEP, we could observe each usage of AT in various areas, and AT utilized to meet the needs of people with disabilities.

Upon review of the magazine over the past 10 years, the reality of how people with disabilities are using AT in various situation has been revealed. However, what results were observed, and what has been established, could not clearly be seen. AT is being used in both countries, but development of the system and social environment for using AT effectively, will still be a challenge in the future, especially for Japan.

Throughout life, persons with disabilities are supported by a variety of AT. It should be utilized not only in special needs schools, developmental centers, at home, and in cooperation with parents in self-contained classrooms in normal schools, but should also be utilized as a general service for education, welfare and in the medical field. It is our hope that more comprehensive studies on AT for persons with disabilities are carried out by researchers in the diversity society.

## Notes

- 1) Rose D. H. and Meyer A. (2002). *Teaching every student in the digital age: Universal design for learning*, VA: ASCD. p. 11.
- 2) *libid*
- 3) Morgan R. L. and Ellerd D. A. (2002). That's the job! I want!, *The Council for Exceptional Children*. 32 (4), p. 44.
- 4) Cramer S. et al. (2000). Using collaboration and the web to implement the CEC standards *The Council for Exceptional Children*. 32 (5), pp. 12-19.
- 5) Stanford P. and Siders J. A. (2001). Accessing the curriculum –E-pal writing. *The Council for Exceptional Children*. 34 (2), pp.21-25.
- 6) Devon S. J. and et al. (2004). Using the internet to improve homework communication. *The Council for Exceptional Children*. 36 (3), pp.64-73.
- 7) Bugey T. (1999). Look! I'm on TV, *The Council for Exceptional Children*. 31 (4), pp.27-33.
- 8) Rose D. H. and Meyer A. (2002). *Teaching every student in the digital age: Universal design for learning*, VA: ASCD. pp.7-8.
- 9) Please see more <http://www.e-at.ne.org>

iafor

*Model of Learning Environment for Creative Education on Social Network to  
Develop Creative Thinking*

Chantana Papattha\*<sup>1</sup>, Namon Jeerungsuvan\*<sup>2</sup>

\*<sup>1</sup>Rajamangala University of Technology Phra Nakhon, Thailand,

\*<sup>2</sup>King Mongkut's of Technology North Bangkok, Thailand

0530

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Abstract

The purposes of the research study were 1) to investigate factors essential for the learning environment of creative education on social network to develop creative thinking (LECES), 2) to design a model for development learning environment, and 3) to evaluate the developed model. Three steps of the research study were: 1) reviewing literature to analyze and synthesize the factors essential to the model, 2) designing the model, and 3) evaluating the model. The sample group included eight experts who specialized in education, information and technology, and creative thinking. The study revealed the following results: three elements were essential for development of LECES Model feature. Knowledge creation through learning process included seven elements: problem finding, data acquisition, analysis, solution finding, revise/evaluation, acceptance finding, and convergent thinking. Resource for learning environment included four elements: learning media, technological, context, and communication. Technologies through social network in learning environment consisted of six elements: identity network, creative network, interested network, collaboration network, gaming/virtual reality, and peer to peer communication. The evaluation appropriation of the LECES Model was in the very high level in both overall picture and each aspect i.e., theories and aspect element concept, development factors, and the appropriateness of the design.

**Keywords:** Learning Environment, Creative Education, Social Network, Creative Thinking

## **Introduction**

Education Management was essential for the growth of every nation due to the reason that education provides foundation for the growth in social, economic, political and technology sectors. Smart Thailand was part of the national ICT framework called 'ICT2020', a development blueprint for the country that will lead and guide all parts of the economy, especially the government sector, to move forward with ICT development (Ministry of Information and Communication Technology, 2011).

Ministry of Education (2011: 4-5) presented the information and communication technology (ICT) for education. The ICT was tools in broadband policy to develop ICT for social, ICT for people, and ICT for government, and using ICT for governance on management. Wangpipatwong, Tanakorn (2010: 82) presented role of the information and communication technology on daily life such as social network: Google, Wikipedia, Twitter, and YouTube. The better educational direction known as the 21<sup>st</sup>-Century Skills that focused on individual skillset of the students, the focus of educational development should be on critical thinking, communication, collaboration, and creativity known as the 4Cs. (Partnership for 21<sup>st</sup> Century Skills, 2011)

In the age of technology was educator would create model to develop students and apply technology on process learning. The researcher interested in designing model of learning environment to develop students' creative thinking in higher education. The study aimed to find factors essential for development of model education to develop creative thinking and to develop innovation on social network for education.

## **Objectives of the study**

The objectives of the study were (1) to investigate factors essential for the learning environment of creative education on social network to develop creative thinking, (2) to design a model to develop learning environment, and (3) to evaluate the developed model.

## **Research Procedures**

Three steps in the study:

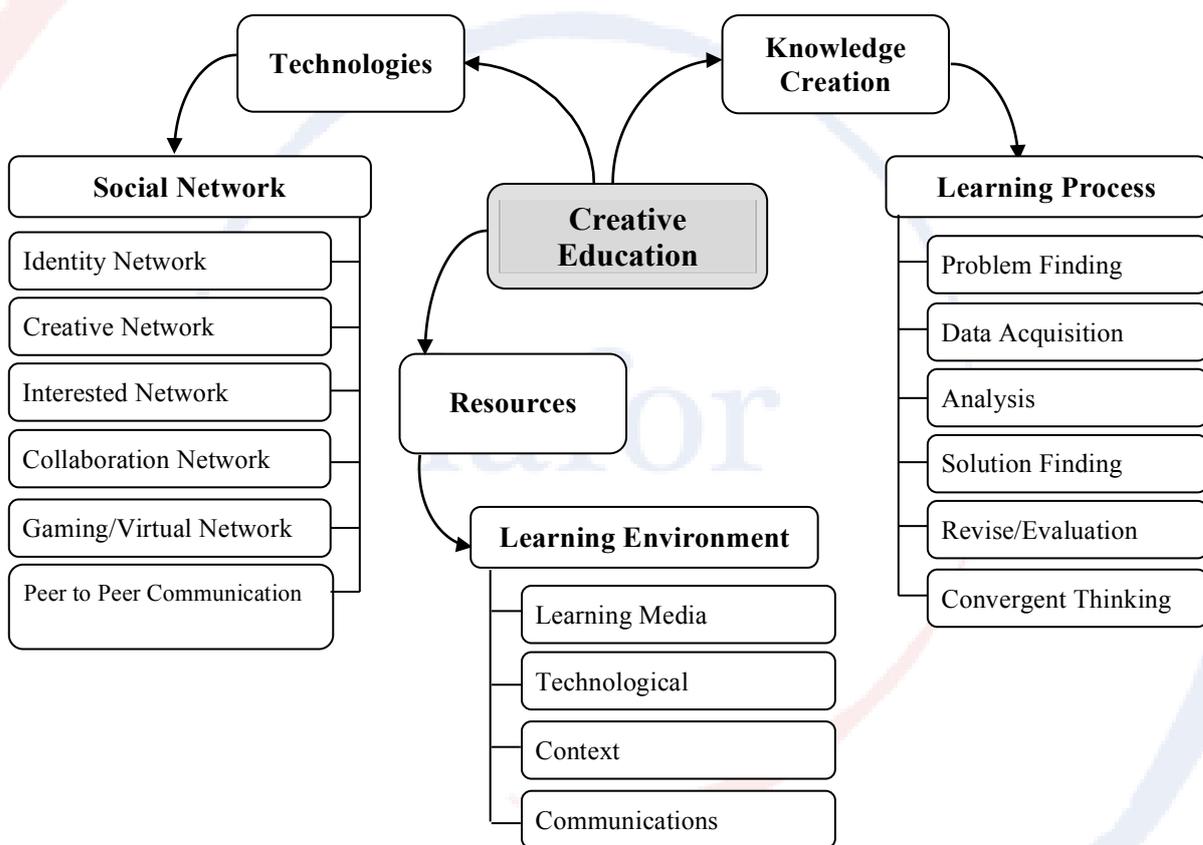
Step 1: Analyzing factors essential for development of learning environment of creative education on social network. Four theories and concepts: 1) creative education, 2) learning environment, 3) social network, and 4) creative thinking.

Step 2: Designing the model of learning environment of creative education on social network: Factors essential from step 1 to develop the model for developing of learning environment on social network.

Step 3: Evaluating the LECES model: Eight experts who were specialists in education, information and communication technology, and creative thinking. Questionnaires were employed to collect data which were analyzed to find arithmetic mean and standard division. The results were presented in tables followed with description.

### Results

Result of step 1: there were two essential levels for the development of learning environment of creative education on social network. Main concept of creative education consisted of three factors included resource factors, knowledge creation factors, and technologies factors. The resource factors on learning environment consisted of four elements: learning media, technological, context, and communication. The technology factors on social network consisted of six elements: identity network, creative network, interested network, collaboration network, gaming virtual reality, and peer to peer communication. The knowledge creation factors on learning process consisted of six elements: problem finding, data



acquisition, analysis, solution finding, revise evaluation, and convergent thinking.

Mind map showed the relation of factors essential for development of learning environment for creative education on social network, shown in

Figure 1.

Figure 1: Mind map of factors essential for development of learning environment of creative education on social network

Source: Designed by Papattha (2013)

Result of step 2: (Draft) the LECES model applied from related factors essential for developing the learning environment on the social network consisted of various subjects, shown in Figure 2.

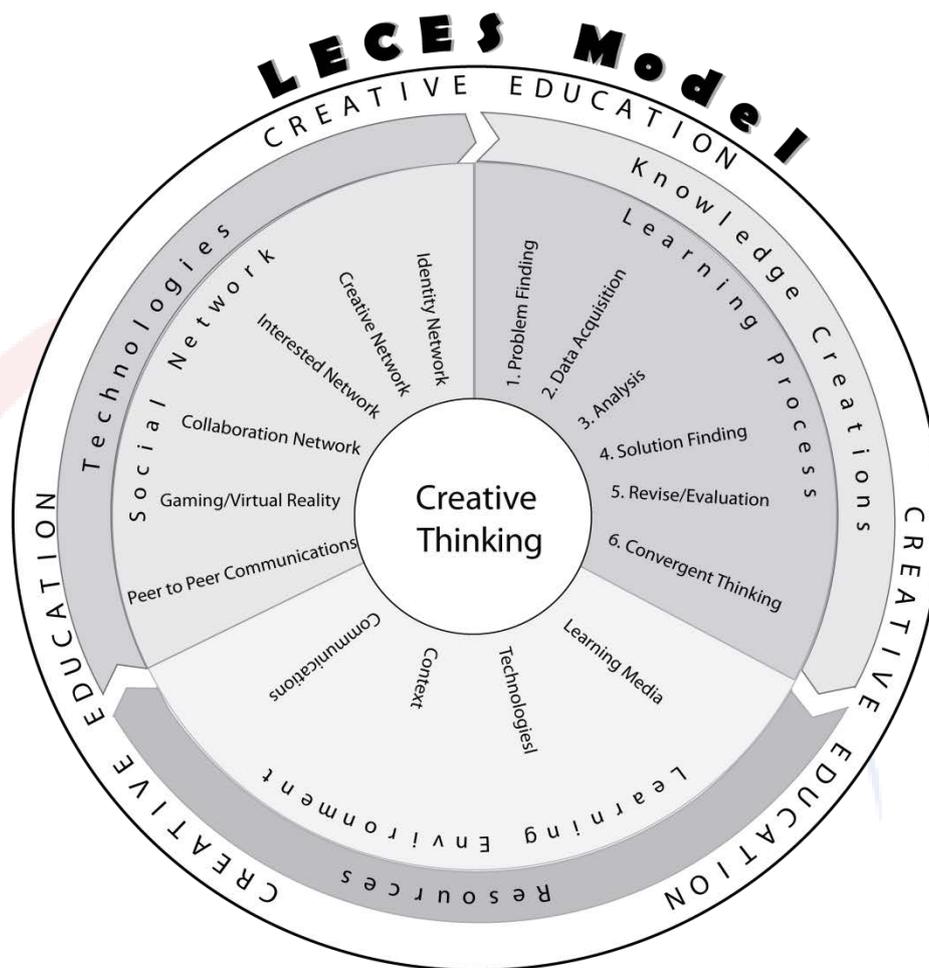


Figure 2: (Draft) The model of learning environment on the social network (LECES)  
Source: Designed by Papattha (2013)

Figure 2 presented LECES model that was the model of learning environment for creative education on social network. The LECES model applied tools on social network to manage learning environment.

The first circle was creative education area.

The second circle consisted of three zone included resource factors, technology factors, and knowledge creations factors. The resource factors in learning environment consisted of learning media, technologies, context, and communications. The technology factors on social network consisted of identity network, creative network, interest network, collaboration network gaming/virtual reality, and peer to peer communication. The knowledge creation factor on learning process consisted of problem finding, data acquisition, analysis, solution finding, revise/evaluation, and convergent thinking.

The third circle in the middle was learning outcome which was creative thinking.

Result of Step 3: Evaluating the LECES model.

Past 1: Theories and concepts for the application in LECES model

Table 1.1: Appropriateness of Theories and Concepts in LECES model

<i>List of items</i>		<i>S.D.</i>	<i>Appropriateness</i>
<i>Theories and concepts for analysis to design LECES Model</i>	4.44	0.62	<i>Very high</i>
<i>Three factors for creative education (resources factors, technology factors, and knowledge creation factors)</i>	4.21	0.72	<i>Very high</i>
<b><i>Overall Appropriateness</i></b>	<b>4.34</b>	<b>0.67</b>	<b><i>Very high</i></b>

Table 1.1 showed evaluation of appropriateness of theories and concepts for apply in the LECES model, overall appropriateness was very high (=4.34, S.D.=0.67). The evaluation of appropriateness of the theories and concepts for analysis to design LECES model, appropriateness was very high (=4.44, S.D.=0.62). The evaluation of appropriateness of three factors for creative education (source factors, technology factors, and knowledge creation factors), appropriateness was very high (=4.21, S.D.=0.72).

#### Past 2: Factors in LECES model

Table 1.2: The evaluation of appropriateness of factors in the LECES model

<i>List of items</i>		<i>S.D.</i>	<i>Appropriateness</i>
<i>Resources factors in learning environment</i>	4.50	0.72	<i>Very high</i>
<i>Technology factors on social network</i>	4.42	0.71	<i>Very high</i>
<i>Knowledge creation factors on process learning</i>	4.33	0.63	<i>Very high</i>
<b><i>Overall Appropriateness</i></b>	<b>4.41</b>	<b>0.68</b>	<b><i>Very high</i></b>

Table 1.2 showed evaluation of appropriateness of factors in the LECES model, overall appropriateness was very high (=4.41, S.D.=0.68). The evaluation of appropriateness of three factors in the LECES model, overall appropriateness was very high i.e. Resources factors in learning environment (=4.50, S.D.=0.72), Technology factors on social network (=4.42, S.D.=0.71), and knowledge creation on learning process (=4.33, S.D.=0.63).

#### Past 3: Designing and applying the LECES model to develop creative thinking of students

Table 1.3: The evaluation of appropriateness of designing and applying the LECES model to develop creative thinking of students

<i>List of items</i>	<i>(<math>\bar{O}</math>)</i>	<i>(S.D.)</i>	<i>Appropriateness</i>
<i>Reviewing literature to analyze and synthesize the factors essential to the model</i>	4.63	0.52	<i>Very high</i>
<i>Designing the LECES model were composed to outcome learning of students</i>	4.25	0.46	<i>Very high</i>
<i>The LECES model to develop creative thinking of students</i>	4.63	0.52	<i>Very high</i>
<b><i>Overall Appropriateness</i></b>	<b>4.50</b>	<b>0.51</b>	<b><i>Very high</i></b>

Table 1.3 showed evaluation of appropriateness of designing and applying the LECES model, overall appropriateness was very high (=4.50, S.D.=0.51). The evaluation of appropriateness of the reviewing literature to analyze and synthesize the factors essential to the model, appropriateness was very high (=4.63, S.D.=0.52). The evaluation of appropriateness of designing the LECES model were composed to outcome learning of students, appropriateness was very high (=4.25, S.D.=0.46). The evaluation of appropriateness of the LECES model to develop creative thinking of students, appropriateness was very high (=4.63, S.D.=0.52). Eight experts commented improving the LECES model on reviewing convergent thinking step. Form the literature review of creative thinking to improve the learning process consisted of seven elements: problem finding, data acquisition, analysis, solution finding, revise/evaluation, acceptance finding, and convergent thinking. The revised LECES model was presented in Figure 3.

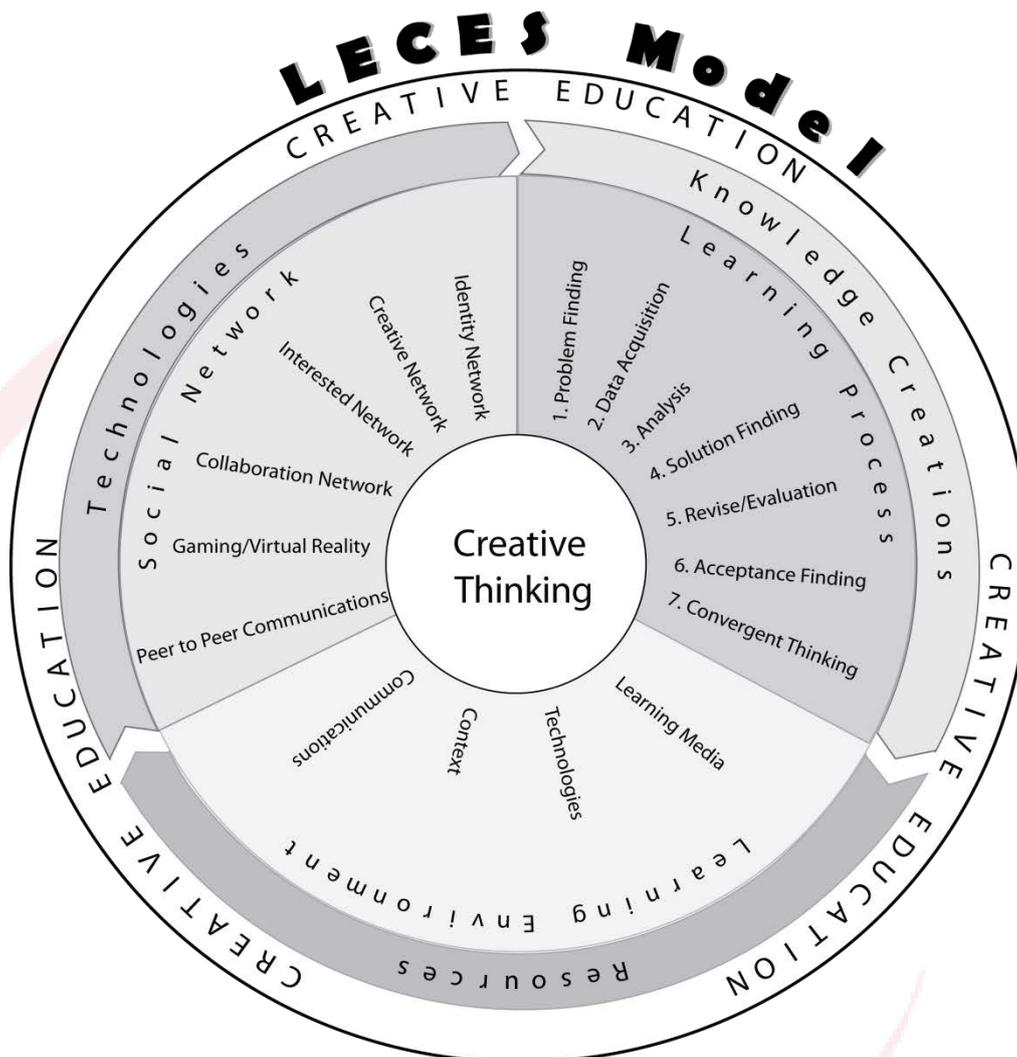


Figure 3: The revised LECES Model improved by eight experts  
Source: Designed by Papattha (2013)

Finally, Figure 3 showed the revised LECES model on three factors included resources, technologies, and knowledge creation. The resources factors in learning environment consisted of four elements included learning media, technologies media, context, and communication. The technology on social network consisted of six elements included identity network, creative network, interested network, collaboration network, gaming/virtual reality, and peer to peer communication. The knowledge creation factors on learning process consisted of six elements included problem finding, data acquisition, analysis, solution finding, revise/evaluation, and convergent thinking,

## Discussions

The evaluation of appropriateness of the theories and concepts to apply in the LECES model showed overall appropriateness at very high level which was congruent to the studies by Office of the Education Council (2003: 5). Creative education was learning process to develop thinking skills, imagination of students to design product. Creative education were to apply curriculum, learning process, assessment and evaluation and link between education institute and learning centers. Mascharat, Thawan (2010: 67-68) presented the principle of creative education consisting of three elements: 1) teacher changed teaching process, 2) students were free to learn and think of learning, and 3) students had thinking skills and practical skills. Ageyev, Valentin (2012: 1-9) showed the creative education affected to motivated and interested in learning. Creative education was affected to recognize of students and teach of teachers.

Suitability evaluation of factors to develop LECES model with the overall appropriateness at very high level which supported the studies by Pornkul, Tanatip (2011: 48-49) that presented learning environment concept included of a regular basis of thought processes of learning activities. These activities reflected thinking of students and teachers. The teacher designing of education in classroom included of three segments: design classroom environment, suitability learning media, and design interactive activity in classroom. Promwong, Chaiyong (2005: 65) presented learning environment was influenced of learning that supporting and blocked leaning. Learning environment was important three issues: 1) using technologies to support learning, 2) designing learning environment to develop student experiences, and 3) assigning learning condition to apply media for learning, adjust attitude, and predict academic achievement.

Appropriation of designing and applying the LECES model overall appropriateness in very high level which were consisted to the studies by Lin, Yu-Sien (2011: 149-155). Creative thinking process and strategies was the environment to support learning, consistency between the data insights of learning strategically, and individual differences of idea. Liu, D. & others (2009: 226) designed of multi-strategic learning environment based on constructivism that learning environment on network was the key for success to quality education via network system.

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## References

- Ministry of Information and Communication Technology. (2011). *National ICT Policy Framework 2011-2020: ICT 2020*, Bangkok: Ministry of Information and Communication Technology
- Ministry of Education. (2011). *Information and Communication Technology for Education of Master plan, Ministry of Education 2009-2013*. Bangkok: Ministry of Education.
- Pornkul, Tanatip. (2011). Theories and Application to Thinking of Teaching Process. 2<sup>nd</sup>ed. Bangkok: Juraroungkorn University Printing House.
- Promwong, Chaiyong. (2005). Learning Environment Management. Bangkok: S.R.Printing Mass product.
- Jeerungsuan, Namon. (2012). *Instructional Design and Assessment*. 2<sup>nd</sup>ed. Bangkok: Textbook Publishing Center King Mongkut's University of Technology North Bangkok.
- Mascharat, Thawan. (2010). Model of Education and Creative Learning Source. Bangkok: Tarn Aksorn.
- Keamane, Tisana. (2010). Didactics: Knowledge for effective of the learning Process. 2<sup>nd</sup>ed. Bangkok: Juraroungkorn University Printing House.
- Wangpipatwong, Tanakorn. (2010). Virtual University with Creative Education. Executive Journal, 30(4), 82-88.
- Palitpolkarnpim, Prasert. (2011). 21st Century Skills Rethinking How Students Learn. Bangkok: Openworlds.
- Wonganutararoch, Preeyaporn. (2010). Education of Philosophy. Bangkok: Bangkok Supplemented Media Center.
- Hoksuwan, Pongprasert. (2005). Learning Environment Management. Choburi: Department of Education Technology, Burapa University.
- Panit, Wichan. (2010). Guidelines of Learning for Students in the 21<sup>st</sup> century. Bangkok: Sodsri-Saridwongsa Foundation.
- Teprasit, Wichit. (2009). Learning Environment Management. Retrieved Febuary 3, 2013, From: <http://www.learners.in.th/blogs/posts/314570>
- Office of the National Education Commission. (2002). Academic Seminar Report: Creative Education Subject. Bangkok: Printing Public.
- Office of the Education Council. (2003). Creative Education Handbook. Bangkok: 21 Century.
- Mooncam, Suwit. (2004). Teaching Strategies of Creative Thinking. Bangkok: Painting Public.
- Ageyev, Valentin. (2012). Psychological Foundations of Creative Education. *Creative Education*, 3(1), 1-9.
- Lin, Yu-Sien. (2011). Fostering Creativity Through Education – A Conceptual Framework of Creative Pedagogy. *Creative Education*, 2(3), 149-155.
- Liu, D. & others.(2009). Design of Multi-strategic Learning Environment based on Constructivism. *IEEE Computer Society: 2009 First International Workshop on Education Technology and Computer Science*.10(1109),226-228.
- Partnership for 21<sup>st</sup> Century Skills.(2011). *Framework for 21<sup>st</sup> Century Learning*. Retrieved September 1, 2012, From: <http://www.p21.org>
- Zhao, H. & Others. (2010). The Personal Learning Environment (PLE) Based on Web2.0. *IEEE Conference Publications*, 22-25.

*Time-honored Tradition Meets 21st Century Literacies: Composition Instruction in Japanese Elementary Schools*

Lucy Spence\*<sup>1</sup>, Yuriko Kite\*<sup>2</sup>

\*<sup>1</sup>University of South Carolina, USA, \*<sup>2</sup>Kansai University, Japan

0549

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Two researchers, one from America and one from Japan collaboratively studied Japanese writing instruction in three elementary schools. We were interested in uncovering educators' beliefs and practices of writing instruction and sought to add to the general knowledge of written composition through the perspective of Japanese culture.

### **Research on Elementary School Writing**

Scholarship comparing writing instruction in Japan to writing instruction in the U.S. found both similarities and differences. For example, writing workshop pedagogy is used widely in the U.S. (Calkins, 1986; Graves, 1983) and has been compared to practices observed in some Japanese schools (Kitagawa & Kitagawa, 1987). Teachers in both the U.S. and Japan incorporate journal writing in their instruction (Applebee & Langer, 2006, Richardson & Konishi, 2013). In Japan, both writing workshop and journal writing incorporate *seikatsu tsuzurikata*, life experience writing. "Seikatsu tsuzurikata basically means 'writing that comes from one's personal experiences or observations'" (Kitagawa & Kitagawa, 2007, p.53; see also Satsuki, 2011). This method encourages students to write about everyday experiences, to report direct observations, and for teachers to give consistent written feedback in order to connect with the writer. The written comments are generally not corrective.

Other than the Kitagawas' studies, little research on writing instruction in elementary schools is available in the U.S. although some research on elementary education briefly touches on the language arts. We draw upon these studies as well as high school and college level composition studies to provide some background. In his research in Japanese elementary schools, Stevenson (1991) discussed the teaching of *kanji* (a Japanese writing system derived from Chinese characters), and described composition instruction focusing on purpose and effective expression. Cave's (2004) study of three elementary schools in central Japan found teachers relied on language arts textbooks, but often made modifications. Teachers focused on the development of children's minds, attitudes and emotions. Students wrote in response to fictional stories, and wrote non-fiction individual expressions and poetry. Students also researched topics of their own choosing and wrote reports, which they presented to the class. Research in high school and college classrooms describe a variety of genres including *seikatsu tsuzurikata*, life experience composition, *nikki*, journal writing, *tegami no kakikata*, letter writing, *haiku* and other forms of poetry, and *sakubun*, topical composition (Dyer & Friederich, 2002; Sato, et al., 1986).

Recent research on elementary school writing in Japan is extremely limited in English language venues. We, Spence and Kite in the current study attempt to fill this gap with observations of elementary classrooms and analysis of textual materials. This research collaboration between a Japanese and U.S. researcher adds to current scholarship on Japanese composition instruction, accessible in English.

### **Theoretical background**

Composition theorist, Roz Ivanič (2004) developed an analytical framework based on teachers' beliefs and practices of writing instruction, which she calls *discourses of writing*. She found six discourses teachers used to describe their theory and practice. Since Ivanič developed this framework in Great Britain, we additionally drew upon Japanese culture and history to account for additional discourses of writing unique to Japan. Below, we describe Ivanič's six discourses of writing instruction, followed by a discussion of twenty-first century literacy practices. Then we describe our research method.

The skills discourse of writing involves learning how to use sound-symbol relationships and syntax in writing. In Japan, this means an emphasis on learning the two writing systems, *hiragana*, and *katakana*, which are phonetic based, and the Chinese derived characters of *kanji*. Once students have learned a great deal of *kanji*, a skills approach will focus increasingly on text type, rather than phonetics.

The creativity approach to writing instruction focuses on style and meaning making. Literature appreciation is often taught along with attention to writing style. In this view, writing develops implicitly through exposure to literature and numerous opportunities to write.

The process approach to writing instruction focuses on the process rather than the written product. Students prewrite then draft, and perhaps write multiple drafts. They revise and edit their work. Students also share their work with others. For example, they may read their work aloud, make it into an illustrated booklet, or hang it in the school hallway.

The genre approach to writing instruction focuses on text type, context, and purpose for writing. In this approach, genre refers to specific text-types, which serve particular social purposes. Rather than thinking of a genre in broad terms such as argumentative writing, in this approach an example of genre could be a political opinion in a newspaper's editorial section.

The sociocultural approach to writing instruction involves writing for a purpose within a social context. Writing is integrated with social practices, collaboration, networks, and patterns of participation. Writing happens within a social context and in conjunction with other literacies such as reading, viewing, and speaking.

The socio-political approach to writing instruction is closely associated with the sociocultural approach. It too, is a view of writing embedded in social practices, but in a broader political context. Writing is embedded in power relations, and writers are affected by decisions made by those who hold powerful positions in society. This approach develops a critical awareness and considers historical and political factors.

## **21<sup>st</sup> Century Literacy**

Research on written composition necessarily is impacted by new media used throughout the world today. Hypertext and visual literacies account for much of current literacy practices. People use both text and visual literacies in their transformative work and expression of meaning (Kress, 2003). Organizations such as the National Council of Teachers of English (2007) in the United States insist that students must learn to create, critique and analyze what they read and view. They must use traditional and new literacies to solve problems by communicating and collaborating with others. Students must design and share information for a global community. Furthermore, educators must "ensure that all students benefit from learning in ways that allow them to participate fully in public, community and economic life." (The New London Group, 1996).

## **Research Method**

Relying on Merriam's (1998) description of case study as "an intensive, holistic description and analysis of a single instance, phenomenon, or social unit" (p. 27), we use case study to uncover the salient characteristics of three teachers' writing instruction. We visited three elementary schools over a period of three months, visiting ten classrooms in all. We video-recorded or took field notes during two visits to each of three focal classrooms. We interviewed one focal teacher from each school as well as each school's principal.

We collected analyzed samples of written materials related to composition instruction including lesson descriptions written by teachers across Japan and published in professional journals. We analyzed anthologies of elementary children's writing, curriculum plans developed by school districts, and four sets of language arts textbooks for grades one through six. These are some of the textbooks for compulsory education, grades one through nine, authorized by the Ministry of Education, Culture, Sports, Science and Technology-Japan (MEXT).

Kite or another native Japanese linguist provided simultaneous English translation for Spence during each school observation and interview. The linguists also assisted in analysis of the journals, books, and curriculum materials. Qualitative coding of transcripts and materials was carried out using Ivanič's (2004) discourses of writing as an analytical framework. A table containing descriptions of each data source was created to organize the emergent findings. Data sources were crosschecked throughout the on-going data collection and analysis. We referred to books and articles describing Japanese education, history, and culture during the analysis in order to account for differences between Ivanič's findings and our emergent findings. When the analysis was complete, we wrote case studies in English then translated them into Japanese. The Japanese versions were given to the three focal teachers for member checking. We made changes based on additional information provided by the focal teachers and by going back to our data sources, books and articles on Japanese history and culture.

## **Context**

The context of this study included three elementary schools in a large city in Japan: two public schools and one private school. In Japan, nine years of compulsory education is provided tuition-free in public schools. Consumable textbooks are also provided free of charge.

One of the schools was in the city center. This city school served grades one through six. The school had served the community for approximately one hundred-thirty years. The community had a declining number of families with school-aged children, due to general young population decrease. However, the community continued to support the school through volunteerism. Local people who were devoted to the school maintained the buildings and grounds.

The second public school was located in a suburban region of the city. It also served grades one through six. The school was approximately fifty years old. The families appeared to be mainly middle-class and many of them lived in multi-family housing. Pleasant shopping areas and high-rise housing units surrounded the school. Compared with the city school, this community was thriving with middle class young people.

The third was a private school located in a smaller city adjacent to the large city. It was four years old and served grades one through six. A middle school and high school were located in the same multi-story building and a division of a large university was housed on the same property. Many of the students were from affluent families and commuted from other neighborhoods. In the section below, we provide case studies of writing instruction within each of these three elementary schools.

## **Findings**

### **Case 1: City School**

Green tennis balls on the chairs lowered the noise level, as twenty-five fourth grade students pushed back their seats. Some stayed in the classroom, talking with their friends while others drifted into the hallway. Large tempera paintings of friends playing their recorders hung on the back wall, with written impressions attached below. Math, science and art papers with writing or illustrations showing the students' thinking were displayed throughout the school. Students in this school wrote in every subject area. They wrote to reflect, summarize, clarify their thinking, and respond with their impressions.

After the break, the children returned to their desks and opened their language arts textbooks to a unit called "Move, think, and act." Ms. H. smiled encouragingly and began.

Ms. H.: Today we are going to learn paragraph writing. What happened in the first paragraph? What is the main idea?

Boy: I think the main idea is to make a plan because you have to think ahead.

Girl: I think the main idea is to have a goal because you have to know what to do.

Ms. H.: Yes, the first paragraph has the clue, or beginning.

Ms. H. wrote the main idea for each paragraph on the chalkboard using the wording from the textbook, while acknowledging the students' ideas. Then they turned the page to text and illustrations of track running.

After discussing several paragraphs, Ms. H. pointed at each phrase on the chalkboard, which the students read all together. Then Ms. H. asked, "Which is the sentence the author wants to stress?" Four boys raised their hands. Ms. H. called on one, who gave the correct answer. Ms. H. underlined the last sentence with bright yellow chalk saying, "Yes, yes, yes."

From this classroom observation and her interview, Ms. H. demonstrated a skills and genre approach to teaching writing. The students must understand the parts of a paragraph including the number of sentences and the main idea of the paragraph. They learned this skill through reading chorally, discussing the paragraph, watching Ms. H. write on the board, and taking notes. The genre approach involved Ms. H. guiding the students through an analysis of each paragraph's structure.

On other days, Ms. H. incorporated additional approaches. One day, the students were finding it difficult to think of what to write, and how to include descriptive details in their writing. They could not seem to get anything written on the blank paper in front of them. Ms. H., relying on her experience as a teacher, delivered an impromptu lesson to help them see they could write about anything. She said, "I am going to act out a scene for you to write about. Watch me carefully because you are going to write everything you see me do."

Ms. H. left the classroom then peeked back around the door to say, "Start watching now." Then she simply came through the doorway, sat down, opened a notebook and wrote something, closed the notebook and went back out of the room. She waited a moment before coming back then said, "Now please describe what you saw me do. Make sentences about what I did from my entering the classroom until I left."

Ms. H. gave her students many supports in learning to write. She drew from her experience and understanding of children to encourage them and teach them how to report their observations. At other times, she taught them to use the five senses and use quotations in writing. She carefully taught necessary skills and gave them opportunities to write in every subject area.

Ms. H. incorporated social practices into her instruction by always reminding the students to think about the reader. They not only wrote for assignments, they wrote for others. For example, the students wrote letters to school volunteers, thanking them for their work making repairs to the school and making gardens on the school grounds.

The students wrote every day in math, science, social studies, art, or music. This showed the children many purposes for writing. Ms. H. wrote reactions, gave feedback about the content of her students' writing, and responded to what they had to say (figure 1). These social practices combined with a skills and genre focus made up Ms. H.'s teaching approach.

Case 2: Suburban School

A warm breeze blew through the open windows of the fourth grade classroom. The whole school was alive with nature and the sound of children's voices in the garden. Pots of green plants stood in a row under the chalkboard, where Ms. N. stood in front of her twenty-eight students writing in the air, the *kanji* 序, which means "order." The children followed along, counting out the number of strokes in unison. They practiced writing the *kanji* in their workbook, which they took to Ms. N. to inspect individually. Within six minutes, the *kanji* lesson was complete and the class began a lesson from the language arts curriculum intended for developing skill in speaking and listening.

Ms. N. wrote the lesson goal and instructions on the chalkboard and the class read it aloud together. She wrote three questions they would be answering then questioned the class.

Ms. N.: You have to be the guide. Show that you understand the audience. What do they need to know when they go to the dolphin show?

Boy: When to go.

Ms. N. gave the students large pieces of paper. She continued writing on the board, asking the class questions as she described the three components for providing information: Confirming the question, responding to the question, adding useful information. The students wrote this on the large paper.

Next, the students answered questions posed by Ms. N. They watched and took notes as Ms. N. wrote information they would need in answering the three questions, such as how long the dolphin show lasted. They would use this information to write an original paragraph.

As the students wrote, Ms. N. circulated and helped those who were having difficulty writing their paragraph. One girl wrote the following.

If you want to see the dolphins twice.  
There are dolphin shows three times a day.  
It will begin promptly.

On the day described here, Ms. N. exhibited a skills and genre approach to teaching writing. The textbook provided the skill and the genre, writing to inform. Ms. N. focused most of her lesson on explaining the elements needed when providing information to others.

Ms. N. clearly worked within the goals set by the regional teachers' group, who created a curriculum guide for their region. The goals are 1. Develop writing that is clear to the audience. 2. Write either a diary or group work based on daily living. 3. Be innovative in using a thinking tool in class. 4. Make comments about children's writing and encourage their writing. 5. Be innovative in how to teach *kanji* so it becomes automatized. On the day described above, she focused on the first and fifth goals. Developing writing that is clear to the audience, and automatizing *kanji*.

On other days, Ms. N. incorporated social practices by providing time for the children to talk with one another at different points in the lesson. The students in this

classroom were very relaxed and although they never disrupted the lesson, they spoke quietly to one another and broke into giggles when a large crow was heard squawking through the open window. At times, Ms. N.'s students wrote letters inviting their parents to school events and thank you letters. Ms. N. required the students to write journal entries every weekend at home. She collected the journals and wrote personal responses to each entry (figure 2).

This was Ms. N.'s first year teaching fourth grade, and had only taught a few years in total. Last year, she taught first grade, where she included social practices and creativity in her writing instruction, emphasizing writing based on daily living. She taught the children to write details about what they felt, what happened, and what was said. Ms. N. approached writing instruction through a skills and genre approach. She also included social practices and creativity at times.

### Case 3: Private School

The large, open room filled with light from the second story windows. This four-year old building was state-of-the-art, with large digital screens, computers, and document projectors. Yet a warm feeling was added to the classroom walls with teacher-made posters of *hiragana* and student-generated lists of "spring" words.

The first grade class had been discussing spring every day for weeks. They had taken a field trip where they collected words related to spring and wrote in their journals about their experiences on the field trip (figure 3). The language arts lesson on this sunny day began with a discussion of what makes good writing. Projecting their journal writing onto the screen, some children read to the whole class. Mr. I asked the children to notice what was good in the writing.

Child 1: He wrote about other vegetables, *goya* and cucumber.

Child 2: It's good that they are growing.

Mr. I: Where does it say it is growing? It says "we planted." He said what he did.

Mr. I encouraged the children to use action in their writing. Rather than only telling what they saw, he wanted the children to write about what they did.

After some students read their journal entry to the class, they each had a chance to read to a partner, receiving positive comments. As a whole group, they shared their experiences so each of the thirty-two voices contributed to the combined knowledge of the whole class. This segment of the language arts class lasted twenty minutes.

For the next segment, Mr. I. projected the textbook onto the screen. The children opened their books to an illustration and told their teacher all the things they saw. Mr. I. wrote the children's observations on the white board. Then Mr. I. said, "Let's read a sample to see what they wrote about." Mr. I. read aloud to the students, pointing to each word on the screen. Then the children read the next page all together, aloud. Throughout this segment, the teacher and students discussed important details about the writing sample in the textbook.

Mr. I: Did she say she had fun?

Child 3: It doesn't have the word, but it's there.

Mr. I: It's better not to write that "I had a good time." How do you express that? It doesn't say "had a good time" but you understand when you read it. How do we do that? You write what you did. "I played jump rope in the park."

On the day of the lesson described above, Mr. I used the process approach in a writing workshop. The students read and commented on one another's writing and the teacher used the students' writing for teaching. A social practice and creativity approach was evident in these activities. Skills, such as "writing to inform" were embedded in the social practice of the workshop. The students wrote about their observations and experiences in a journal. They brainstormed ideas and vocabulary and used their field trip as writing material. The students came up with their own ideas and their writing was original.

On other days, Mr. I focused on teaching traditional aspects of Japanese language arts, such as writing *hiragana*, how to read orally with expression, and memorizing poetry. The language arts curriculum integrated with science, social studies, and field trips. A thematic approach and writing workshop served to combine process writing, social practice, creativity, and skills in Mr. I's first grade classroom.

### **Language Arts Curriculum**

We found and analyzed many journals and books written by and for teachers. The journals were compilations written by teachers all over Japan and published at regular intervals each year. The books were both compilations by various teachers, or written by a single teacher. Additionally, we analyzed documents created by area teachers for their region, MEXT documents, and four of the five language arts series approved by MEXT for use in public schools.

Examples of skills found in the language arts series' included modifying verbs in sixth grade and writing a subject and predicate in second grade. Genres taught through the series' included narrative, poetry, expository, writing to inform, paragraph, invitation, opinion, news article, letter, research paper, speech writing, imaginary story, and life experience essay. The life experience essays included topics such as what you notice about spring, how your emotions change, and the thing you love.

The creativity approach was evident in the language arts series through unit headings, and phrases sprinkled throughout. "Let's expand your imagination." "Let's express." "Let's reflect on everyday life." The reading selections in the series' stressed an appreciation for literature, which according to Ivanič (2004) is often a catalyst for the creativity approach to writing. However, in these series', the writing lessons were seldom connected to the reading selections.

Examples of process writing found in the language arts series' included using semantic maps to generate ideas, giving feedback, peer revising, and sharing writing with the class. These aspects of process also provided a sociocultural element through working with partners and small groups. Interviews and research into students' communities broadened the sociocultural reach beyond the classroom.

The language arts series' addressed socio-political topics in both reading selections and writing. Several lessons in fifth and sixth grade included such topics. Examples of socio-political topics from the language arts series' were "sustainable resources," "gender differences," and "media in our world." The lower grade language arts series' seldom presented such topics.

Other textual materials described instructional practices used by teachers across Japan. They included skill, genre, sociocultural, creativity, and process in their descriptions. The only approach to writing we did not find in the journals was socio-political. There were also some references to using traditional Japanese practices and technology in the classroom.

### **Traditional Japanese Teaching Practices**

We found traditional Japanese teaching practices throughout the data. These involved integrating reading, writing, speaking, and listening through an appreciation of literature. During language arts lessons, teachers used classical poetry as a model and students were encouraged to memorize these and other reading selections from their textbook. They also memorized and collected proverbs, compiling them into booklets.

Choral reading of passages from the language arts textbook, and from the chalkboard was evident in many of our observations and in the textual materials. The students read these passages with expression and in unison. Another traditional practice was a focus on good penmanship. Students were encouraged to use the correct stroke order for *kanji*. They engaged in repeated writing of *kanji* in special textbooks, which included instructions and pages of square grid lines for practice.

Other traditional practices were related to creativity. Composition techniques such as using metaphor, and poetry structures such as *haiku*, *tanka*, and *renshi* were mentioned in interviews and found in the textual materials. Nurturing young children's language was emphasized in the lower grades, both by Mr. I, the first grade teacher, and the textual materials. Writing from the heart was a concept that appeared often and is a central tenet of *seikatsu tsuzurikata*, life experience writing. Students also wrote journal entries about daily life, either during the school day, or on weeknights or weekends. Ms. H., the city school fourth grade teacher gave her students a special notebook for conducting personal inquiry at home. Ms. N. assigned journal writing every weekend.

### **21<sup>st</sup> Century Literacy Practices**

Technology was evident in the large digital screens in each of the three classrooms. The private school first grade teacher used a document projector to display student writing for class discussions. Digital photography was included in essays written by former sixth-grade students of the suburban school principal. In interviews, the teachers' and principals' aspirations toward incorporating 21<sup>st</sup> century literacies were clear. The principals of the three schools and several private school educators expressed their goals for students to develop personal expression through writing, develop creativity and higher level thinking such as expressing opinions and developing arguments. They wanted students to be able to present their ideas using technology. These educators' aspirations were parallel with the expectations set forth by MEXT.

## Discussion

We found the teachers, language arts curricula, and other textual materials combined skills, genre, creativity, process, and social practices of writing instruction in various ways. The only evidence of socio-political writing was in the language arts textbooks, mostly in fifth and sixth grades. That said, not every teacher evidenced all six discourses through our observations and the interviews. Socio-political topics were not mentioned in any interviews, however we cannot attest to whether such topics came up later in the school year, after our visits were completed.

In addition to the discourses proposed by Ivanič (2004), there was also evidence of traditional Japanese practices and 21<sup>st</sup> century literacy practices. The Japanese language arts are a vehicle for developing students' cultural identity through appreciation of traditional literature such as Japanese folk tales, Japanese forms of poetry, Chinese poetry, and informative articles on aspects of Japanese culture such as the performing arts.

Japanese identity develops, in part through elementary education. Befu (1986) as cited in Sato (1998) describes Japanese identity as a combination of "interpersonalism, self-discipline, and role perfectionism" (p. 122). These three aspects of identity are evident in the teaching and curriculum materials explored in this study. One way interpersonalism was developed was through teachers' response to student writing, emphasizing the content and their relationship with the student.

Self-discipline refers to a positive mental attitude. As such, a focus on self-reflection was evident across the data. For example, the language arts series' for fourth grade included making a collection of writing called, "Me at ten years old." In this project, the students reflect on the fourth grade year and write a letter to themselves to read when they become twenty years old. By developing a positive mental attitude, the students develop a vitality to live and to overcome obstacles.

Role perfectionism was encouraged by direct instruction to the whole class, which prevailed in many of our observations. Students were observed listening intently to the teacher, reading, responding, and reciting in unison. They practiced *hiragana*, *katakana*, and *kanji* through repeated writing and careful character formation.

### Combining Traditional and 21<sup>st</sup> Century Practices

Traditional Japanese literacy practices connected students to their culture and developed self-identity. Japanese culture is perpetuated in part by passing along values and skills to the young through the Japanese elementary school system. Yet educators are faced with the dilemma of how to combine tradition with 21<sup>st</sup> century literacy practices as educators aspire toward developing writers who communicate effectively in a global society.

The MEXT approved language arts curriculum contains sociopolitical topics that have the potential for developing 21<sup>st</sup> century literacy practices. For example, in one fifth-grade book, the topic of gender differences in spoken Japanese is presented and students are encouraged to research gender differences in a variety of settings. This topic provides an opportunity for computer research, using hypertext and visual literacies to explore an interesting topic. If developed further it could provide opportunities to think critically about the roles of men, women, girls, and boys in a

variety of social contexts. Researching gender differences could lead to making judgments about whether gender inequities exist. Students could extend their research to other societies, thus developing the ability to think globally about common human experiences.

Traditional and 21<sup>st</sup> century literacy practices can develop students' ability to solve complex problems. For example, through studying about the gender differences in language, students can learn about traditional Japanese language and culture, as well as the way language changes in response to contemporary life. In order to utilize the MEXT curriculum in this manner however, teachers must go beyond the written curriculum. Teachers can be supported in this endeavor in the following ways:

- Provide professional development in critical thinking.
- Disseminate curriculum supplements focusing on development of 21<sup>st</sup> century literacies along with the language arts textbooks.
- Develop awareness of teaching practices that develop critical thinking among parents, community members, boards of education, business leaders, and administrators

Through the education and engagement of all stakeholders, teachers will feel supported in moving beyond the language arts textbook to develop students who are ready to take their place in 21<sup>st</sup> century civic and economic life.

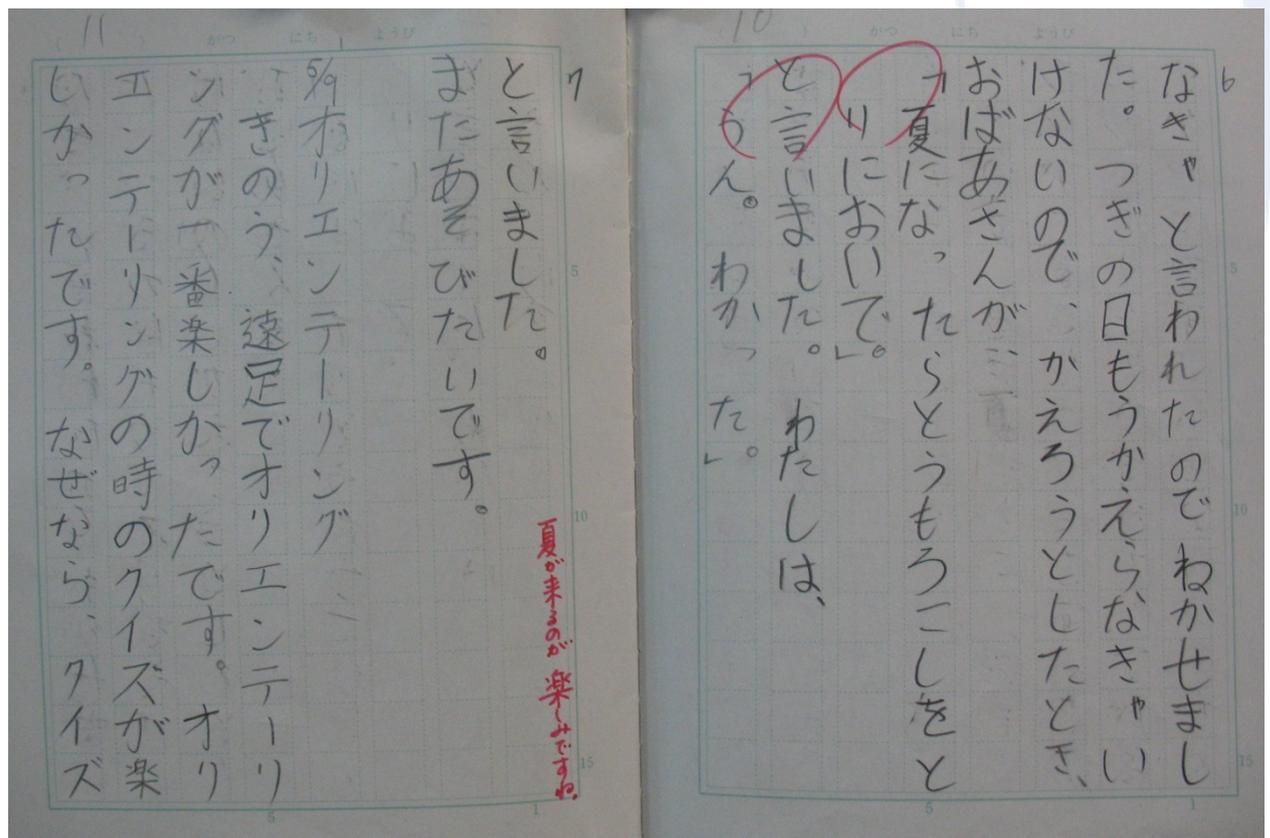


Figure 1. City School Journal: Girl's journal entry about grandmother inviting her to visit and pick corn in the summer. Ms. H. commented in red ink, "Summer is coming so you will be glad."

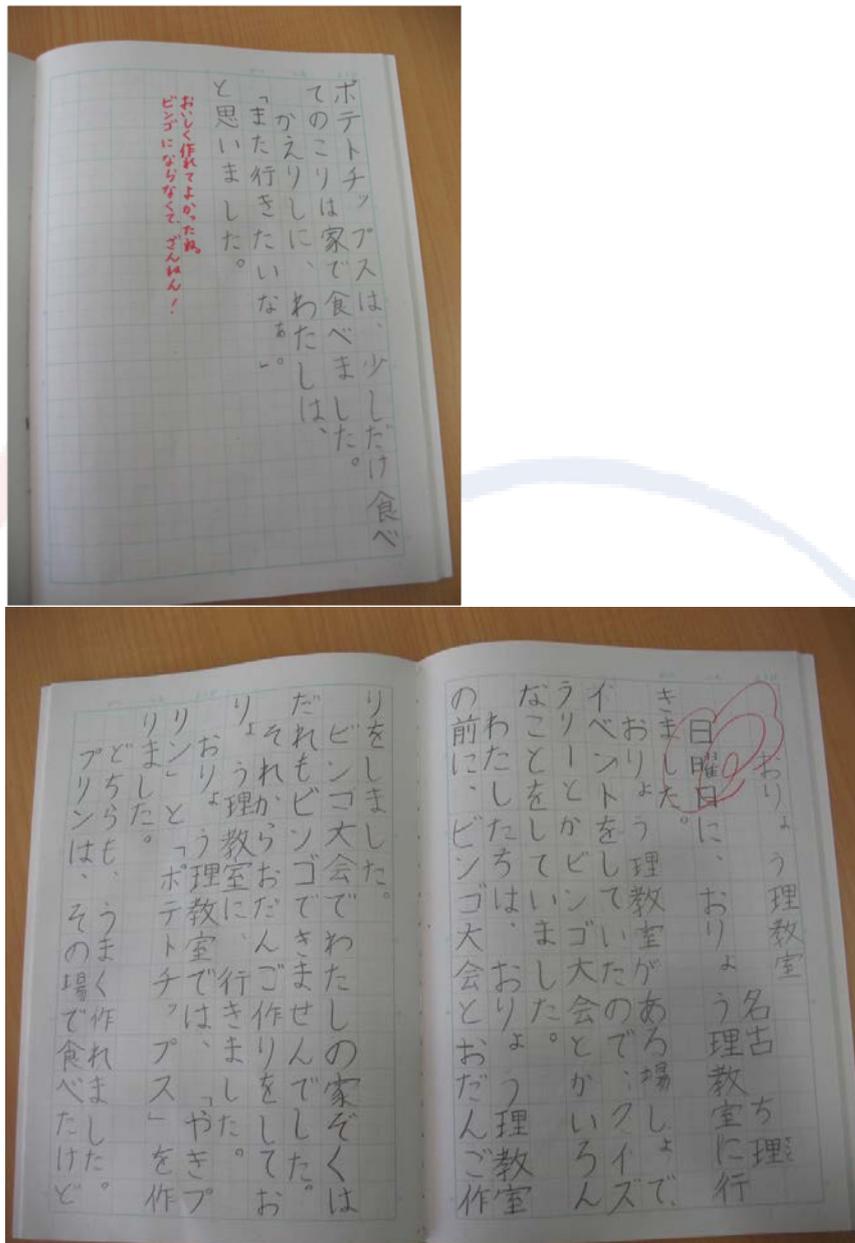


Figure 2. Suburban School Journal. “On Sunday I went to cooking class. At the place where they have the cooking class they have quiz and bingo. So first, we did bingo then we made sweets at cooking class. At bingo, none of my family won so they made sweets. Then we went to cooking class and we made pudding and potato chips. Both came out very good. We ate pudding then and a little bit of potato chips. I want to go again.” Ms. N. commented, “It’s good that your dishes came out well, and I’m sorry you didn’t win at bingo.”

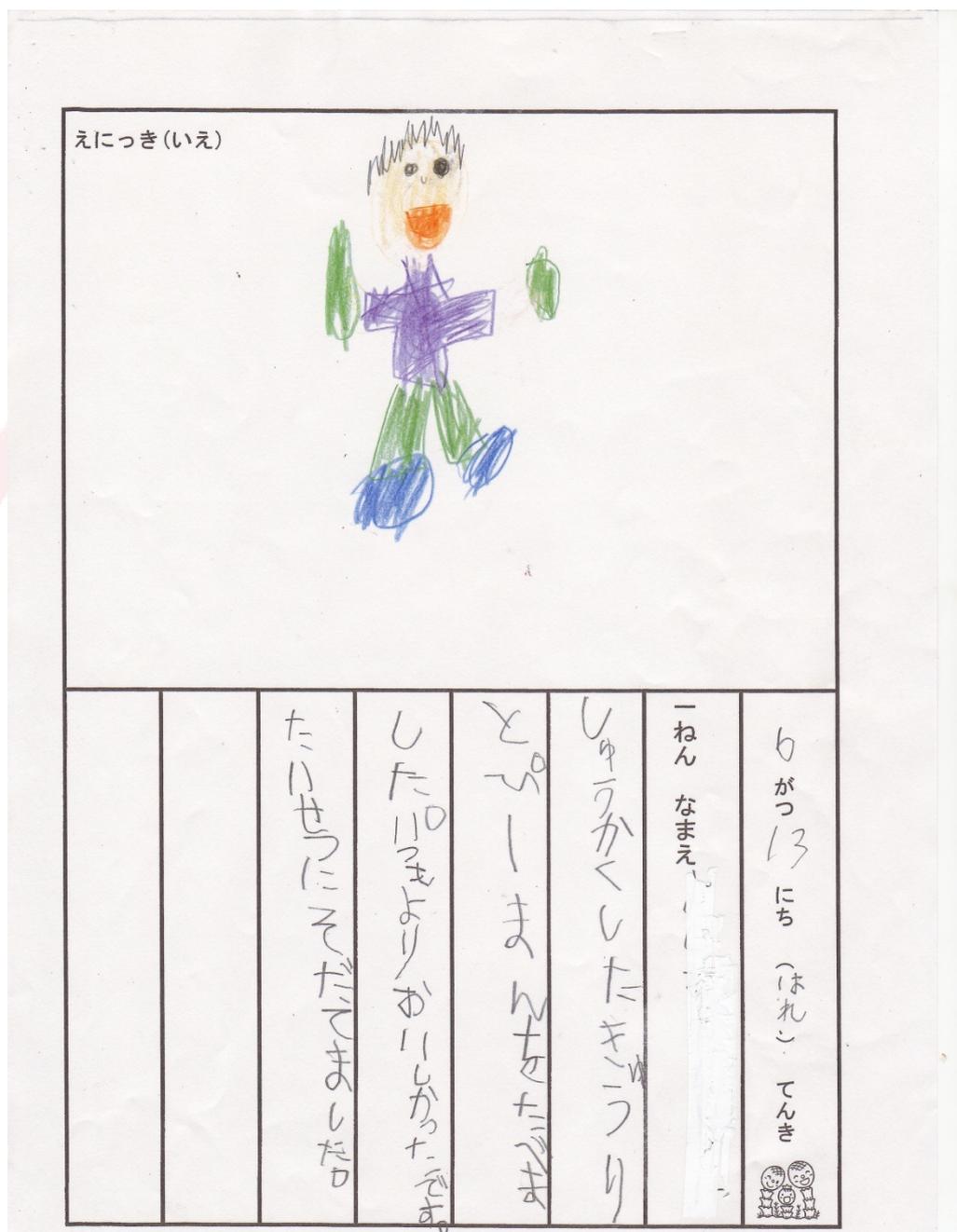


Figure 3. Private School Journal. "Cucumber harvest. Today we ate. It was delicious. I have carefully nurtured."

## References

- Applebee, A. & Langer, J., 2006. *The state of writing instruction in America's schools: What existing data tell us*, Albany: Center on English Learning and Achievement.
- Befu, H., 1986. The social and cultural background of child development in Japan and the United States. In: H. Stevenson, H. Azuma & K. Hakuta, eds. *Child development and education in Japan*. New York: WH Freeman, pp. 3-12.
- Calkins, L., 1986. *The art of teaching writing*. Portsmouth: Heinemann.
- Cave, P., 2007. *Primary school in Japan: Self, individuality and learning in elementary education*. New York: Routledge.
- Dyer, B. & Friederch, L., 2002. The personal narrative as cultural artifact: Teaching autobiography in Japan. *Written Communication*, 19(2), pp. 265-296.
- Graves, D., 1983. *Writing: Teachers and children at work*. Portsmouth: Heinemann.
- Ivanič, R., 2004. Discourses of writing and learning to write. *Language and Education*, 18(3), pp. 220-245.
- Kitagawa, M. & Kitagawa, C., 1987. *Making connections with writing, an expressive writing model in Japanese schools*. Portsmouth: Heinemann.
- Kitagawa, M. & Kitagawa, C., 2007. Core values of progressive education: Seikatsu tsuzurikata and whole language. *International Journal of Progressive Education*, 3(2), pp. 53-67.
- Kress, G., 2003. *Literacy in the new media age*. New York: Routledge.
- Merriam, S., 1998. *Qualitative research and case study applications in education*. 2nd ed. San Francisco: Jossey-Bass.
- National Council of Teachers of English, 2007. *21<sup>st</sup> century literacies*, Urbana, NCTE.
- Richardson, S. & Konishi, H., 2013. An implementation of the Japanese autobiographical method seikatsu tsuzurikata--"Life writing"--In a US elementary school. *Creative education*, 4(9), pp. 549-556.
- Sato, M., Kono, C., Tanabe, K. & Nishimura, Y., 1986. *Nihongo sakubun [Japanese composition]*. Tokyo: Nihongo no Bonjimsha.
- Sato, N., 1998. Honoring the Individual. In: T. Rohlen & G. LeTendre, eds. *Teaching and Learning in Japan*. New York: Cambridge University Press, pp. 119-153.
- Satsuki, H., 2011. The ideology and practices of "seikatsu-tsuzurikata": Education by teaching of expressive writing. *Educational Studies in Japan: International Yearbook*, Volume 6, pp. 21-31.
- Stevenson, H., 1991. Japanese elementary school education. *The Elementary School Journal*, 92(1), pp. 109-120.
- The New London Group, 1996. A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, 66(1), pp. 60-92.

*Tone in the Khorat Dialect and the Northeastern Dialect*

Kanitha Putthasatien

Nakhon Ratchasima Rajabhat University, Thailand

0587

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Abstract

The main objective is to study and to compare between the tone of dialect in Khorat and Northeastern in Nonsung, Nonthai, Phimai and Pakthongchai district, Nakhon Ratchasima province. Thailand.

The data was recorded from two native speakers per district by using the Cool Edit Pro program. 60 wordlist of William J. Gedney's tonebox.

The investigation was carried out in two main stages. In the first step, the pattern of tone was splitted and merged. In the second step, 1,440 test tokens were investigated the acoustic characteristics analysis by Praat program.

The results indicate that Nonsung, Nonthai and Phimai districts used Khorat dialect. Two varieties are spoken in Pakthongchai district. The Khorat dialect has 4 tones, while the Northeastern dialect has 6 tones. In Nonsung, Phimai and some area in Nonthai district, the pattern of tone is A1-3 = DS1-3, A4, B1-3= C1 =DL1-3 and B4 = C2-4=DL4 = DS4. Nonthai and Pakthongchai spoken Khorat dialect is A1 = DS1-3, A2-4, B1-3 = C1 = DL 123 and B4 = C2-4 = DL4 = DS4. Whereas the pattern of Pakthongchai spoken Northeastern dialect is A1 = DS1-3, A1-2, A4, B1-4, C1, DL 1-3 and C1-3, DL4, DS4.

## **1. Introduction**

Nakhon Ratchasima province or Khorat is one of the Northeastern provinces of Thailand. Khorat is the gateway to the North-East (Isaan) from the Central influenced by languages i.e. Standard Thai and Northeastern Dialect. Moreover, Brown (1985) defined the language spoken in Khorat is Cleole derived from the phonological of Lao language changed to Thai language but keep the accent in. In the previous mentioned studies above, Khorat dialect is halfway between Thai and Isaan. (Piyawit, 1987)

The languages spoken in Khorat are various which can be classified into 2 groups i.e. Khorat Dialect and the Northeastern Dialect.

This paper will be focusing on Khorat Dialect and the Northeastern Dialect spoken at Nonsung, Nonthai, Phimai and Pakthongchai district in Nakhon Ratchasima province, Northeastern, Thailand

## **2. Objective**

To study and to compare the tone in the Khorat dialect and the Northeastern dialect at Nonsung, Nonthai, Phimai and Pakthongchai district in Nakhon Ratchasima province, Northeastern, Thailand

## **3. Method**

### **3.1 Selected languages**

Khorat dialect and Northeastern dialect were spoken in Nakhon Ratchasima province. All these two languages are in the same language family which is Tai language family with SEA tonal languages.

### **3.2 Data collection**

The data used in this study was collected from two female native speakers (30-60 years olds) per district. The total are 8 informants (2 informants x 4 districts). The informants were born and resided in Nonsung, Nonthai, Phimai and Pakthongchai district, Nakhon Ratchasima province, Northeastern, Thailand, respectively. All speakers use their language as the home language.

### **3.3 Test words**

The tested words in this study were taken from 60 wordlist of William J. Gedney's tonebox. In some cases, more suitable words were replaced. The detail can be seen in appendix. For more information, see Brown 1985 and Gedney 1989.

### **3.4 Data recording**

Totally 1,440 test tokens (60 test words x 4 district x 2 informants x 3 times) were used for acoustical measurements. The recorded site of this study was quieted which could be found in each villages by using Cool Edit Pro program. A microphone was connected directly to the notebook. All informants were naturally pronounced each word three times. The best qualified one was selected to be used for analysis.

### 3.5 Data analysis

The data were divided into 2 main parts 1) The splitted and merged tone and 2) the acoustic characteristics.

The fundamental frequency (F0) was measured and analyzed at the vowel onset and every 10% of the vowel duration (11 points), the Praat program was used. The validity of the acoustical measurements was tested by using T-test ( $p < 0.05$ ). The results were shown in the figures.

### 4. Results

The results indicate that Nonsung, Nonthai and Phimai district use Khorat dialect. Two varieties are spoken in Pakthongchai district. The Khorat dialect has 4 tones, while the Northeastern dialect has 6 tones. The pattern of splitted and merged tone in Nonsung, Phimai and some area in Nonthai district is A1-3 = DS1-3, A4, B1-3 = C1 = DL1-3 and B4 = C2-4 = DL4 = DS4. The pattern of Nonthai and Pakthongchai spoken Khorat dialect in some area is A1 = DS1-3, A2-4, B1-3 = C1 = DL 1-3 and B4 = C2-4 = DL4 = DS4. Lastly Pakthongchai spoken Northeastern dialect's pattern is A1 = DS1-3, A1-2, A4, B1-4, C1 = DL 1-3 and C1-3 = DL4 = DS4. See figure 1 and 2.

1 <sup>st</sup> Nonsung informant					2 <sup>nd</sup> Nonsung informant						
	A	B	C	DL	DS		A	B	C	DL	DS
1	T.1		T.3		T.1	1	T.1		T.3		T.1
2			T.4			2			T.4		
3						3					
4	T.2					4	T.2				
1 <sup>st</sup> Nonthai informant					2 <sup>nd</sup> Nonthai informant						
	A	B	C	DL	DS		A	B	C	DL	DS
1	T.1		T.3		T.1	1	T.1		T.3		T.1
2			T.4			2	T.2		T.4		
3						3					
4	T.2					4					
1 <sup>st</sup> Phimai informant					2 <sup>nd</sup> Phimai informant						
	A	B	C	DL	DS		A	B	C	DL	DS
1	T.1		T.3		T.1	1	T.1		T.3		T.1
2			T.4			2			T.4		
3						3					
4	T.2					4	T.2				

1 <sup>st</sup> Pakthongchai informant					2 <sup>nd</sup> Pakthongchai informant						
	A	B	C	DL	DS		A	B	C	DL	DS
1	T.1	T.4	T.5	DL	T.1	1	T.1	B	T.3	DL	T.1
2	T.2		T.6			2	T.2		T.4		
3						3					
4	T.3					4					

Figure 1 The tone splits and merges of 1<sup>st</sup> and 2<sup>nd</sup> Nonsung, Nonthai, Phimai and Pakthongchai district's speakers

1 <sup>st</sup> Nonsung informant					2 <sup>st</sup> Nonsung informant						
	A	B	C	DL	DS		A	B	C	DL	DS
1	A	B	T.5	DL	DS	1	A	B	T.3	DL	DS
2			T.6			2			T.4		
3						3					
4						4					
1 <sup>st</sup> Nonthai informant					2 <sup>nd</sup> Nonthai informant						
	A	B	C	DL	DS		A	B	C	DL	DS
1	A	B	T.5	DL	DS	1	A	B	T.3	DL	DS
2			T.6			2			T.4		
3						3					
4						4					
1 <sup>st</sup> Phimai informant					2 <sup>nd</sup> Phimai informant						
	A	B	C	DL	DS		A	B	C	DL	DS
1	A	B	T.5	DL	DS	1	A	B	T.3	DL	DS
2			T.6			2			T.4		
3						3					
4						4					
1 <sup>st</sup> Pakthongchai informant					2 <sup>nd</sup> Pakthongchai informant						
	A	B	C	DL	DS		A	B	C	DL	DS
1	A	B	T.5	DL	DS	1	A	B	T.3	DL	DS
2			T.6			2			T.4		
3						3					
4						4					

	A	B	C	DL	DS		A	B	C	DL	DS
1						1					
2						2					
3						3					
4						4					

**Figure 2** The acoustic characteristics analysis of 1<sup>st</sup> and 2<sup>nd</sup> Nonsung, Nonthai, Phimai and Pakthongchai district’s speakers

**5. Conclusion and discussion**

According to Akharawatthanakun (2003), the pattern of splited and merged tone in the Northeastern dialect of William J. Gedney’s tonebox is B1-4, C1=DL1-3, C2-4=DL4 and B≠DL (Lao ladder). See figure 3

	A	B	C	DL	DS
1		=	⊗	⊗	
2		=		⊗	
3		=		⊗	
4		=			

**Figure 3** The pattern of tone splits and merges in the Northeastern dialect

However, the pattern of tone splits and merges in the Khorat dialect of William J. Gedney’s tonebox is B1-3 = C1 = DL1-3 (No Lao ladder)

The finding indicates that the 1<sup>st</sup> Pakthongchai informant from Takhu village speaks Northeastern dialect. All informants from Nonsung, Nonthai, Phimai district and 2<sup>nd</sup> Pakthongchai informant from Don village speak Khorat dialect.

Furthermore, Khorat dialect can be classified into 2 subgroups from the difference of tone splits and merges and acoustic characteristics. The pattern of tone splits and merges in 1<sup>st</sup> subgroup : A1-3 ≠ A4 and 2<sup>nd</sup> subgroup : A1 ≠ A2-4 conform to Phanupong’s study (1986). See figure 4.

1 <sup>st</sup> Khorat dialect subgroup					2 <sup>nd</sup> Khorat dialect subgroup						
	A	B	C	DL	DS		A	B	C	DL	DS
1						1					
2						2	=				
3						3					
4	=					4					

Figure 4 : The pattern of tone splits and merges in 1<sup>st</sup> and 2<sup>nd</sup> Khorat dialect subgroup

According to Phanupong (1986), can be classified Khorat dialect into 3 subgroups but in this study, it was found only 2 subgroups because the selected area of this study do not cover all of province, It cannot be concluded that Khorat dialect can be classified into only 2 subgroups

The finding from Pakthongchai district indicates the clear difference between Khorat dialect and Northeastern dialect. That is to say, Lao people from Vientiane have been immigrated to Takhu district. This caused the language pattern. Thai is why the Northeastern dialect and Lao language are similar.

This paper confirms “Khorat dialect is Creole” combining between Standard Thai and Northeastern dialect.

**6. Acknowledgement**

I would like to thank the Research and Development Institute and the Faculty of Humanities and Social Sciences, Nakhon Ratchasima Rajabhat University for funding this research project. Special thanks and appreciation go to Asst. Prof. Ratana Rujirakul, for her very helpful suggestions and comments. Moreover, without the cooperation of all informants, this research would not have been possible.

## References

- Akharawatthanakun, Phinnarat. (2003). **A Tone change : a case study of the Lao language**. Ph.D. dissertation, Chulalongkorn University. (In Thai).
- Brown, J. Marvin. (1985). **From ancient Thai to modern dialects and other writings on historical Thai linguistics**. Bangkok: White Lotus Co.
- Gedney, William J. (1989). **Selected papers on comparative Tai studies**. Ann Arbor, MI: University of Michigan Press.
- Phanupong, Vichin.(1986). **Word geography**. Bangkok : Chulalongkorn University. (In Thai).
- Piyawit, Naruemon. (1987). **Dialect**. Nakhonratchasima : The Faculty of Thai, (In Thai).

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## Appendix

		Open Syllables						Closed Syllables			
		A		B		C		DL		DS	
High	Voiceless Aspirated	1	/hũu/ 'ear'	13	/khày/ 'egg'	25	/khâaw/ 'rice'	37	/khàat/ 'torn'	49	/màt/ 'flea'
		2	/khãa/ 'leg'	14	/phàa/ 'cleave'	26	/s̄ta/ 'shirt'	38	/sàak/ 'pestle'	50	/sùk/ 'cooked'
		3	/hũa/ 'head'	15	/khàw/ 'knee'	27	/hâa/ 'five'	39	/hàap/ 'to carry on a shoulder pole'	51	/phàk/ 'vegetable'
Mid	Voiceless Unaspirated	4	/pīi/ 'year'	16	/pàa/ 'forest'	28	/pâa/ 'aunt'	40	/pòot/ 'lung'	52	/kòp/ 'frog'
		5	/tāa/ 'eye'	17	/kày/ 'chicken'	29	/klâa/ 'rice seedlings'	41	/piik/ 'wing'	53	/tāk/ 'to scoop'
		6	/kīn/ 'eat'	18	/kêe/ 'old'	30	/tôm/ 'to boil'	42	/tòok/ 'to hammer'	54	/cêp/ 'hurt'
	Glottalized Voiced	7	/bīn/ 'fly'	19	/bâa/ 'shoulder'	31	/bâa/ 'crazy'	43	/dêet/ 'sunshine'	55	/bêt/ 'fishhook'
		8	/dēɛŋ/ 'red'	20	/bâaw/ 'young man'	32	/bâan/ 'house'	44	/ʔâap/ 'to bathe'	56	/dip/ 'unripe'
		9	/dâaw/ 'star'	21	/dâa/ 'to scold'	33	/ʔâa/ 'open mouth'	45	/dòok/ 'flower'	57	/ʔòk/ 'chest'
Low	voiced	10	/mīi/ 'hand'	22	/phôo/ 'father'	34	/náam/ 'water'	46	/mīit/ 'knife'	58	/nók/ 'bird'
		11	/ŋũu/ 'snake'	23	/mêe/ 'mother'	35	/nóoŋ/ 'younger'	47	/lũuk/ 'child'	59	/mót/ 'ant'
		12	/nâa/ 'ricefield'	24	/râi/ 'dry field'	36	/má:/ 'horse'	48	/l̄hat/ 'blood'	60	/wât/ 'temple'

*Thai Food Culture through Grammatical Patterns of English Translation*

Piyada Low

Kasetsart University, Thailand

0588

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Abstract

Thai food has been recognized and become popular across the world. To present Thai food culture to foreigners, English translation of Thai menu is needed. Poor English translation can lead to misunderstanding of Thai culture and the taste of Thai food. On the other hand, proper English translation helps to communicate cultural identity and present traditional Thai cuisine. The research, therefore, aims to investigate the English translation of Thai menus and to propose the grammatical patterns in English translation of Thai menus. 290 Thai menu items with English transliterations and description are obtained from four to five stars hotels employing expatriate executive chefs to operate the hotel restaurants. This is to ensure the comprehensibility of English translation of the Thai menus. According to types and serving styles of Thai food culture, the menu items are categorized into 10 groups: salads, soup, curries, fried, deep-fried, steamed, baked/ braised, grilled/barbeque/ roasted, rice/noodles/chili dips, and desserts. After grouping, 148 menu items are selected to be analyzed for grammatical patterns of English translation in each category. The analytical form is created to organize and group the menu items. The significance of the study is to propose proper grammatical patterns in English translation of Thai menus to be used as a guideline in translating Thai menus into English language. Moreover, the patterns will be used and practiced in translating more Thai menus in class of “English for Food and Beverage Service” course.

**Key words:** Food Culture; Thai Menus; English Translation; Grammatical Patterns

## 1. INTRODUCTION

The Thai government has given importance of Thai cuisine and has the policies to promote Thailand to be the Kitchen of the World with the project “Thai Cuisine to the World”. To enhance this project, English translation of the dish names, therefore, should provide the clear pictures and facilitate foreigners to understand Thai cuisine. Good and proper English translations of the dish names help to promote Thailand’s tourism industry. On the other hand, poor English translations of the dish names usually give bad impressions (Mu, 2010). Foreigners still do not have clear ideas of what the menus say even with the English translations. An example of a Thai dish ‘Pad Thai’ is a good example. The dish name does not convey a clear picture of the dish. The word ‘Pad’ means ‘fry’ in English while the word ‘Thai’ does not give any clue. Literally translated, ‘Pad Thai’ means fried Thai which is incomprehensible for foreigners. The dish is actually a traditional Thai fried noodle dish. Therefore, English translation principles of Thai dish names should have been set up. It is important for restaurant industry and for tourism in general since good quality of English translation may lead to higher standards of service and better socio-cultural exchanges (Pouget, 1999).

When taking the joining of ASEAN Community in 2015 and the development of inter-cultural communication into account, it is of great significant to research into the English translation of Thai menus to promote the interaction among people of different nations when cultural exchanges will be increasingly taking place. Thailand and Thai food has gradually played a more and more important role on the international stage.

Information from Wikipedia website shows the appreciation of Thai cuisine by the increasing number of Thai restaurants from four in 1970s London to between two and three hundred in less than 25 years. It also mentions a survey held in 2003 by the Kellogg School of Management and Sasin Institute indicating Thai cuisine ranked 4th when people were asked to name an ethnic cuisine, after Italian, French and Chinese cuisine. Two restaurants specializing in Thai cuisine have received Michelin stars: "Nahm" in London in 2002 and "Kiin Kiin" in Copenhagen in 2009. Moreover, in the list of the "World's 50 most delicious foods" compiled by CNN in 2011 Som Tum stands at place 46, Nam Tok Moo at 19, Tom Yum Kung on 8, and Massaman curry stands on first place as most delicious food in the world ([http://en.wikipedia.org/wiki/Thai\\_cuisine](http://en.wikipedia.org/wiki/Thai_cuisine) accessed on 24 June 2013)

The study, therefore, aims to investigate the English translation of Thai Menus and to identify the grammatical patterns in translation of Thai Menus into English language.

## 2. CONCEPTUAL FRAMEWORK

### 2.1 Translation

Translation is a process to communicate from one language into another language. According to the Oxford Dictionaries on line, translation is "the process of translating words or text from one language into another"

Translation for J.C. Catford (1974) is defined as "... the replacement of textual material in one language (SL) by equivalent textual material in another language (TL)." (p.20). Translation is to find 'equivalents' in the TL(Target Language) to 'replace' the text in SL(Source Language). Here, some aspects of meaning are related while the form can be changed. Translation can also be defined as Rank-bound and Unbound Translation under rank criteria: sentence, clause, group, word, and morpheme. Rank-bound Translation is when SL unit is translated with the same rank of TL unit. SL word is translated with TL word or SL clause is translated with TL clause. Word-for-word Translation is another term for rank-bound translation at word rank as SL translation is translated into TL word. Unbound Translation consists of two types of translation: Free Translation and Literal Translation. For free translation, SL word may be replaced by equivalent TL groups of words, clause, or sentences - at a different rank. Literal translation lies between word-for-word and free translation. That is, literal translation may begin with a translation of SL word to TL word but changes can be made within TL restriction.

According to Newmark (1981), translation is described as "a craft consisting in the attempt to replace a written message and/or statement in one language by the same message and/or statement in another language." (p.7). There are two main groups of translation: SL emphasis and TL emphasis. Each group consists of four subtypes. SL emphasis consists of Word-for-Word, Literal, Faithful and Semantic Translation. While Adaptation, Free, Idiomatic and Communicative translation belong in TL emphasis. A significant aspect of Newmark's translation is that he emphasizes the author's intention – what the author expects in the SL text remains in the TL.

There are methods sharing the same character but they are called differently. Only Word-for-Word Translation is called the same by Catford and Newmark. However, Catford's Literal Translation covers Newmark's Literal, Faithful, and Semantic Translation as the text tends to be translated singly but adjustment can be made to grammatical constructions. Catford's Free Translation seems to cover all methods under Newmark's TL emphasis – Adaptation, Free, Idiomatic, and Communicative translation as equivalents are extended to a higher unit than words.

## **2.2 Translation Strategies**

Baker (1992) investigates translation problems arising from non-equivalence at word level. She identifies eight translation strategies used by professional translators of nonequivalence at word level: translation by a more general word, by a more neutral or less expressive word, by a cultural substitution, by a loan word or by a loan word plus an explanation, by a paraphrase using related words, by a paraphrase using unrelated words, by omission, and by illustration. These strategies can be used as references or guidelines to deal with unfamiliar Thai food ingredients or names in translating into English version.

Khongbumpen (2008) gave some examples of translating Thai food names into English concerning translation strategies categorized by Baker (1992) as follows:

Example 1:

SL: ปลาสด (Pla Salid / Pla = fish Salid = Name in Thai)

TL: a kind of freshwater fish

A more general word is used to translate a relative lack of specificity in the target language compared with the source language. (p.9)

Example 2:

SL: สังขยา (Sangkaya/ a kind of Thai dessert)

TL: Custard

A cultural substitution is preferred when the source culture is too complicated to understand. The concept in the target culture that is more familiar should be selected. (p.11)

However, a loan word with some explanation can also be used as it gives clearer meaning in the target language.

Example 3:

SL: สังขยา (Sangkaya)

TL: Sangkaya, a kind of Thai dessert made from egg yolk, coconut milk and sugar (p. 11)

Pinmanee (2003) suggests that to translate across cultures should start with generic word followed by descriptive phrase telling form, function, or both form and function. The example of Thai dish is given for her suggestion as follows:

*Generic word + descriptive phrase (form)*

ข้าวซอย : Thai fast **food**, hot curried noodles with chicken or beef (p.303)

From the given examples, it is relatively clear that phrase is needed to give more information of the dish name in case of lack of specificity in the target language telling form, function, both form and function. On the other hand, cultural substitution is preferred if there is similarity in the target language. Description of food name is also needed in English phrase for more information.

### 3. METHOD

#### 3.1 Samples of the Study

The purposive samples of the study were Thai menus with English transliterations and descriptions from four to five stars hotels in Pattaya. The hotels have employed expatriate executive chefs to operate the hotel restaurants. This is to ensure the comprehensibility of the English translation of the Thai menus. The total number of Thai menus obtained is 290 menu items. According to cooking methods and serving styles of Thai food culture based on the Thai Junior Encyclopedia Project by Royal Command of H.M. the King (<http://kanchanapisek.or.th/kp6/New/sub/book/book.php?page=main&book=13> accessed on 24 June 2013), the menu items are categorized into 10 groups: salads, soup, curries, fried, deep-fried, steamed, baked/braised, grilled/ barbeque (BBQ)/ roasted, rice/ noodles/ chili dips, and desserts. After grouping, 148 menu items are selected to be analyzed for grammatical patterns of English translation in each category.

### 3.2 Instruments

The analytical form is created to organize and group the menu items. Moreover, the form helps determine grammatical patterns of English translation of Thai menus as shown in table 1.

Table 1: Analytical Form for Grammatical Patterns of English Translation of Thai Menus

Category:	Item no:	Key word (Head word):
Name in Thai:	Part of speech in English:	
Name in English:		
English description:		
Grammatical pattern: 1. Pre modifier 2. Post modifier		
Remark:		

The Thai name indicates the head word in English translation. Other components in the name such as cooking method, main ingredients, and additional ingredients will be analyzed and determined for the positions in the grammatical pattern of English version.

### 3.3 Data Analysis

The obtained data in each group are analyzed as the following process.

1. Identify part of speech of the head word of each menu group
2. Identify pre modifiers and post modifiers of each head word
3. Analyze types of pre modifiers and post modifiers

## 4. RESULTS

The results are presented into three parts: head words of each menu group, grammatical patterns of head words and modifiers, and order of pre modifiers and post modifiers.

### 4.1 Head words of each menu group

As the Thai menu items are categorized into 10 groups; head words of each group are clearly seen and identified their parts of speech in English.

#### 4.1.1 Noun head words and verb-past participle head words

The head words fall into two parts of speech in English: noun and verb – past participle. Only grilled/ barbeque (BBQ)/ roasted menu group falls into both parts of speech head words. Menu groups of salads, soup, rice/noodles/chili dips, and desserts have noun head words (NHW). Fried, deep-fried, steamed, and baked/braised menu

groups have verb-past participle head words (V<sub>3</sub>HW). Verb-past participle head words actually indicate the cooking methods of the dishes. English parts of speech of head words in each menu group are shown in table 2.

Table 2: Head words of each menu group and their parts of speech

Menu Groups	Head words	Parts of Speech
1. Salads	Salad	Noun
2. soup	Soup	Noun
3. curries	Curry	Noun
4. fried	Fried	Verb – past participle
5. deep-fried	Deep-fried	Verb – past participle
6. steamed	Steamed	Verb – past participle
7. baked/braised	Baked/braised	Verb – past participle
8. grilled/barbeque/roasted	Grilled/ roasted Barbeque (BBQ)	Verb – past participle Noun
9. rice/noodles/chili dips	Rice/noodle/chili dips	Noun
10. desserts	dessert	Noun

#### 4.1.2 Shifts of Head Words

Some menu items are translated with different techniques of English translation, not with the head words of each menu group. The items are ปอเปี๊ยะทอด- POR PIA TOD, กุ้งอบวุ้นเส้น and ปลาเปรี้ยวหวาน.

##### Menu 1: POR PIA TOD

Glass noodle & vegetable filled *spring rolls* with sweet chili

The dish POR PIA TOD is in deep-fried menu group and should have verb-past participle head word. However, spring roll, a loan word, is generally used instead. The head word is, therefore, changed from verb-past participle head word to noun head word.

##### Menu 2: กุ้งอบวุ้นเส้น (No English transliteration)

Fried river prawns with vermicelli & ginger in the *hot pot*

The menu ‘กุ้งอบวุ้นเส้น’ is in baked/ braised menu group but translated without verb-past participle head word ‘baked’. A container ‘*hot pot*’ signifying baking method is used instead.

##### Menu 3: ปลาเปรี้ยวหวาน (No English transliteration)

Sweet & sour fish fillet ‘Thai style’

The menu ‘ปลาเปรี้ยวหวาน’ belongs to fried menu group. ‘Fried’ is verb-past participle head word in this group. However, it is translated without the verb-past participle head word, but with main ingredients in the name instead. Literally meaning of the name, ปลา is fish and เปรี้ยวหวาน shows the taste, sweet and sour. As there is no head word ‘fried’ in the Thai menu name, the English translation does not have it either. The phrase “Thai style” is added to emphasize the local flavor.

#### 4.2 Grammatical Patterns of Head Words and Modifiers

Although modifiers and descriptive phrases of head words are found in all menu groups in English translation of Thai menus, not all menu items have both modifiers and descriptive phrases. Menu items with only pre modifiers or post modifiers are found. Menu items with only pre modifiers are found in menu groups of salads, soup, BBQ, rice/noodles/chili dips, and desserts. On the other hand, menu items with only post modifiers are mostly found in menu groups of fried, deep-fried, steamed, baked/braised, and grilled/roasted.

The results will show the positions of both noun head words (NHW) and verb-past participle head words (V<sub>3</sub>HW) with pre modifiers and post modifiers.

##### 4.2.1 Menu items with only pre modifiers

Menu items with only pre modifiers are found in menu groups of salads, soup, BBQ, rice/noodles/chili dips, and desserts. Pre modifiers of the head noun words give more information in terms of taste, cooking method and ingredients. Most pre modifiers are word modifiers and placed before the head noun words. Order of pre modifiers is taste, cooking method of the main ingredients, and main ingredients. The position of noun head words and pre modifiers is shown in pattern 1.

**Pattern 1:** taste + cooking method + main ingredient + **NHW**

Ex: Spicy grilled pork **salad**

Head noun word, however, is used differently in the translation of a soup dish called ‘Chicken in coconut milk *soup*’. Although the head noun word is placed at the end of the phrase similar to other items, the word ‘*soup*’ is actually an object of a preposition ‘in’. The prepositional phrase ‘in coconut milk *soup*’ is a post modifier to the word ‘chicken’ which is the main ingredient of the dish as shown in pattern 2. However, there is a menu item in dessert group, ข้าวเหนียวมะม่วง (KAO NEAW MAMUANG) translated by only its head words. Literally meaning, ข้าวเหนียว (KAO NEAW) is sticky rice and มะม่วง (MAMUANG) is mango. The dessert consists of two main ingredients: sticky rice and mango, and shown by the name. In Thai language, modifier is placed after noun: noun + modifier. On the other hand, noun modifier in English is placed in front of noun: modifier + noun (Nathong 2006). The menu, therefore, is translated as ‘Mango sticky rice’.

**Pattern 2:** Main ingredient + **NHW**

Or Main ingredient + Main ingredient

Ex: Chicken in coconut milk **soup**

Mango sticky rice

#### 4.2.2 Menu items with only post modifiers

Menu items with only post modifiers are mostly found in verb-past participle head words in the menu groups of fried, deep-fried, steamed, baked/braised, and grilled/roasted.

Verb- past participle head words are mostly followed by post modifiers in the form as they are the first words of the descriptive phrases. The past participle verbs actually function as adjectives showing the cooking methods of the following nouns or main ingredients in the dishes. Past participle verbs, therefore, are placed before nouns and at the beginning of the menu descriptions. The descriptive phrase, then, starts with verb-past participle head word before a noun which is the main ingredient followed by a prepositional phrase.

Menu items having noun head words are also found with only post modifiers in menu groups of rice/ noodles/ chili dips and desserts.

Menu items with only post modifiers are found in fried menu group. Head word in this menu group is 'fried', 'stir fried', or 'sautéed'. Other English words with the same meaning in cooking term as 'fried' are found. The words are 'wok fried' and 'tossed'. All verb-past participle head words must be placed before noun words or main ingredients then followed by post modifiers telling additional ingredients and sauces in a form of prepositional phrase.

Prepositional phrases telling additional ingredients use the preposition 'with' while additional sauce can be indicated by the preposition 'with' and 'in'. Post modifier can be only additional ingredients, only sauce, or both additional ingredients and sauce. It is significant that any pre modifiers can be added to additional ingredients and sauce. The upmost additional ingredients mentioned should be three since the phrase will be too long. Pattern of this menu group can be:

**Pattern 3:** V<sub>3</sub>HW + main ingredient + with/in + sauce

V<sub>3</sub>HW + main ingredient + with + additional ingredients

V<sub>3</sub>HW + main ingredient + with + additional ingredients + in + sauce

Ex. **Stir fried** kale with shitake mushroom in oyster sauce

**Deep fried** pork with pepper and garlic

**Deep fried** white snapper with sweet and sour sauce

**Deep fried** garoupa fish with chili sauce

There are two menu items followed by only nouns: 'Deep fried spring rolls' and 'Deep fried crab meat rolls'. The two menus are culturally served with sweet plum sauce but the sauce is left out in the menu description. Significantly, a cultural substitution by using a loan word '*spring rolls*' is used to give clearer meaning in English and main ingredients are also used. To emphasize the local flavor, 'Esan Style' is added to the description in the menu 'Grilled whole chicken 'Esan style'. The pattern can be:

**Pattern 4:** V<sub>3</sub>HW + loan word

Or **V<sub>3</sub>HW** + main ingredients

Ex. **Deep fried** *spring rolls*

**Deep fried** crab meat rolls

**Grilled** whole chicken ‘Esan style’

A container is used to give local flavor of the dish. This method is found in the menu ‘*Grilled* cotton fish in banana leaves’. Pattern 5 can be formed.

**Pattern 5:** **V<sub>3</sub>HW** + main ingredient + in/with + container

Ex: **Grilled** cotton fish in banana leaves

Menu items with post modifiers are also found in rice/ noodles/ chili dip menu group. The items with post modifiers are noodle soup. Noodle is actually the noun head word; however, it functions as a noun modifier to another noun ‘soup’. Fortunately, English translation ‘noodle soup’ is exactly translated as the same pattern to Thai pattern of the menu ก๋วยเตี๋ยวน้ำ. ก๋วยเตี๋ยว (KUEY TEOW) is noodle and น้ำ (NAM) is soup.

**Pattern 6:** **NHW** + with+ main ingredients

Ex: **Noodle soup** with pork and prawn wantons

**Noodle soup** with fish ball, pork meat ball or chicken meat ball

**Wonton soup** with crab meat and prawn

#### 4.2.3 Menu items with both pre modifiers and post modifiers

Grammatical pattern with both pre modifiers and post modifiers of head words is mostly employed in English translation of menu group with noun head words: salads, soup, curries, rice/noodles/chili dip, and desserts.

It is significant that taste of salad dishes are always indicated in menu descriptions as spicy taste is the common taste of Thai salads. Main ingredients are also mentioned as pre modifiers to head words while additional ingredients are added as post modifiers. Original place name is indicated as post modifier to emphasize the local flavor of the dish: Esan style or North eastern style. ‘Thai’ is also a popular word to add to emphasize the local flavor of Thai dishes. Pattern of pre modifiers and post modifiers of noun headword is:

**Pattern 7:** taste + main ingredient + **NHW** +with + additional ingredients + and + sauce

Ex: Spicy beef **salad** with onion, tomato & celery

Spicy pork **salad** with chili and lime sauce

Spicy prawn **soup** with straw mushroom & lemongrass

Clear tofu **soup** with pork and shrimps

Color is relative significant as it is indicated in English description of curries menu group: green, red, and yellow. Main ingredients are normally indicated before noun head words in other menu groups; however, they are indicated in different position as post modifiers after the preposition ‘with’ and can be followed by additional ingredients. Pattern of curries menu group is formed as:

**Pattern 8:** color + **NHW** + with+ main ingredients + additional ingredients

Ex: Green **curry** with chicken, beef, pork, vegetarian with tofu  
 Red **curry** with roasted duck, pineapple & cherry tomatoes  
 Yellow **curry** with chicken

Rice/ noodles/ chili dip menu group also have both pre modifiers and post modifiers. Cooking methods in the forms of past participles are frequently added as pre modifiers to noun head words: rice and noodles. Post modifiers tell more of other additional ingredients of the dishes in the forms of prepositional phrases.

‘KHAO TUNG NA TUNG’ is actually a snack made of rice. It is translated by telling the texture ‘crispy’ of the head word followed by prepositional phrase as post modifier to show additional ingredients and dip. The pattern can be formed as pattern 9.

**Pattern 9:** texture + **NHW** + with + additional ingredients / sauce /dip

Ex: Crispy **rice** with shrimp & pork coconut dip

Other pre modifiers indicate taste or cooking method to noun head word. The pattern can be formed as shown in pattern 10.

**Pattern 10:** taste + cooking method + **NHW**+ with+ additional ingredients

Ex: Fried **rice** with chicken, pork, beef, vegetarian with prawns  
 Fried **noodles** with vegetables and seafood in oyster sauce  
 Spicy **shrimps paste** with condiment

### 4.3 Order of pre modifiers and post modifiers

Pre modifiers to noun head words give information of taste, color, texture, cooking methods, and main ingredients of the dishes. Order of pre modifiers can be taste or color or texture or characteristics or number before cooking method and main ingredients. Significantly, color is the most mentioned pre modifier in curries menu group and cooking method is in past participle form placed immediately before ingredients. Samples of pre modifier order can be found in table 3.

Table 3: Order of Pre Modifiers to Noun Head Words

Order of pre modifiers	Menu description
Main ingredient + <b>NHW</b>	Pork, chicken, or veal sausage <b>BBQ</b>
Cooking method + <b>NHW</b>	Fried <b>RICE</b> with ...
color + <b>NHW</b>	Green / red/ yellow <b>CURRY</b> with ...
taste + cooking method + main ingredients + <b>NHW</b>	Spicy minced pork/chicken/beef <b>SALAD</b> Spicy grilled pork <b>SALAD</b>
texture + <b>NHW</b>	Crispy <b>RICE</b>

Characteristic is another pre modifier used to modify head words such as **jasmine**, **famous Thai**, **classic**, **Thai style** and **green** in the following menus.

**Menu 1: ข้าวสวย**

Steamed **jasmine rice**

**Menu 2: ต้มยำกุ้ง**

TOM YAM GOONG

**Famous Thai** sour & spicy *broth* with prawns and lemongrass

**Menu 3: เบ็ดต้นมะนาวดองกับผักเขียว**

**Green melon soup** with duck and pickled lemon

**Menu 4: ผัดไทย**

PHAD THAI

**Classic** fried rice *noodles* with chicken, pork, vegetarian with prawns

PHAD THAI

**Thai style** stir fried rice *noodles* with vegetables, chicken or prawns

Prepositional phrases are added as post modifiers to show ingredients, sauce or dip or condiments or container of the dishes. Significantly, main ingredients are placed as post modifiers only in curries menu group while additional ingredients are placed as post modifiers in other menu groups. Thai local flavor is emphasized by adding style to indicate the original places of the cooking such as ‘north eastern style’ and ‘Esan’ style. Words indicating characteristics are also used i.e. classic and Thai style. Samples of post modifiers are shown in table 4.

Table 4: Order of post modifiers to noun head words

Order of post modifiers	Menu description
<i>color</i> + <b>NHW</b> + with+ main ingredients + additional ingredients	<i>Green / red</i> <b>CURRY</b> with chicken, pork, beef <i>Red</i> <b>CURRY</b> with roasted duck, pineapple & cherry tomatoes
<b>NHW</b> +with + additional ingredients + and + sauce	Spicy <b>SOUP</b> with mixed seafood and lemon grass Stir fired rice <b>NOODLES</b> with mixed seafood and vegetables Spicy pork <b>SALAD</b> with chili and lime sauce

Most of verb-past participle head words do not have pre modifiers. The translation starts with verb-past participle head words followed by post modifiers. However, pre modifiers can be added to any words in post modifiers as shown in following menus.

**Menu 5: เต้าหู้ผัดฉ่า**

TAOHU PHAD CHA

*Stir fried* tofu with **young** peppercorn & chili

Here, the adjective ‘young’ is added to modify pepper corn.

**Menu 6: ผัดเปรี้ยวหวานหมู/ไก่/ปลา**

PHAD PREAW WARN MOO, GAI OR PLA

*Stir fired* pork, chicken or fish in **sweet & sour** sauce

The sweet and sour taste is added to modify the sauce in post modifier of the dish.

Post modifiers give more information of additional ingredients, sauce, dip, condiments, and container as shown in the following menus.

**Menu 7: ปลากระพงทอดกระเทียมพริกไทย**

PLA KAPONG TOD KRA THEM PRIK THAI

*Fried* red snapper with **garlic and pepper** sauce

Additional ingredient, garlic, and sauce are indicated as post modifiers in the menu.

**Menu 8: สะเต๊ะรวม**

SATAY RUAM

*Grilled* chicken, beef & pork skewers with **peanut sauce** and **ajar**

English transliteration, Ajar, which is a condiment to the dish is added together with its sauce.

**Menu 9: ปลาสำลีเผาซอสมะขาม** (No English transliteration)

*Grilled* cotton fish in **banana leaves**

Here, the container of the dish or actually the appearance is mentioned as post modifier.

## 5. CONCLUSIONS

There are ten grammatical patterns of English translation of Thai menus found. The patterns are indicated by head words of each menu group. Noun head words can be translated into English with seven grammatical patterns while verb-past participle head words can be translated with three grammatical patterns.

### 5.1 Grammatical patterns with noun head words

Menu groups with noun head words are salads, soup, curries, barbeque, rice/noodles/ chili dip, and desserts. Seven grammatical patterns of English translation of Thai menus are found in patterns 1-2 and patterns 6-10. The patterns are shown with the order of pre modifiers and pos modifiers as follows.

**Pattern 1:** taste + cooking method + main ingredients + NHW

**Pattern 2:** Main ingredient + NHW

Or Main ingredient + Main ingredient

**Pattern 6:** NHW + with+ main ingredient

**Pattern 7:** taste + main ingredients + NHW +with + additional ingredients + and + sauce

**Pattern 8:** color + NHW + with+ main ingredients + additional ingredients

**Pattern 9:** texture + NHW + with + additional ingredients / sauce /dip

**Pattern 10:** cooking method + NHW+ with+ additional ingredients

Both pre modifiers and post modifiers can be added to noun head words. Pre modifiers to noun head words can be summarized as follows.

1. Certain menu items can be translated with just pre modifiers to noun head words or with main ingredients instead of noun head words as they are parts of the dish names. The example of just pre modifier to noun head word is the menu of 'Spicy green papaya *salad*'. The example of only main ingredient in translation is ข้าวเหนียวมะม่วง '*mango sticky rice*'; ข้าวเหนียว (KAO NEAW) is sticky rice and มะม่วง (MAMUANG) is mango.

2. A loan word is a way of cultural substitution to give better appearance of the dishes. The menu of **ปอเปี๊ยะทอด** (POR PIA TOD) translated as ‘*Deep fried spring rolls*’, the loan word for **ปอเปี๊ยะ** (POR PIA) is spring rolls.
3. More than one main ingredient can be mentioned as pre modifiers.
4. Cooking method is in past participle form placed immediately before ingredients.
5. Pre modifiers to noun head words give information of taste, color, texture, cooking methods, and main ingredients of the dishes. Order of pre modifiers can be taste or color or texture or characteristics or number before cooking method and main ingredients.
6. Color is the most mentioned pre modifier in curries menu group.
7. Characteristic is used to emphasize Thai local flavor such as *classic, Thai style, famous Thai*.
8. English transliteration of Thai names is used as it is relatively difficult and complicated to explain the dishes. Thus, it is also a way to emphasize Thai food culture as found in the menus of **มัสมั่น** (MASSAMAN), **พะแนง** (PANANG), **จู้จี้** (CHOO CHEE), **ขนมจีน** (KANOM CHIN), **ปลาช่อน** (PLA CHON), and **สลิม** (SALIM).

Post modifiers of noun head words can be summarized as:

1. Prepositional phrases are added as post modifiers to show ingredients, sauce or dip or condiments or container of the dishes.
2. Main ingredients can be placed as post modifiers only in curries menu group. On the other hand, additional ingredients are placed as post modifiers in other menu groups.
3. Thai local flavor is emphasized by adding style to indicate the original places of the cooking such as ‘*north eastern style*’ and ‘*Esan*’ style, ‘*Classic Thai*’ and ‘*Thai style*’.

## 5.2 Grammatical patterns with verb-past participle head words

Menu groups with verb-past participle head words are fried, deep-fried, steamed, baked/braised, and grilled/roasted. Three grammatical patterns of verb-past participle head words with order of post modifiers are found in pattern 3-5.

**Pattern 3:** V<sub>3</sub>HW + main ingredient + with/in + sauce

V<sub>3</sub>HW + main ingredient + with + additional ingredients

V<sub>3</sub>HW + main ingredient + with + additional ingredients + in + sauce

**Pattern 4:** V<sub>3</sub>HW + loan word

Or V<sub>3</sub>HW + main ingredient

**Pattern 5:** V<sub>3</sub>HW + main ingredient + in/with + appearance/container

The patterns of verb-past participle head words can be summarized as follows.

1. Most of verb-past participle head words do not have pre modifiers.
2. There are other words used as head words in fried menu group. The words are ‘stir fried’, ‘wok fried’, ‘sautéed’ and ‘tossed’.
3. English translation of menu groups with verb-past participle head words will start with verb-past participle head words followed by post modifiers.

4. Pre modifiers can be added to any words in post modifiers, especially cooking methods added to ingredients.
5. Post modifiers give more information of additional ingredients, sauce, dip, condiments, and container.

## References

- Baker, M. (1992). *In Other Words: A Coursebook on Translation*. London & New York: Routledge
- Catford, J.C. (1974). *A Linguistic Theory of Translation: An Essay in Applied Linguistics*. Oxford: Oxford University Press.
- Khongbumpen, Chittsopha. (2007). *Strategies Employed in Translation from Thai into English: A Case Study of an Article in Focus Bangkok*. Master's Project, M.A. (English). Bangkok: Graduate School, Srinakharinwirot University.
- Mu, Congjun. (2010). English Translation of Chinese Dish Names. *Translation Journal*, 14
- Newmark, P. (1981). *Approaches to Translation*. Oxford: Pergamon Press.
- Pinmanee, Supanee. (2003). *Advanced Translation*. Bangkok: Chulalongkorn University Press.
- Pouget, C.F. (1999). Are Menu Translations Getting Worse? Problems from Empirical Analysis of Restaurant
- [http://en.wikipedia.org/wiki/Thai\\_cuisine](http://en.wikipedia.org/wiki/Thai_cuisine) (24 June 2013)
- <http://kanchanapisek.or.th/kp6/New/sub/book/book.php?page=main&book=13> (24 June 2013)
- <http://oxforddictionaries.com> (5 September 2013)

*Performance of In-Service Basic Education Teachers of Nueva Vizcaya, Philippines*

Bonimar Tominez, Leila Dela Cruz

Nueva Vizcaya State University, Philippines

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Abstract

In-service teachers with family responsibilities perform better in diversity of learners, community linkages, and personal growth and professional development; those holders of master's degree and who were assigned in district 4 have better teaching performance in curriculum; master teachers perform remarkably in learning environment, diversity of learners and curriculum; and those who are compensated with higher salary grade manifest higher teaching performance in learning environment, diversity of learners and curriculum.

The higher the teaching position, the higher the level of teaching performance in learning environment, diversity of learners, curriculum, and planning, assessing & reporting and overall performance; and, the higher the salary grade, the higher the level of teaching performance in social regard for learning, learning environment, diversity of learners, curriculum, planning, assessing & reporting and overall performance.

The salary grade of the in-service teachers is a powerful predictor of their remarkable teaching performance in social regard for learning, learning environment, diversity of learners, curriculum, and planning, assessing and reporting while their gender predicts their excellent performance in dealing with diverse learners.

**Keywords:** teaching performance, social regard for learning, learning environment, diversity of learners, curriculum, planning, assessing & reporting, community linkages, personal growth & professional development, in-service teachers

## **RATIONALE**

The Department of Education in the Philippines designed the National Competency-Based Teacher Standards (NCBTS) Framework to allow the basic education teachers assess their own performance against the competency standards to identify their strengths and weaknesses in order for them to fully function as effective facilitators of learning.

The NCBTS is an integrated theoretical framework that defines the different dimensions of effective teaching, where effective teaching means being able to help all types of students learn the different learning goals in the curriculum. It provides a single framework that shall define effective teaching in all aspects of a teacher's professional life and in all phases of teacher development. The use of a single framework should minimize confusion about what effective teaching is. The single framework should also provide a better guide for all teacher development programs and projects from the school-level up to the national level.

Because of the complexity of teaching and individual variation among teachers, effective teaching is not like a "one size fits all" sock. In order to be effective, a teacher according to the NCBTS, must excel in the seven dimensions of teaching such as social regard for learning; learning environment; diversity of learners; curriculum; planning, assessing and reporting; community linkages; and, personal growth & professional development. If quality education is to be achieved through a thorough understanding on certain factors that are contributory to effective teaching, research-based knowledge must then be generated to come up with bases of articulation and focus for development amongst the frontliners of education. Hence, this research.

### **Objectives of the study**

This research established the overall teaching performance of in-service teachers in the public elementary schools of the northern part of Nueva Vizcaya.

Specifically, it ascertained the following:

1. the demographic profile of in-service teachers such as age, gender, marital status, highest educational attainment, length of service in the teaching profession, grade level assignment, school assignment, district where school assignment belongs, teaching position, teaching status and salary grade
2. the level of teaching performance of in-service teachers as evaluated by themselves and their principals in the following domains: social regard for learning, learning environment, diversity of learners, curriculum, planning, assessing & reporting, community linkages and personal growth & professional development;
3. the significant difference on the level of teaching performance of in-service teachers when they are grouped according to their demographic variables;
4. the significant relationship between the level of teaching performance of in-service teachers and their demographic variables; and,

5. the factors that predict the level of teaching performance of in-service teachers.

## CONCEPTUAL FRAMEWORK

Effective teaching has two critical dimensions: *intent* and *achievement*. An effective teacher is one who brings about intended learning outcomes. A teacher must be prepared in the four areas of competence in order to be successful in bringing about intended learning outcomes: *command of theoretical knowledge about learning and human behavior, display of attitudes that foster learning and genuine human relationships, command of knowledge in the subject matter to be taught, and control of teaching skills that facilitate learning* (Cooper, 1999).

Additionally, an effective teacher is a master of her field who provides meaningful and enjoyable classroom experiences by utilizing appropriate activities and incorporating illustrations leading to a more satisfying outcome. She brings learning experiences to maximum level by raising crucial questions that require students to become critical and rational thinkers. An effective teacher enthusiastically guides students in setting and clarifying their goals while honing them to become holistic and competent individuals. She implements classroom rules and policies which she collaboratively prepared with her students while accomplishing the learning activities stipulated in her well-designed instructional plan. An effective teacher advocates better and enjoyable learning through the use of technology (Tominez & Palina, 2009).

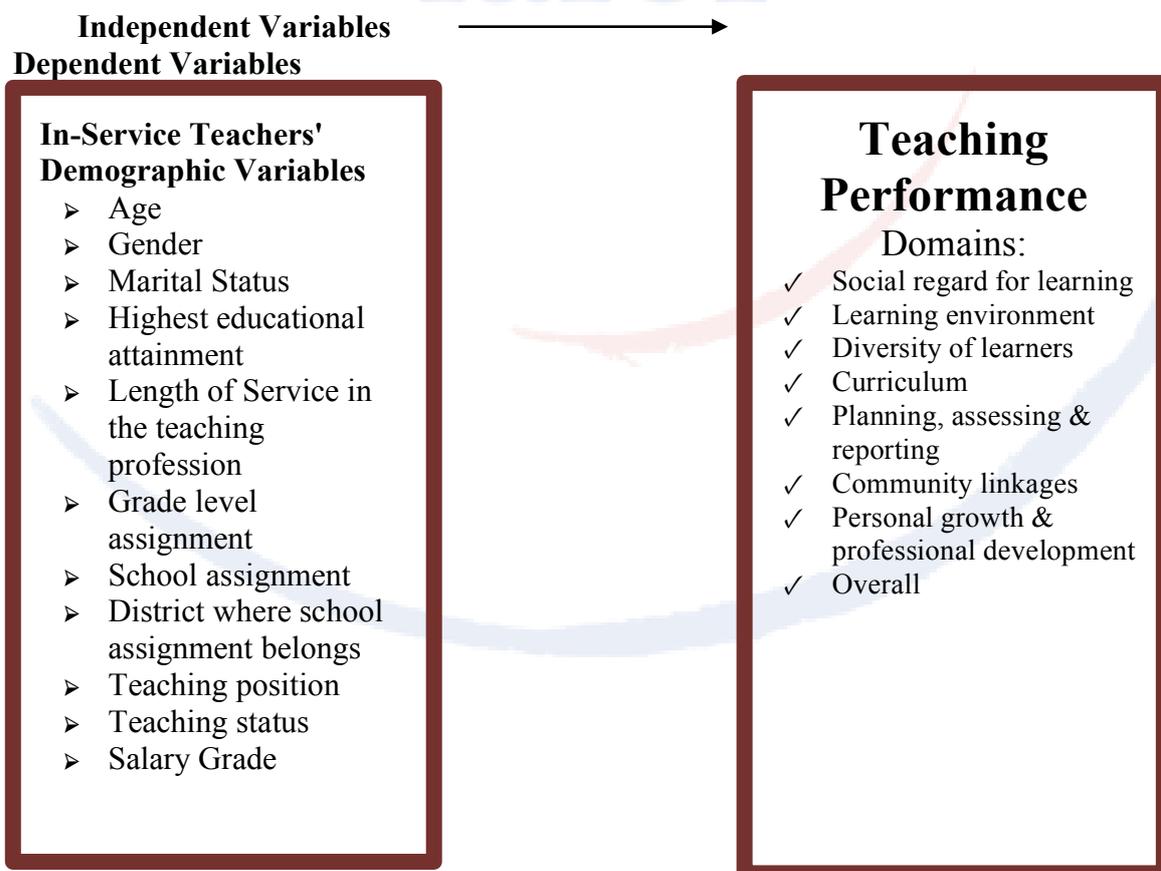


Figure 1: Paradigm of the study

Anchored from the above characteristics of an effective teacher, this research established the performance of in-service teachers specifically looking into the factors that influence and explain their teaching effectiveness. In this study, age, gender, marital status, highest educational attainment, length of service in the teaching profession, grade level assignment, school assignment, district where school assignment belongs, teaching position and teaching status are the variables that were presumed to be related with the teaching performance of in-service teachers particularly on teaching domains such as social regard for learning; learning environment; diversity of learners; curriculum; planning; assessing and reporting; community linkages; and, personal growth & professional development.

## RESEARCH METHODOLOGY

This research employed the descriptive-inferential study. The descriptive research describes, analyzes and interprets the conditions that presently exist. The inferential study investigates the extent to which different variables are related to each other.

### Research Locale

This study was conducted at the College of Teacher Education of the Nueva Vizcaya State University Bayombong, Nueva Vizcaya, Philippines and in the different elementary schools of the DepEd Division of Nueva Vizcaya during the school year 2012-2013. Figure 2 presents the maps of the Philippines and the province of Nueva Vizcaya.



Figure 2. The maps of the Philippines and the province of Nueva Vizcaya

## EVIDENCE FRAMEWORK

### Sample Size and Sampling Procedure

This study utilized partial enumeration. Those who served as cooperating teachers to pre-service teachers of the College of Teacher Education, NVSU were taken as respondents of this study. The overall performance of these respondents (n=68) was derived from their self-assessment and the evaluation made by their principals (n=8).

### Research Instrument

The research instrument used in the study was a questionnaire composing of two parts. The first part consisted of the demographic variables such as age, gender, marital status, highest educational attainment, length of service in the teaching profession, grade level assignment, school assignment, district where school assignment belongs, teaching position, teaching status and monthly income/salary grade. The second part of the questionnaire is a checklist consisted of items that indicate the teaching performance of the teachers in the following domains: *Social regard for learning, Learning environment, Diversity of learners, Curriculum, Planning, assessing & reporting, Community linkages, and Personal growth & professional development*. This is the instrument that the DepEd is using to periodically evaluate the teachers.

The table below shows the distribution of rating and the corresponding qualitative descriptions with 5.00 as the highest and 1.00 as the lowest rating.

Table 1. Distribution of rating with corresponding qualitative descriptions

Rating	Qualitative Description
4.21-5.00	Outstanding
4.41-4.20	Very Satisfactory
2.61-3.40	Satisfactory
1.81-2.60	Fair
1.00-1.80	Poor

### Sources of Data

The in-service teachers were evaluated by the following sector-evaluators: self and principals. The overall performance of the in-service teachers was determined through the Competency Standards for Teacher Performance drafted by the Department of Education under the Basic Education Assistance to Mindanao (BEAM) Project in 2003 which was modified and revised in workshops in Cebu and Subic in 2005 and in a series of zonal and sectoral workshops in March to May 2006.

### Statistical Treatment of Data

Descriptive statistics such as frequency counts, percentages, and means were used to describe the demographic profile of the in-service elementary teachers while inferential statistics such as the t-test, Analysis of Variance and the Post Hoc test were utilized to compare the means of two or more groups, the chi square and Pearson Product Moment Correlation were used to determine if the two sets or variables are correlated and the multiple regressions were employed to determine the factors that predict the teaching performance of the teachers. The 0.05 probability level was the critical point of reference used in this study.

## RESULTS AND DISCUSSION

### In-Service Teachers' Demographic Profile

**Age.** 24 of 68 in-service teachers (35.29%) are 31-40 years old, 19 (27.94%) are 51 years old and above, 18 (26.47%) are 41- 50 years old, and 7 (10.29%) are 21-30 years old. The average age of the in-service teachers is 43. This implies that most of the in-service teachers are in their middle adulthood and working stage.

**Gender.** 59 of 68 in-service teachers (86.76%) are female and 9 (13.24%) are male. This implies that majority of the in-service teachers are female.

**Marital status.** 66 of 68 in-service teachers (97.06%) are married and 2 (2.94%) are single. Findings reveal that most of the in-service teachers have family responsibilities.

**Highest educational attainment.** 49 of 68 in-service teachers (72.06%) have units in MS/MEd, 14 (20.59%) holds MS/MEd degree, and 5 (7.35%) are BS degree holders. Findings imply that most of the in-service teachers are pursuing their graduate studies.

**Length of service.** 16 of 68 in-service teachers (23.53%) are in the teaching profession for 11 – 15 years, 13 or 19.12% in the teaching profession for 16-20 years, 12 (17.65%) are in the teaching profession for 21-25 years, 11 (16.18%) are in the teaching profession, 10 (14.70%) are in the teaching profession, and 6 (8.82%) are in the teaching profession for 1 – 5 years. Results imply that most in-service teachers have spent more than a decade in the teaching profession.

**Grade level assignment.** 15 of 68 in-service teachers (22.06%) are assigned in Grade V, 13 (19.12%) are assigned in Grade III, 12 (17.65%) are assigned in grade IV, 12 are assigned in grade VI, 9 (13.24%) are assigned in grade II, and 7 (10.29%) are assigned in grade I. Findings indicate that majority of the in-service teachers were assigned to teach at the intermediate level.

**School assignment.** The in-service teachers were almost equally distributed to the different schools in 4 districts. In schools A, B, D, E and G, each has the same frequency of 9 (13.24%) in-service teachers, both schools C & H have a frequency of 8 (11.76%) while school F has a frequency of 7 in-service teachers. Findings indicate that there are almost equal numbers of in-service teachers in the schools that serve as field study areas of pre-service teachers.

**District where school belongs.** 28 of 68 in-service teachers (41.18%) belong to District 2, 17 (25%) are from District 1, 17 are from District 4, and 6 (8.82%) are from District 3. Results show that most of the respondents are from 1<sup>st</sup> and 2<sup>nd</sup> districts.

**Teaching position.** 41 of 68 in-service teachers (60.29%) hold a Teacher 3 position, 9 (13.24%) hold a Master Teacher 2 position, 6 (8.82%) hold a Teacher 1 position, 6 hold a Teacher 2 position, 5 (7.35%) hold a Master Teacher 1 position and 1 (1.47%) holds a Special Education Teacher position. Findings reveal that most of the respondents are holding Teacher 3 position.

**Teaching status.** It was noted that all (100%) of the in-service teachers hold a permanent status. This implies that in-service teachers need to be permanent in their status before they can serve as cooperating teachers for pre-service teachers.

**Salary grade.** 41 of 68 in-service teachers (60.29%) are under salary grade 13, 9 (13.24%) are under salary grade 19, 6 (8.82%) are under salary grade 11, 6 are under salary grade 12, 5 (7.35%) are under salary grade 18, and 1 is under salary grade 14. Results imply that majority of the respondents are compensated with salary grade 13.

### In-Service Teachers' Level of Teaching Performance

**Social regard for learning.** Table 2 reflects the performance of in-service teachers in terms of *social regard for learning*. It was noted that both the in-service teachers (m=4.651) and principals (m=4.776) rated the in-service teachers *outstanding* in this particular domain of teaching performance with an overall mean of 4.713.

Table 2. Level of teaching performance on social regard of learning of the in-service teachers as evaluated by themselves and their principals

Social Regard for learning	In-service Teachers	Principals	Overall Mean
The Teacher.....	mean	mean	
1 implements school policies and procedures	4.809	4.912	4.860
2 demonstrates punctuality.	4.500	4.676	4.588
3 maintains appropriate appearance.	4.779	4.882	4.831
4 is careful about the effect of one's behavior on students.	4.515	4.632	4.574
<b>Mean</b>	<b>4.651</b>	<b>4.776</b>	<b>4.713</b>
<b>Descriptive Rating</b>	<b>Outstanding</b>	<b>Outstanding</b>	<b>Outstanding</b>

Findings indicate that the in-service teachers remarkably *implement school policies and procedures, maintain appropriate appearance, demonstrate punctuality and are careful about the effect of their behavior on students*. This implies that the in-service teachers strongly uphold excellence in becoming role models to their learners.

**Learning environment.** Table 3 reveals the performance of the in-service teachers in the learning environment. An overall mean of 4.673 clearly indicates that the pre-service teachers are *outstanding* in performing this domain as evaluated by the in-service teachers (m=4.654) and principals (m=4.691).

Results show that the in-service teachers exceptionally focused on the importance of providing for a social, psychological and physical environment within which all students, regardless of their individual differences, can engage the different learning activities and work towards attaining high standards of learning.

Table 3. Level of teaching performance on learning environment of the in-service teachers as evaluated by themselves and their principals

Learning Environment The Teacher....		In-service Teachers	Principals	Overall Mean
		mean	mean	
1	maintains a learning environment of courtesy and respect for different learners (ability, culture, gender).	4.676	4.735	4.706
2	provides gender-fair opportunities for learning.	4.750	4.735	4.743
3	recognizes that every learner has strengths.	4.779	4.779	4.779
4	maintains a safe, clean and orderly classroom free from distractions.	4.765	4.750	4.757
5	arranges challenging activities given the physical environment.	4.544	4.603	4.574
6	uses individual and co-operative learning activities.	4.706	4.735	4.721
7	encourages learners to ask questions.	4.544	4.632	4.588
8	provides learners with a variety of learning experiences.	4.618	4.706	4.662
9	handles behavior problems quickly and with due respect to children's rights.	4.544	4.632	4.588
10	gives timely feedback to reinforce appropriate learner's behavior.	4.603	4.632	4.618
11	guides individual learners toward the development of appropriate social and learning behavior.	4.632	4.618	4.625
12	communicates school policies and procedures for classroom behavior.	4.691	4.735	4.713
<b>Mean</b>		<b>4.654</b>	<b>4.691</b>	<b>4.673</b>
<b>Descriptive Rating</b>		<b>Outstanding</b>	<b>Outstanding</b>	<b>Outstanding</b>

**Diversity of learners.** Table 4 reflects the performance of the in-service teachers in this particular domain. An overall mean of 4.633 indicates that in-service teachers (m=4.579) and principals (m=4.687) strongly agreed that the in-service teachers are *outstanding* in dealing with the diversity of learners.

Table 4. Level of teaching performance on diversity of learners of the in-service teachers as evaluated by themselves and their principals

Diversity of learners The Teacher....		In-service Teachers	Principals	Overall Mean
		mean	mean	
1	uses information on the learning styles and needs of learners to design and selects learning experiences.	4.529	4.721	4.625
2	establishes goals that define appropriate expectations for all learners.	4.588	4.632	4.610
3	introduces lessons that are appropriate to needs and /or abilities of learners.	4.721	4.765	4.743
4	provides differentiated activities for learners.	5.588	4.706	4.647
5	initiates other learning approaches for learners whose needs have not been meet by usual approaches.	4.441	4.574	4.507
6	shows sensitivity to multi-cultural background of learners.	4.574	4.676	4.625
7	sets clear, challenging and achievable expectations on the holistic development of all learners.	4.500	4.647	4.574
8	Identifies learning gaps and take actions to enable learners to catch up.	4.529	4.647	4.588
9	employs integrative strategies for meaningful and holistic development of learners.	4.544	4.676	4.610
10	is sensitive to unusual behavior of learners and takes appropriate action	4.662	4.735	4.699
11	provides opportunities to enhance learners growth in all aspects.	4.691	4.779	4.735
<b>Mean</b>		<b>4.579</b>	<b>4.687</b>	<b>4.633</b>
<b>Descriptive Rating</b>		<b>Outstanding</b>	<b>Outstanding</b>	<b>Outstanding</b>

Findings imply that the in-service teachers excellently facilitate the learning process in diverse learners, by first recognizing and respecting individual differences, then using knowledge about student's differences to design diverse sets of learning activities to ensure that all students can attain desired learning goals.

**Curriculum.** Table 5 presents the performance of the in-service teachers in this domain. The in-service teachers are *outstanding* (overall mean=4.689) in curriculum as specified by themselves (m=4.669) and principals (m=4.708).

Table 5. Level of teaching performance on curriculum of the in-service teachers as evaluated by themselves and their principals

Curriculum		In-service Teachers	Principals	Overall Mean
		Mean	mean	
<b>The teacher....</b>				
1	delivers accurate and updated content knowledge using appropriate methodologies, approaches and strategies.	4.676	4.676	4.676
2	integrates language, literacy and quantitative skill development and values in the subject area.	4.691	4.662	4.676
3	explains learning goals, instructional procedures and content clearly and accurately to students.	4.632	4.662	4.647
4	link the current content with past and future lessons.	4.794	4.691	4.743
5	aligns the lesson objectives with the teaching methods, learning activities and instructional materials or resources appropriate to learners.	4.779	4.794	4.787
6	creates situations that encourage learners to use high order thinking skills.	4.544	4.618	4.581
7	engages and sustains learner's interest in the subject by making content meaningful and relevant to them.	4.706	4.662	4.684
8	integrates relevant scholarly works and ideas to enrich the lesson as needed.	4.471	4.603	4.537
9	integrates content of subject area with other disciplines.	4.721	4.735	4.728
10	sets appropriate learning goals.	4.632	4.750	4.691
11	leads learners to understand the learning goals.	4.706	4.765	4.735
12	links the goals set with the expectations for every learner.	4.559	4.691	4.625
13	establishes routines and procedures to maximize instructional time.	4.632	4.794	4.713
14	plan lessons to fit within the available instructional time.	4.721	4.794	4.757
15	translates learning competencies to instructional objectives.	4.559	4.721	4.640
16	selects, prepares and utilizes instructional materials appropriate to the learners and to the learning objectives.	4.750	4.735	4.743
17	provides activities and uses materials which fit the learners' learning styles, goals and culture.	4.647	4.647	4.647

18	uses a variety of teaching approaches and techniques appropriate to the subject matter and the learners.	4.721	4.721	4.721
19	utilizes information derived from the assessment to improve teaching and learning.	4.676	4.721	4.699
20	provides activities and use materials which involve students in meaningful learning.	4.765	4.721	4.743
<b>Mean</b>		<b>4.669</b>	<b>4.708</b>	<b>4.689</b>
<b>Descriptive Rating</b>		<b>Outstanding</b>	<b>Outstanding</b>	<b>Outstanding</b>

Findings reveal that the in-service teachers highly consider the elements of the teaching-learning process that work in convergence to help students understand the curricular goals and objectives and to attain high standards of learning defined in the curriculum. These elements include the teacher's knowledge of subject matter and the learning process, teaching-learning approaches and activities, instructional materials and learning resources.

**Planning, assessing & reporting.** Table 6 shows the performance of the in-service teachers in *planning, assessing and reporting*. It was noted that an overall mean of 4.673 indicates that the in-service teachers are *outstanding* in this particular domain of teaching as manifested by their self-assessment (m=4.640) and their principals' evaluation (m=4.706).

Table 6. Level of teaching performance on planning, assessing and reporting of the in-service teachers as evaluated by themselves and their principals

<b>Planning, Assessing &amp; Reporting</b>		<b>In-service Teachers</b>	<b>Principals</b>	<b>Overall Mean</b>
<b>The teacher....</b>		mean	mean	
1	shows proofs of instructional planning.	4.603	4.632	4.618
2	implements instruction as planned.	4.603	4.750	4.676
3	demonstrates ability to cope with varied teaching milieu.	4.632	4.765	4.699
4	prepares formative and summative tests in line with the curriculum.	4.779	4.794	4.787
5	employs non-traditional assessment techniques (portfolio, journals, rubrics, etc.)	4.691	4.706	4.699
6	interprets and uses assessment results to improve teaching and learning.	4.647	4.691	4.699
7	identifies teaching-learning difficulties and possible causes and take appropriate action to address them.	4.500	4.559	4.529
8	uses tools for assessing authentic learning.	4.618	4.618	4.618
9	provides timely and accurate feedback to learners to encourage them to reflect on and monitor their own learning growth.	4.632	4.676	4.654
10	keeps accurate records of grades/performance levels of learners.	4.868	4.809	4.838
11	conducts regular meetings with learners and parents to report learner's progress.	4.515	4.721	4.618
12	involves parents to participate in school activities that promote learning.	4.588	4.750	4.669
<b>Mean</b>		<b>4.640</b>	<b>4.706</b>	<b>4.673</b>
<b>Descriptive Rating</b>		<b>Outstanding</b>	<b>Outstanding</b>	<b>Outstanding</b>

Results indicate that the in-service teachers admirably focused on the use of assessment data to plan and revise teaching-learning plans, the integration of assessment procedures in the plan and implementation of teaching-learning activities, and reporting on learner's actual achievement and behavior.

**Community Linkages.** Table 7 presents the performance of the in-service teachers in community linkages. The in-service teachers were evaluated *very satisfactory* in their community involvement as indicated by their self-evaluation (m=4.350) and overall

mean of 4.401. However, the principals (m=4.451) assessed the in-service teachers to be outstanding in performing their task in the community.

Table 7. Level of teaching performance on community linkages of the in-service teachers as evaluated by themselves and their principals

<b>Community Linkages</b>		<b>In-service Teachers</b>	<b>Principals</b>	<b>Overall Mean</b>
<b>The teacher...</b>		mean	mean	
1	involves community in sharing accountability for the learners' achievement.	4.294	4.471	4.382
2	uses community resources (human, material) to support learning.	4.265	4.412	4.338
3	uses the community as a laboratory for learning.	4.132	4.279	4.206
4	participates in the community activities that promote learning.	4.529	4.529	4.529
5	uses community networks to publicize school events and achievements.	4.279	4.353	4.316
6	encourages students to apply classroom learning to the community.	4.603	4.662	4.632
<b>Mean</b>		<b>4.350</b>	<b>4.451</b>	<b>4.401</b>
<b>Descriptive Rating</b>		<b>Very satisfactory</b>	<b>Outstanding</b>	<b>Very satisfactory</b>

Results imply that the in-service teachers agreeably linked classroom activities to the experiences and aspirations of the students in their homes and communities. This further indicates that their efforts are directed at strengthening the links between the schools and communities, particularly as these links help in the attainment of the curricular goals.

**Personal growth and professional development.** Table 8 shows the performance of the in-service teachers in terms of their personal growth and professional development. An overall mean of 4.640 indicates that the in-service teachers are excellent in their personal and professional development as manifested by their self-assessment (m=4.620) and their principals' evaluation (m=4.682).

Table 8. Level of teaching performance on personal growth and professional development of the in-service teachers as evaluated by themselves and their principals

<b>Personal Growth and Professional Development</b>		<b>In-service Teachers</b>	<b>Principals</b>	<b>Overall Mean</b>
<b>The teacher...</b>		mean	mean	
1	maintains stature and behavior that upholds the dignity of teaching.	4.750	4.765	4.757
2	allocates time for personal and professional development through participation in educational seminars and workshops, reading educational materials regularly and engaging in educational research.	4.706	4.544	4.625
3	manifests personal qualities such as enthusiasm, flexibility and caring.	4.765	4.676	4.721
4	articulates and demonstrates one's personal philosophy of teaching.	4.721	4.618	4.669
5	keeps abreast with the recent developments in education.	4.721	4.676	4.699
6	links with other institutions, organizations for sharing best practices.	4.588	4.500	4.544
7	reflects on the quality of his/her own teaching.	4.750	4.574	4.662
8	improves teaching performance based on feedback from students, peers and superiors and practice teachers.	4.809	4.721	4.765
9	accepts personal accountability for learner's achievement (performance).	4.735	4.779	4.757
10	uses self-evaluation to recognize and enhances one's strengths and correct one's weakness.	4.824	4.809	4.816
<b>Mean</b>		<b>4.737</b>	<b>4.662</b>	<b>4.701</b>
<b>Descriptive Rating</b>		<b>Outstanding</b>	<b>Outstanding</b>	<b>Outstanding</b>

Results reveal that the in-service teachers extremely value having a high personal regard for the teaching profession, concern for professional development, and continuous improvement as teachers.

**Overall level of teaching performance.** Table 9 shows the overall level of teaching performance of the in-service teachers as evaluated by themselves and their principals. Generally, the in-service teachers were evaluated outstanding in their teaching performance as indicated by an overall mean of 4.640.

Table 9. Overall level of teaching performance of the in-service teachers as evaluated by themselves and their principals

Overall Teaching Performance	In-service Teachers	Principals	Overall Mean
	Mean	mean	
1 Social Regard for learning	4.651	4.776	4.714
2 Learning environment	4.654	4.691	4.673
3 Diversity of Learners	4.579	4.687	4.633
4 Curriculum	4.669	4.708	4.689
5 Planning, assessing and reporting	4.640	4.706	4.673
6 Community linkages	4.350	4.451	4.401
7 Personal growth and professional development	4.737	4.662	4.700
<b>Mean</b>	<b>4.620</b>	<b>4.682</b>	<b>4.640</b>
<b>Descriptive Rating</b>	<b>Outstanding</b>	<b>Outstanding</b>	<b>Outstanding</b>

Findings indicate that the in-service teachers exceedingly perform their tasks as role models to their learners providing meaningful and satisfying learning experiences when dealing with diverse learners and facilitating better learning that greatly ensures quality output.

**Difference on the In-service Teachers' Level of Teaching Performance when grouped according to Demographic Variables**

Table 10. Difference on the level of teaching performance of in-service teachers when grouped according to marital status

Level of Teaching Performance	Marital Status	N	Mean	T-Test		
				Descriptive Value	t-value	Significance
<i>Diversity of learners</i>	Married	66	4.639	<i>Outstanding</i>	5.0285	0.0000**
	Single	2	4.450	<i>Outstanding</i>		
<i>Community linkages</i>	Married	66	4.413	<i>Outstanding</i>	4.3334	0.0488*
	Single	2	4.000	<i>Very Satisfactory</i>		
<i>Personal growth and professional development</i>	Married	66	4.875	<i>Outstanding</i>	3.9181	0.0027**
	Single	2	4.696	<i>Outstanding</i>		
<i>Over-all</i>	Married	66	4.644	<i>Outstanding</i>	2.6930	0.0326*
	Single	2	4.535	<i>Outstanding</i>		

\*0.05 level of significance

\*\*0.01 level of significance

Table 10 shows that there is a significant difference on the level of teaching performance of the in-service teachers in terms of diversity of learners, community linkages, and personal growth and professional development when grouped according to marital status. This implies that the level of teaching performance of the in-service teachers in terms of diversity of learners, community linkages, and personal growth and professional development of the respondents who are married is higher as compared to the respondents who are single.

Table 11. Difference on the level of teaching performance of in-service teachers when grouped according to highest educational attainment

Level of Teaching Performance	Highest Educational Attainment	ANOVA				
		N	Mean	Descriptive Value	F-value	Significance
<i>Curriculum</i>	BS	5	4.7420	<i>Outstanding</i>	3.2867	0.0437*
	With MS/MED units	49	4.6400	<i>Outstanding</i>		
	MS/MED	14	4.8507	<i>Outstanding</i>		

\*0.05 level of significance

Table 11 shows that there is a significant difference on the level of teaching performance of the in-service teachers in terms of curriculum when grouped according to the highest educational attainment.

Table 12. Post-Hoc test on the difference on the level of teaching performance of the respondents in terms of curriculum when grouped according to Highest Educational Attainment

Dependent Variable	Highest Educational Attainment		Mean Difference	Significance
<i>Curriculum</i>	with MS/Med Units	MS/MED	-0.2107	0.0139*

\*0.05 level of significance

Table 12 shows that the level of teaching performance in terms of curriculum of the in-service teachers with MS/MED degree is significantly higher than those with units in MS/MEd. This indicates that the MS degree holders have better teaching performance as compared to those with units in MS/MEd.

Table 13. Difference on the level of teaching performance of in-service teachers when grouped according to district where school assignment belongs

ANOVA						
Level of Teaching Performance	District where school belongs	N	Mean	Descriptive Value	F-value	Significance
<i>Diversity of learners</i>	District 1	17	4.6341	<i>Outstanding</i>	2.2805	0.0877*
	District 2	28	4.6046	<i>Outstanding</i>		
	District 3	6	4.4100	<i>Outstanding</i>		
	District 4	17	4.7594	<i>Outstanding</i>		

\*0.05 level of significance

Table 13 reveals that there is a significant difference on the level of teaching performance of the in-service teachers in terms of diversity of learners when grouped according to the district where the school assignment belongs.

Table 14. Post-Hoc test on the difference on the level of teaching performance of the respondents in terms of diversity of learners when grouped according to district where the school assignment belongs.

Dependent Variable	District where the school assignment belongs		Mean Difference	Significance
<i>Diversity of Learners</i>	District 2	District 4	-0.2268	0.0134*

\*0.05 level of significance

Table 14 shows that there is a significant difference on the level of teaching performance of the in-service teachers in terms of diversity of learners of the respondents from district 2 and district 4. This implies that the level of teaching performance of the in-service in district 4 is significantly higher as compared to the teaching performance of the in-service teachers in district 2.

Table 15 shows that there is a significant difference on the level of teaching performance of the in-service teachers in terms of learning environment, diversity of learners, and curriculum when grouped according to teaching position.

Table 15. Difference on the level of teaching performance of in-service teachers when grouped according to teaching position

		ANOVA				
	Teaching Position	N	Mean	Descriptive Value	F-value	Significance
<b>Learning environment</b>	Teacher 1	6	4.480	Outstanding	2.4576	0.0427*
	Teacher 2	6	4.690	Outstanding		
	Teacher 3	41	4.629	Outstanding		
	MT 1	5	4.870	Outstanding		
	MT 2	9	4.908	Outstanding		
	SPET 1	1	4.500	Outstanding		
	Teacher 1	6	4.410	Outstanding		
Teacher 2	6	4.645	Outstanding			
Teacher 3	41	4.589	Outstanding			
MT 1	5	4.826	Outstanding			
MT 2	9	4.874	Outstanding			
SPET 1	1	4.590	Outstanding			
<b>Curriculum</b>	Teacher 1	6	4.415	Outstanding	2.7344	0.0269*
	Teacher 2	6	4.761	Outstanding		
	Teacher 3	41	4.658	Outstanding		
	MT 1	5	4.888	Outstanding		
	MT 2	9	4.852	Outstanding		

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		4.830	
SPET 1	1	0	<i>Outstanding</i>

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*\*0.05 level of significance*

Table 16 shows that in terms of *learning environment*, the level of teaching performance of the respondents occupying a Teacher 1 position is lower as compared to the respondents occupying Master Teacher 1 and Master Teacher 2 position. The table also shows that the level of teaching performance in terms of learning environment of the respondents occupying Teacher 3 position is significantly lower as compared to respondents occupying a Master Teacher 2 position.

In terms of *diversity to learners*, the level of teaching performance of the respondents occupying a Master Teacher 2 position is significantly higher as compared to those occupying Teacher 1 and Teacher 2 positions. The level of teaching performance in terms of diversity of learners of the respondents occupying Master Teacher 1 position is significantly higher as compared to the respondents occupying a Teacher 1 position.

Furthermore, in terms of *curriculum*, the level of teaching performance of the respondents occupying a Teacher 1 position is significantly higher as compared to those occupying Teacher 2, Teacher 3, Master Teacher 1, and Master Teacher 2 positions. This indicates that among all the teaching positions, respondents occupying Teacher 1 position are of the lowest level. This further implies that the level of teaching performance in terms of curriculum of the respondents occupying Master Teacher 2 position is significantly higher as compared to the respondents occupying Teacher 3 position.

Table 16. Post-Hoc test on the difference on the level of teaching performance of the respondents in terms of learning environment, diversity of learners, and curriculum when grouped according to Teaching Position

<b>Dependent Variable</b>	<b>Teaching Position</b>		<b>Mean Difference</b>	<b>Significance</b>
<b><i>Learning environment</i></b>	Teacher 1	MT 1	-0.3900	0.0306*
	Teacher 1	MT 2	-0.3880	0.0122*
	Teacher 3	MT 2	-0.2390	0.0232*
<b><i>Diversity of learners</i></b>	Teacher 1	MT 1	-0.4160	0.0189*
	Teacher 1	MT 2	-0.4360	0.0043**
	Teacher 3	MT 2	-0.2567	0.0131*
<b><i>Curriculum</i></b>	Teacher 1	Teacher 2	-0.3467	0.0272*
	Teacher 1	Teacher 3	-0.2430	0.0402*
	Teacher 1	MT 1	-0.4730	0.0046**
	Teacher 1	MT 2	-0.4350	0.0023**
	Teacher 3	MT 2	-0.1920	0.0445*

\*0.05 level of significance  
 \*\*0.01 level of significance

Table 17 shows that there is a significant difference on the level of teaching performance of the in-service teachers in terms of learning environment, diversity of learners, and curriculum when grouped according to salary grade.

Table 17. Difference on the level of teaching performance of in-service teachers when grouped according to salary grade

Level of Teaching Performance	Salary Grade	ANOVA				
		N	Mean	Descriptive Value	F-value	Significance
<i>Learning environment</i>	SG11	6	4.4800	<i>Outstanding</i>	3.0627	0.0227*
	SG12	6	4.6900	<i>Outstanding</i>		
	SG13	41	4.6290	<i>Outstanding</i>		
	SG14	1	4.5000	<i>Outstanding</i>		
	SG18	5	4.8700	<i>Outstanding</i>		
	SG19	9	4.9089	<i>Outstanding</i>		
<i>Diversity of learners</i>	SG11	6	4.4100	<i>Outstanding</i>	3.4038	0.0139*
	SG12	6	4.6450	<i>Outstanding</i>		
	SG13	41	4.5893	<i>Outstanding</i>		
	SG14	1	4.5900	<i>Outstanding</i>		
	SG18	5	4.8260	<i>Outstanding</i>		
	SG19	9	4.8744	<i>Outstanding</i>		
<i>Curriculum</i>	SG11	6	4.4150	<i>Outstanding</i>	3.3489	0.0150*
	SG12	6	4.7617	<i>Outstanding</i>		
	SG13	41	4.6580	<i>Outstanding</i>		
	SG14	1	4.8300	<i>Outstanding</i>		
	SG18	5	4.8880	<i>Outstanding</i>		
	SG19	9	4.8522	<i>Outstanding</i>		

\*0.05 level of significance

Table 18 shows that in terms of *learning environment*, the level of teaching performance of the in-service teachers with salary grade 11 is significantly lower than those with salary grade 18 and salary grade 19. The level of teaching performance of those with salary grade 13 is significantly lower as compared to those with salary grade 19.

In terms of *diversity to learners*, the level of teaching performance of the in-service teachers with salary grade 11 is significantly lower as compared to those with salary grade 18 and salary grade 19. The level of teaching performance of those with salary grade 13 is significantly lower as compared to those with salary grade 19.

In terms of *curriculum*, the level of teaching performance of the in-service teachers with salary grade 11 is significantly lower as compared to those with salary grades 12, 13, 18, and 19. This indicates that among the salary grades, in-service teachers with salary grade 11 have the lowest level of teaching performance.

Table 18. Post-Hoc test on the difference on the level of teaching performance of the respondents in terms of learning environment, diversity of learners, and curriculum when grouped according to Salary Grade

Dependent Variables	Salary Grade		Mean Difference	Significance
<i>Learning environment</i>	SG11	SG18	-0.3900	0.0286*
	SG11	SG19	-0.4289	0.0062**
	SG13	SG19	-0.2829	0.0094**
<i>Diversity of learners</i>	SG11	SG18	-0.4160	0.0181*
	SG11	SG19	-0.4644	0.0028**
	SG13	SG19	-0.2852	0.0079**
<i>Curriculum</i>	SG11	SG12	-0.3467	0.0276*
	SG11	SG13	-0.2471	0.0374*
	SG11	SG18	-0.4730	0.0047**
	SG11	SG19	-0.4372	0.0028**

\*0.05 level of significance

\*\* 0.01 level of significance

### Relationship between the In-Service Teachers' Level of Teaching Performance and Demographic Variables

Table 19 shows that there is a significant relationship between the *teaching position* and the level of teaching performance in terms of *learning environment, diversity to learners, curriculum, planning, assessing & reporting and overall performance*. This indicates that the higher the teaching position the higher the level of teaching performance in terms of learning environment, diversity to learners, curriculum, planning, assessing & reporting and their overall performance.

Table 19. Relationship between the demographic profile and the level of teaching performance

Demographic Variables		Social Regard of Learning	Learning Environment	Diversity of Learners	Curriculum	Planning, Assessing, Reporting	Overall
Teaching Position	Pearson Correlation	.211	.312(**)	.353(**)	.348(**)	.279(*)	.278(*)
	Sig. (2-tailed)	.084	.010	.003	.004	.021	.022
Salary Grade	Pearson Correlation	.245(*)	.383(**)	.400(**)	.348(**)	.317(**)	.310(*)
	Sig. (2-tailed)	.044	.001	.001	.004	.008	.010

\*0.05 level of significance

\*\*0.01 level of significance

The table also reveals that there is a significant relationship between the *salary grade* of the in-service teachers and the level of teaching performance in terms of *social regard to learning, learning environment, diversity to learners, curriculum, planning, assessing & reporting and overall performance*. This implies that the higher the salary grade of the teachers the higher the level of teaching performance in terms of social regard to learning, learning environment, diversity to learners, curriculum, planning, assessing & reporting and their overall performance.

### Predictors of the In-Service Teachers' Level of Teaching Performance

Table 20. Factor that predicts the level of teaching performance of in-service teachers in terms of Social regard for learning

Variable	Beta In	T	Significance
<b>Salary Grade</b>	0.0280	2.0560	0.0437*
<b>Constant</b>	4.6048	72.8150	0.0000

Predictors in the Model: (Constant), salary

Dependent Variable: Social regard for learning

*\*0.05 level of significance*

Table 20 shows the factor that predicts the level of teaching performance of in-service teachers in terms of social regard for learning. The level of performance of in-service teachers in terms of social regard for learning is equal to  $4.6048 + 0.0280$  (salary grade). The table reveals that the salary grade of the respondents is a predictor of the level of teaching performance of in-service teachers in terms of social regard for learning.

Table 21. Factor that predicts the level of teaching performance of in-service teachers in terms of Learning environment

Variable	Beta In	T	Significance
<b>Salary Grade</b>	0.0464	3.3633	0.0013**
<b>Constant</b>	4.4927	70.2367	0.0000

Predictors in the Model: (Constant), salary

Dependent Variable: Learning environment

*\*\*0.01 level of significance*

Table 21 shows the factor that predicts the level of teaching performance of in-service teachers in terms of learning environment. The level of performance of in-service teachers in terms of learning environment is equal to  $4.4927 + 0.0464$  (salary grade). The table reveals that the salary grade of the in-service teachers is a predictor of the level of teaching performance of in-service teachers in terms of learning environment.

Table 22. Factors that predict the level of teaching performance of in-service teachers in terms of Diversity of learners

Variables	Beta In	T	Significance
<i>Salary Grade</i>	0.0510	3.8384	0.0003**
<i>Gender</i>	0.2097	2.1421	0.0359*
<i>Constant</i>	4.0423	20.4351	0.0000

Predictors in the Model: (Constant), salary, gender

Dependent Variable: Diversity of learners

\*0.05 level of significance

\*\*0.01 level of significance

Table 22 shows the factors that predict the level of teaching performance of in-service teachers in terms of diversity of learners. The level of performance of in-service teachers in terms of diversity of learners is equal to  $4.0423 + 0.2097$  (gender)  $+ 0.0510$  (salary grade). The table reveals that the salary grade and the gender of the respondents are predictors of the level of teaching performance of in-service teachers in terms of diversity of learners.

Table 23. Factor that predicts the level of teaching performance of in-service teachers in terms of Curriculum

Variable	Beta In	T	Significance
<i>Salary Grade</i>	0.0394	3.0150	0.0036**
<i>Constant</i>	4.5369	74.9101	0.0000

Predictors in the Model: (Constant), salary

Dependent Variable: Curriculum

\*\*0.01 level of significance

Table 23 shows the factor that predicts the level of teaching performance of in-service teachers in terms of curriculum. The level of performance of in-service teachers in terms of curriculum is equal to  $4.5369 + 0.0394$  (salary grade). The table reveals that the salary grade of the respondents is a predictor of the level of teaching performance of in-service teachers in terms of curriculum.

Table 24. Factor that predicts the level of teaching performance of in-service teachers in terms of Planning, assessing & reporting

Variable	Beta In	t	Significance
<i>Salary Grade</i>	0.0402	2.7130	0.0085**
<i>Constant</i>	4.5163	65.6988	0.0000

Predictors in the Model: (Constant), salary

Dependent Variable: Planning, assessing and reporting

*\*\*0.01 level of significance*

Table 24 shows the factor that predicts the level of teaching performance of in-service teachers in terms of planning, assessing and reporting. The level of performance of in-service teachers in terms of planning, assessing and reporting is equal to  $4.5163 + 0.0402$  (salary grade). The table reveals that the salary grade of the respondents is a predictor of the level of teaching performance of in-service teachers in terms of planning, assessing and reporting.

The above results indicate that salary grade and gender are powerful predictors of effective teaching performance. However, in a three-year study of graduates of a teacher education program that assessed the extent to which education and subject matter coursework predicted teaching performance, Ferguson & Womack (1993) established a conclusion that coursework in teacher education made a constructive difference in teaching performance and was a more influential predictor of teacher effectiveness than measures of content expertise.

## CONCLUSIONS

1. The in-service teachers are relatively young adults who are in the working stage, female and with family responsibilities. Having spent more than a decade in the teaching profession, they have felt the need to upgrade their pedagogical skills hence, their pursuit for higher degrees. As mentors to their successors, these in-service teachers were assigned to teach at the intermediate level. Most are from 1<sup>st</sup> and 2<sup>nd</sup> districts holding Teacher 3 position. They enjoy a permanent status and are remunerated with monthly compensation of salary grade 13.
2. The in-service teachers strongly uphold excellence in becoming role models to their learners; exceptionally focused on the importance of providing for a social, psychological and physical environment within which diverse learners can engage in the different learning activities and work towards attaining high standards of achievement; excellently facilitate learning by recognizing and respecting individual differences and designing equitable sets of learning activities to ensure that all learners can attain desired learning goals; highly consider the elements of the teaching-learning process that drive learners to realize the curricular goals and objectives and to attain high standards of learning; admirably focused on the use of assessment data to plan, revise, integrate and implement assessment procedures in the teaching-learning experiences and to provide feedback on the learner's actual achievement and behavior; sensibly link classroom activities to the experiences and aspirations

- of the learners in their homes and communities; extremely value that of having a high personal regard for the teaching profession, concern for professional development, and continually grow in and with the profession.
3. In-service teachers with family responsibilities perform better in diversity of learners, community linkages, and personal growth and professional development; those holders of master's degree and who were assigned in 4<sup>th</sup> district have better teaching performance in curriculum; master teachers perform remarkably in learning environment, diversity of learners and curriculum; and those who are compensated with higher salary grade manifest higher teaching performance in learning environment, diversity of learners and curriculum.
  4. The higher the teaching position, the higher the level of teaching performance in learning environment, diversity of learners, curriculum, and planning, assessing & reporting; and, the higher the salary grade of the in-service teachers, the higher the level of teaching performance in social regard to learning, learning environment, diversity of learners, curriculum, planning, assessing, and reporting.
  5. The salary grade of the in-service teachers is a powerful predictor of their remarkable teaching performance in social regard for learning, learning environment, diversity of learners, curriculum, and planning, assessing and reporting while their gender gives explanation to their excellent performance in dealing with diverse learners.

## RECOMMENDATIONS

1. **DepEd School Administrators.** The principals, supervisors and superintendent should craft development programs that will provide an avenue for their teachers to grow personally and professionally in order for them to better deliver quality instruction to the learners or end-users.
2. **Teacher Education Institutions.** TEIs should strengthen their teacher education programs or curricular offerings to better equip and hone pre-service teachers with desired competencies such as knowledge, skills, attitudes and values that they can draw on when they enter the teaching profession.
3. **In-Service Teachers.** In-service teachers should exert more efforts in delivering quality teaching to their clientele by keeping themselves abreast with the recent innovations of education and or teaching strategies and techniques that will further improve their teaching performance.
4. **Researchers.** Future researchers may replicate and explore other variables and or methodology in the conduct of a similar research.

## LITERATURE CITED

Cooper, James M. (1999). *The Teacher as a Decision Maker*. Classroom Teaching Skills 6<sup>th</sup> edition. Houghton Mifflin Company: New York.

Department of Education (2009). *The National Competency-Based Teacher Standards*. Mentors Town: Teachers for the 21<sup>st</sup> Century-The Most Comprehensive Education Resource in the Philippine Setting. Posted on July 5, 2009. Retrieved on July 18, 2013 from <http://saicebrian.wordpress.com/2009/07/05/national-competency-based-teacher-standards-ncbts/>

Ferguson, Patrick and Womack, S.T. (1993). *The Impact of Subject Matter and Education Coursework on Teaching Performance*. Journal of Teacher Education, v44 n1 p55-63 Jan-Feb 1993. ISSN-0022-4871. Retrieved on July 15, 2013 from [http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?\\_nfpb=true&\\_ERICExtSearch\\_SearchValue\\_0=EJ463322&ERICExtSearch\\_SearchType\\_0=no&accno=EJ463322](http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_ERICExtSearch_SearchValue_0=EJ463322&ERICExtSearch_SearchType_0=no&accno=EJ463322)

Tominez, B.A. and Palina, J.O.S. (2009). *A Pseudo-Phenomenological Inquiry on the Anatomy of the Outstanding Teacher Educators in a State University in the Philippines*. International Conference on Innovative Research in a Changing and Challenging World Conference Proceedings (B). Australian Multicultural Interaction Institute. May 18-20, 2012 Copyright 2012 ISBN 978-0-646-58268-9 pages 316-327. Retrieved on January 15, 2013 from [http://www.B\\_AMII\\_conference\\_proceeding\\_book.pdf](http://www.B_AMII_conference_proceeding_book.pdf)

*Peace Education: Community Development and National Prosperity*

Maha Mouchantaf

Notre Dame University, Lebanon

0594

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Abstract

In light of the current political dynamics and transformations that engulf the MENA region and especially Lebanon, Higher Education Institutions need to assist the youth in developing new values such as democracy and acceptance of the different other in order to maximize community development and consequently, national prosperity on the social and economic levels. This paper describes the process of reforming the Student Life Bylaws at Notre Dame University after integrating new civic engagement programs, democratic electoral system and conflict transformation workshops. This paper also demonstrates that the participating students in the reform decision making process might portray future engaged Lebanese leaders. In addition, it depicts the changes that resulted from their intensive work and engagement on the personal level in terms of democracy and acceptance of the different other.

**Keywords:** Peace Education, Democracy, Community Service, Civic Engagement, National Prosperity, Conflict Transformation.

## **Introduction**

Universal values such as peace, democracy, pacific conflict resolution and freedom became crucial for the survival of any society. Consequently, nations rely on their educational systems, notably schools and later on higher education institutions, to instill those values in their youth.

Situated in the boiling and controversial Middle East, Lebanon survived a thirty year civil war but its different societal constituents are still divided due to the absence of reconciliation and forgiveness necessary to overcome any war and achieve social cohesion. Furthermore, the youths' sense of belonging to the nation is practically nonexistent due to the lack of proper civic education programs at both the school and the university levels. Lebanese youths are struggling with their affiliations, namely religious and political. They were not trained to accept the different other and to adapt to new diversified environments. They witnessed verbal and physical violence that led them to reproduce the same model in their own distinct environments.

## **Case study background**

Notre Dame University (NDU) is a Lebanese private, non-profit, Catholic institution of higher education which adopts the American model of liberal arts education. NDU offers quality instruction at a variety of degree levels and offers opportunities for research in various fields of interest for Lebanese and foreign students alike in a spirit of openness that embraces all cultures, regardless of race, gender, color, religion, or sect. As a Catholic institution inspired by the cultural and spiritual heritage of the Maronite Order of the Holy Virgin Mary, NDU seeks to provide comprehensive quality education that fosters excellence in scholarship, lifelong learning, enlightened citizenship, human solidarity, moral integrity and belief in God. In designing its curricula, NDU is committed to the philosophy and standards of the American model of liberal arts education. Conceiving itself as an authentic academic community, NDU promotes diversity, respect for human dignity and rights, and concern for the common good. Its profound aspiration is to prepare its students to be future leaders who can exercise reason upon knowledge and shape a world of truth, justice, love and freedom. Since universities mirror their societies, conflicts arose between students in line with the country's continuous inter-religious and inter-sectarian conflicts. Tension on campus escalated between different political parties as in other universities' campuses across the nation. Since peace education is always bound to the problems prevailing in societies, and since there is a dire need for NDU students to acquire peaceful behavioral patterns, NDU launched a total reform program for its Student Union (SU) electoral law and by-laws. A task force was created for that purpose that comprises representatives from different faculties along with representatives of different political clubs in the University. The aim of the project was to bring together students from different social and political backgrounds in order to find common grounds and values to overcome preconceived ideas that hinder their coexistence. Twenty three meetings were held during the 2012 - 2013 academic year, three conflict resolution workshops were conducted with all members and the students presented six different electoral law proposals. Students worked hand in hand with the administration towards achieving their target. The new electoral law will be decided upon by the University authorities during the current year so all relative logistics will be implemented by the end of the current academic year. This new law should be approved by the current SU along with the University authorities in line with the

shared governance policy of NDU. Prior to relating the outcomes of this case study, a review of peace education and conflict resolution principles should be elucidated.

#### A review of Peace Education through Conflict Transformation

Peace education is currently considered to be both a philosophy and a process involving skills, including listening, reflection, problem-solving, cooperation and conflict resolution (Harris, 1996). The process involves empowering people with the skills, attitudes and knowledge to create a safe world and build a sustainable environment. The philosophy teaches nonviolence, love, compassion and reverence for all life. Peace education confronts indirectly the forms of violence that determinates society by teaching about its causes and providing knowledge of alternatives. Peace education also seeks to transform the present human condition by, as noted educator Betty Reardon states, “changing social structures and patterns of thought that have created it” (Reardon, 1988). Peace education is taught in many different settings, from nursery school to college and beyond. Community groups teach peace education to adults and children (Harris & Morrison, 2003).

Conflict resolution or transformation consists of training people to find peaceful solutions to conflicts and to practice win-win situations for all parties. Skills used in conflict resolution are similar to those used in innovative instructional strategies, such as cooperative learning. When students work together on academic exercises, they learn to use the positive interpersonal skills

of caring, leadership, trust and conflict management. The ability to employ these skills in one facet of daily interaction will enhance the ability to use them in others. Indirectly, there is a compound effect on these instructional and conflict resolution strategies used across academic

and interpersonal dimensions in the learning environment (Adler, 1993).

The advantages of acquiring conflict resolution skills through education are well documented in the literature. While skills of conflict resolution are molded in educational institutions, they tend to be not followed up at home and in societies. Increasing pro-social actions, which reflect competence in peer interactions, friendships, and conflict resolution skills, can bring about the prevention of aggression (Grossman, Neekerman, Koepsell, Liu, Asher, Beland, Frey, & Rivara, 1997). Educators agree that problem solving, communication and nonviolent conflict resolution must be taught to address the problem of youth violence (DeJong, 1994). Researchers agree that interventions must stress nonviolent problem-solving and conflict resolution skills. Educational administrators and policy makers insist that any solution must emphasize prevention (Giuliano, 1994). Peer mediation allows educators to create safe school communities and combine “teachable moments” with experiential

learning strategies to encourage students to find peaceful ways to resolve conflict (DeJong, 1994). Peer mediators then reinforce the skills that teachers instill through use of the peer group. In this way, peers act as a protective factor, rather than a risk (Barnett, Adler, Easton, & Howard, 2001). David Hamburg, president of the Carnegie Corporation, stated that “the reversal of the trend of violence among the young depends on teaching students how to work cooperatively with others” (Hamburg, 1992). Protective factors, such as a positive orientation to school, positive relations with adults, awareness of friends who model conventional behavior, involvement in pro-social behavior and a perception of strong sanctions for transgressions, all lessen problem behavior and moderate risk factors (Jessor , Van Den Bos, Vanderryn, Costa,

& Turbin, 1995). Conflict resolution and peer mediation provide all of these protective factors. Involvement in peer mediation strengthens a student's positive orientation to school by providing a caring environment that is free from violence and encourages working together. Positive relations with adults are fostered through the interactions of peer mediators and teachers who train and supervise. The peer mediators that serve as the peer group also serve as the friends who model conventional behavior (Barnett, Adler, Easton, & Howard, 2001). Successful peer mediation programs recognize that conflict can be positive; it increases achievement, motivation, and reasoning, as well as social and cognitive development. Relationships are enriched and resilience is promoted through conflict. It is important to note that attempts to deny or suppress conflicts may actually contribute to violence (Johnson & Johnson, 1995). If conflict is not tackled, it is not solved, so it may grow into violent behavior and hostility. Educators must rely on the "teachable moments" that come with academic controversies, or when ideas, information, conclusions, theories, and opinions of one student differ from another (Johnson & Johnson, 1995). According to Johnson and Johnson (1996, p11), "Training every student how to negotiate and mediate will ensure that future generations are prepared to manage conflicts constructively in career, family, community, and national and international settings." This will result in a positive learning environment. The learned pro-social behavior is fundamental to successful functioning in society (Masten & Coatsworth, 1998).

### **Case Study Findings**

Following the workshops, meetings and presentations, the participating students reported the following ten most important learning outcomes in their testimonies:

1. Developing social interaction on deeper levels, freedom of speech, no prejudices
2. Building bridges and capacities with others based on common points
3. Respecting the others even when disagreeing with them or misunderstanding them
4. Enjoying living together not only "tolerating" but fully embracing the others
5. Widening knowledge about other religions and accepting different ideas and perspectives
6. Appreciating diversity, human rights and women's rights
7. Importance of dialogue for solving problems
8. There is a dire need to communicate even if we are different. Difference doesn't mean conflict.
9. Diversity does not have to lead to dispute but to coexistence and respect.
10. What matters is our knowledge and behavior regardless what we believe in.

Furthermore, samples of their testimonies related reflections such as "I've rated the experience as high to encourage such intuitions. I think that support has been offered to students where a meaningful dialogue developed. The activities have improved our ability to communicate by offering us some ground rules for discussion and engaging us with comfortable simple discussion topics"– F.M, BA Mass Communication. "The experience was excellent, beautiful interaction, plus the discovery of a new club. I learned to forget political opinions, be easy going, common living, interactive and forget cultural and political differences" – E.W., BA International Affairs and Diplomacy.

The faculty members representing their respective faculties on the task force reported less tension between students, increased trust and positive attitude among students during and after the activities.

### **Summary, Conclusions and Recommendations**

The NDU task force activities aiming at developing peace building and peaceful conflict resolution skills seem to have impacted positively the university environment based on participating students and faculty members' testimonies. Tackling the different conflicts from a peaceful perspective induced tolerance, respect and acceptance attitudes. Reported violent incidents decreased and a climate of open communication was present. Tensions among different political parties did not escalate into fights and confrontations.

Further research on integrating conflict transformation and peace building values across the curriculum might expand the results of this case study to a larger scale. Embedding those values will enhance democratic practices and contribute to building a more humane, open, free and responsible society. Furthermore, it will help in shaping generations that will overcome clashes based on extremism, religion and culture. Our role as educators is to bridge the gaps among divided communities and engage our students in promoting the general welfare rather than individual acquisitions.

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## References

- Adler A. (1993). *A rationale for teaching conflict resolution*. West Palm Beach, FL: School District of Palm Beach County.
- Barnett, R. V., Adler, A., Easton, J., & Howard, K. P. (2001). An evaluation of peace education foundation's conflict resolution and peer mediation program. *School Business Affairs*, 29-39.
- DeJong, W. (1994). School-based conflict resolution: Give educators more credit. *Journal of Health Affairs* 13(4), 163-164.
- Giuliano, J. D, (1994). A peer education program to promote the use of conflict resolution skills among at-risk school age males. *Public Health Reports*, 109(2), 158-161.
- Grossman, D. C., Neekerman, H. J., Koepsell, T. D., Liu, P. Y., P.Y. Asher, K.N., Beland, K., Frey, K., & Rivara, I.P.(1997). Effectiveness of a violence prevention curriculum among children in elementary school. *Journal of American Medical Association*, 277(20), 1605-1611.
- Hamburg, D. A. (1992). *Today's children: Creating a future for a generation in crisis*. New York, NY: Random House.
- Harris, I. (1996). Peace Education in a Post-modern World. *Peabody Journal of Education*, 73(3), 1-11.
- Harris, I., & Morrison, M. L. (2003). *Peace education*. North Carolina: McFarland & Company, Inc. Jefferson,
- Johnson, D. W., & Johnson, R. T. (1995). Why violence prevention programs don't work—and what does. *Educational Leadership*, 52(5), 63-67.
- Johnson, D. W., & Johnson, R. T. (1996). Reducing school violence through conflict resolution training. *NASSP Bulletin*, 80(579), 11-18.
- Reardon, B. (1988). *Comprehensive peace education: Educating for global responsibility*. New York: Teacher College Press.

*The Development of Pre-Service Science Teachers' Teaching Practices through Reflective Process*

Akarat Tanak

Kasetsart University, Thailand

0614

The Asian Conference on Education 2013

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Abstract

The purposes of this descriptive research were to develop a criterion for evaluating pre-service science teachers' teaching practices and to study the effect of using criterion in supervision process through reflective process. The views of cooperating teachers and university supervisors on pre-service science teachers' teaching practices were collected by questionnaire. The data was analyzed and served as a basis for developing the standard criteria. In supervision process, five student teachers used the standard criterion as a self-assessment form to reflect and improve their practices in a post-observation session, and then provided feedbacks by cooperating teachers and university supervisors. The classroom observations and an interview protocol were used as research tools to gather the effect of reflective process.

The findings showed that three aspects of planning instruction, teaching, and learning environment included in the standard criterion. In aspect of planning instruction, there were six items including understanding about curriculum, content knowledge, teaching strategies/techniques, students learning, learning media and resources and assessment techniques. In aspect of teaching, there were six items including effective instruction, meaningful learning, appropriate assessment, effective communication, effective use of media, resources and technology and time management. The learning environment included care and respect to students, physical environment, motivated student learning, and classroom management. It also found that using reflective process could improve pre-service science teachers' teaching practices. They performed increasingly on effective instruction, effective use of media, resources and technology and appropriate assessments, whereas, effective communication and classroom management were still significant problems.

**Keywords:** preservice, science teachers, teaching practices, reflective process

## INTRODUCTION

Teaching practice is a crucial aspect of teacher preparatory program in teacher preparation institution. It is the period when student teachers are aided to put the theories and principles of education which they have learnt in classroom into practice. Hence, Ministry of Education, who functioned the contribution a systematic developing and producing process for the teacher with proper qualification as well as standardization of advanced teaching profession through supervising and coordinating the teaching institutions to produce and develop the teacher, changed the policy of teacher preparation by revising the curriculum of teacher production from the 4 year-program to 5 year-program. (Office of the Higher Education Commission, 2004) In teacher's curriculum of 5 year-program, student teacher has to spend the time for course work study intensively for 4 years and teaching experience practice in the school for another year.

It has a significant role in assisting the pre-service teachers gain the expertise and confidence in their teaching. It is not enough simply to place a student teacher in a classroom setting; the supervision is a critical to the development of preservice teachers. Supervising or cooperating teachers are an essential component for developing preservice teachers' practice in schools. The supervising and cooperating teacher plays a significant role in the development of the student teachers' skills, knowledge, and attitudes (Karmos & Jacko, 1977; Lowther, 1968). Their role includes the dimensions of model, mentor, provider of feedback, and coach. However, the result of preservice science teacher seminar during field experiences address problems in teaching science effectively, such as planning lessons, organizing instruction, and selecting and using learning media and faced problems in supervising of cooperating teachers and university supervisors. (Office of Education Field Experiences, 2001; Roadrangka and Srisukvatananan, 2002)

One of the reasons attributed to the low quality in preservice science teachers' teaching practices was the supervising process that did not lead to fulfill development. For a number of years now, the practical element of pre-service teacher education has been taken in primary and secondary schools under the guidance of cooperating teachers in school, and supervisors in the university department of education. The role of cooperating teacher and supervisors is essentially one of supervising, helping and encouraging the work of the student teacher, and also giving an assessment of their abilities to teach during the practice. However, most of the assessment forms are grading on a four-five scale, simply 'satisfactory' or 'unsatisfactory' sometimes accompanied by a written report. Some of the difficulties inherent in assessment by grading were found. The teaching mark lacks validity, i.e. it does not assess what it purposes to assess, it reflects only a strictly limited number of teaching skills rather than the whole range of the student's teaching ability. Assessment by grading is not objectivity; grading depends on cooperating teacher and supervisors' experiences and views. The problem on disagreement between the cooperating teacher and the supervisor was found (Roadrangka and Srisukvatananan, 2002). The cooperating teacher and supervisor should together evaluate the student teacher on the basis of the appropriate standards. Therefore, it is necessary to design the assessment standard criteria to guide cooperating teacher and supervisors.

Additionally, the active supervision process should be required to make supervision process success. The reflective teaching process was the process that teacher learn and create knowledge by critically reflecting upon their own action and experiences. Student teachers are encouraged to provide opportunity and support for themselves and others for reflection on both the content and the learning process as well as to model reflective thinking on the strategies for learning as well as what they learned (Schon, 1987). However, there are no assessment standard criteria for preservice teacher that aligned with professional standards in Thailand. Hence, this research aimed to develop a criterion for evaluating pre-service science teachers' teaching practices based on cooperating teachers and university supervisors' views and to assess the efforts in using reflective process infused into the teaching practice of student teachers in a faculty of education in Thailand.

### **PURPOSES OF THE STUDY**

The purposes of this study are to develop a criterion for evaluating pre-service science teachers' teaching practices and to study the effect of using criterion in supervision process through reflective process.

### **RESEARCH DESIGN**

We employed descriptive research method to develop a criterion for evaluating pre-service science teachers' teaching practices based on cooperating teachers and university supervisors' views. The research procedure was divided into two phases.

Phase I: Development of a criterion to evaluate pre-service science teachers' teaching practices based on survey views of cooperating teachers and university supervisors in schools and science teacher preparing institutes in Thailand. The questionnaires about pre-service science teachers' teaching practices were distributed to ninety science cooperating teachers in forty five schools and thirty university supervisors in fifteen teacher preparing institutes in Thailand. The data then was analyzed and served as a basis for developing the standard criteria. The meeting was conducted with five experienced cooperating teachers and five university supervisors to modify the standard criterion.

Phase II: The implementation of a criterion to evaluate pre-service science teachers' teaching practices through reflective process. In supervision process, five student teachers used the standard criterion as a self-assessment form to reflect and improve their practices in a post-observation session, and then provided feedbacks by cooperating teachers and university supervisors.

### **PARTICIPANTS**

During October, 2011, ninety science cooperating teachers in forty five schools and thirty university supervisors in fifteen teacher preparing institutes in Thailand were invited to response in a questionnaire items about their practices and views on evaluating pre-service science teachers' teaching practices. Forty-nine science cooperating teachers and supervisors agree to response. Then, five experienced cooperating teachers and five university supervisors were invited to participate in

focus group to modify the standard criterion based on cooperating teachers and university supervisors' views. During January-February, 2012, five student teachers and their cooperating teachers and university supervisor were invited to use the standard criterion as an assessment tool to reflect and improve student teachers' practices in a post-observation session.

## **DATA COLLECTION AND ANALYSIS**

The development of the criterion for evaluating pre-service science teachers' teaching practices was based on the literature and then pilot survey. A review of the literature on preservice performance assessment /teacher candidate evaluation rubric (California Commission on Teacher Credentialing, 2009; The Commonwealth of Massachusetts Department of Education, 2011; Westfield State College, 2011; Wittenberg University, 2011) was conducted to be a guideline for developing questionnaire items. The survey were composed of 46 items used a rating scale for response. It measured on these things 1) how often cooperating teachers/ university supervisors' evaluating preservice science teachers' practices on three aspects of planning, teaching and environment, 2) which performance indicator items cooperating teachers/ university supervisors viewed as the key that should be included in the assessment criteria. In aspect of planning, 16 indicators of performance items under 5 criteria of understands curriculum (2 items), content knowledge (5 items), teaching strategies (3 items), student learning (3 items), and diverse learners (3 items) were included. In aspect of teaching, 22 indicators of performance items under 6 criteria of effective instruction (4 items), organizes meaningful learning (5 items), engages student learning (2 items), uses appropriate assessment (4 items), effective communication (5 items), uses appropriate and uses of media, resources, and technology (2 items) were stated. In aspect of environment, 8 indicators of performance items under 5 criteria of cares, respects and supports learning environment (2 items), manages physical environments effectively (4 items), and facilitates student engagement (2 items). Developed criteria and performance indicators, based on the literature, was pilot test on ninety science cooperating teachers in forty five schools and thirty university supervisors in fifteen teacher preparing institutes in Thailand in October, 2011. After eliminating surveys with incomplete responses, the data analyzed from this survey involved the perception of 49 experienced cooperating teachers and university supervisors were used as a guideline for revising the criteria. The meeting was conducted with five experienced cooperating teachers and five university supervisors to modify the standard criterion.

During the implementation phase, the modified criteria were used as a reflective tool for student teachers to improve their practices in supervision process. Supervision process included conducting classroom observations to observe the teaching and learning process. Five student teachers were asked to design and teach a lesson plan. Classroom observation by cooperating teachers and university supervisors were conducted to record what student teachers actually said and did during the instructional process. Cooperating teachers and university supervisors were asked to respond to statements on a four-point rubric scale. These statements were later used during a follow-up discussion with student teachers. In post-observation session, student teachers were encouraged to reflect on and self-analyze their own teaching and performance. Student teachers were asked to identify strength patterns in an

independent self-analysis of the observation data and briefly describe how they might develop appropriate strategies that lead to an improvement in the instructional process. Next, cooperating teachers and university supervisors provided feedback and guidance to improve instruction. The supervision process was conducted three times for each student teacher. To analyze the development of pre-service science teachers' teaching practices, the progression of rubric scales of the three times of classroom observation were categorized into four groups, including increase, decrease, stable and unstable.

## RESULTS

### Phase I: development of a criterion to evaluate pre-service science teachers' teaching practices

The following criteria and indicators of performances were developed based on the consideration, but not follow completely, on the result of survey views of cooperating teachers in schools and university supervisors and focus group interview with five experienced cooperating teachers and five university supervisors. The three aspects of planning instruction, teaching, and learning environment were included in the standard criterion. In aspect of planning instruction, there were six criteria including understanding about curriculum, content knowledge, teaching strategies/techniques, students learning, learning media and resources and assessment techniques. Moreover, the indicators of performances that describe what pre-services science teacher should demonstrate in each criteria are informed as following:

**Table I: Criteria and Indicators of Performance in aspect of planning**

criteria	Indicators of performances
1. Understands the curriculum	<ul style="list-style-type: none"> <li>- Plans lesson goals that are clear, relate to academic content standards and content to be taught</li> <li>- Plans lesson goals that cover three domains that can be observed and measured</li> <li>- Plans lesson that aligns goals, content, activities, and evaluation</li> </ul>
1. Understands content knowledge	<ul style="list-style-type: none"> <li>- Plans lesson demonstrate central concepts, skills, and basic vocabulary that related to lesson goals and content standard</li> <li>- Plans lesson that are accurate in content and clearly represent subject matter content</li> <li>- Understands about nature of science and plan lesson that provide opportunities for students to use process of investigation in science</li> <li>- Understands and connects content to be taught to everyday lives</li> </ul>
1. Understands teaching strategies/techniques	<ul style="list-style-type: none"> <li>- Selects teaching methods, activities and materials appropriate for students and content</li> <li>- Plans lesson method emphasizing student-centered and knowledge construction</li> </ul>
1. Understands student learning	<ul style="list-style-type: none"> <li>- Plans lesson that recognize the interests, abilities, needs, prior knowledge and experiences of group and individual students</li> <li>- Plans lesson that varied use of differentiated instruction techniques to</li> </ul>

criteria	Indicators of performances
	meet student differences - Plans lesson that provide learning opportunity to select learning activity based on individual and group interests
1. Prepare media, materials and resources	- Selects appropriate media, materials that are aligned with subject matter, learning activities and student abilities - Plans lesson using appropriate and multiple resources - Selects media, materials and resources relevant to local
1. Understands assessment methods	- Plans lesson using assessment methods that are relate to three domains, including knowledge, process, and attitude - Uses several and practical assessment methods - Uses authentic assessment method that appropriate to what they want to assess - Uses assessment method based on individual difference

### Aspect II: Teaching

In aspect of teaching, there were six criteria including effective instruction, meaningful learning, appropriate assessment, effective communication, and effective use of media, resources and technology and time management. Moreover, the indicators of performances that describe what pre-services science teacher should demonstrate in each criteria are informed as following:

**Table II: Criteria and Indicators of Performance in aspect of teaching**

criteria	indicators of performances
1. Delivers Effective instruction	<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>- Encourages student interest that relate to content and not explain key words to be taught</li> <li>- Elicits student prior knowledge/basic concept that align with subject matter being taught and then stimulates classroom discussion</li> <li>- Asks question that connect student prior knowledge/interest to learning activities</li> </ul> <p><b>Teaching</b></p> <ul style="list-style-type: none"> <li>- Makes connection between student prior knowledge/ interest and learning activity</li> <li>- Asks questions to discuss clearly on purpose, procedure, materials, data to be recorded</li> <li>- Engages students to do hands-on activities usin process of</li> </ul>

criteria	indicators of performances
	investigation in science - Asks question to stimulate thinking and participating in classroom discussion to conclude key concept
	<b>Conclusion</b> - Provides opportunities for students to construct knowledge by themselves - Uses questioning or other assessment techniques to assess student learning
2. organizes meaningful learning	- Uses varied activities and materials that meet the learning of all students - Provides opportunities for students to practice and apply learning to promote understanding in deeper and real-life contexts - Teacher effectively combine independent, cooperative, and whole class organization strategies to maximize student understanding and learning
3. Use appropriate assessment	- Monitors student understanding during instruction and makes adjustments to the lesson to promote learning - Uses several kinds of assessment methods to assess knowledge, skills and attitude during instruction - Provides feedback immediately for informing and/or redirecting student learning
4. effective communication	- Displays effective use of voice - Displays clear and meaningful language and appropriate to student age - Displays correct use of oral and written language including correct use of vocabulary related to content being taught - Listens to student answers both correct and incorrect and then stimulates discussion - Displays appropriate waiting time
5. appropriate and effective use of media, resources, and technology	- Selects and uses several and creative media, materials, and technology to support student learning - Uses accurate media, materials and technology
6. time management	- Uses appropriate time with content and learning activities - Uses instructional time productively and effectively

### Aspect III: learning environment

The learning environment included care and respect to students, physical environment, motivates student learning, and classroom management. Moreover, the indicators of performances that describe what pre-services science teacher should demonstrate in each criteria are informed as following:

**Table III: Criteria and Indicators of Performance in aspect of learning environment**

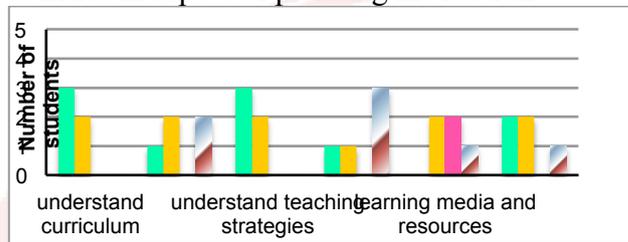
criteria	Performance indicators
1. caring, respectful and supportive learning environment	<ul style="list-style-type: none"> <li>- Uses speech and body language with respect and care and honors their differences</li> <li>- Creates a climate that promotes fairness and positive social interaction</li> <li>- Creates safety climate in sharing ideas and not ignore or reject student incorrect answers</li> </ul>
2. Manages physical environments effectively	<ul style="list-style-type: none"> <li>- organizes physical environments to support instructional activities</li> <li>- manage clean, lighten, and quiet classroom environment</li> <li>- Takes care classroom environment, provide appropriate media and materials accessible to all student</li> </ul>
3. motivates student engagement	<ul style="list-style-type: none"> <li>- engages student learning in group and individual</li> <li>- engages student social interaction to construct knowledge</li> <li>- uses appropriate positive and negative supports to promote student learning</li> </ul>
4. Uses classroom management techniques	<ul style="list-style-type: none"> <li>- uses a variety of classroom management techniques</li> <li>- shows instant problem solving</li> </ul>

Phase II: The implementation of a criterion to evaluate pre-service science teachers' teaching practices through reflective process

The cooperating teachers and supervisors responded to various statements on a four-point rubric scale. These statements were combined into three aspects, including planning instruction, teaching, and learning environment. For each aspect, we separately reported the development of pre-service science teachers' teaching practices of their cooperating teachers and university supervisors' views (See picture 1-3). However, the correlations between cooperating teachers' perceptions of student teachers' teaching practices were comparable to supervisors' perceptions.

As a result of the study, reflective process stimulated majority of the student teachers to be greatly developed in teaching practices in two aspects of planning instruction and instruction. However, the abilities in organizing learning environment were stable.

Picture 1: University supervisors and cooperating teachers' views on student teachers' abilities in aspect of planning instruction

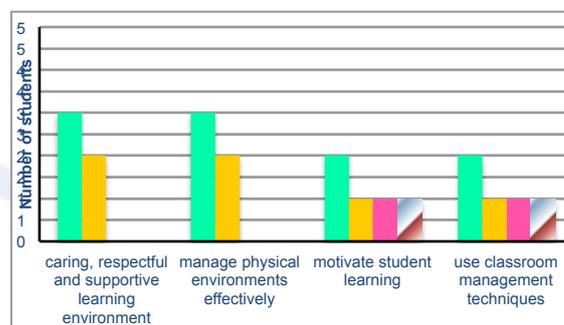


University supervisors' views

Cooperating teachers' views

In the first aspect on planning instruction, six criteria including understanding about curriculum, content knowledge, teaching strategies/techniques, students learning, learning media and resources and assessment techniques were evaluated (See picture 1). The perceived teaching practice level of the student teachers rated by university supervisors and cooperating teachers in were equivalent. They viewed that student teachers' abilities in planning instruction were increased. The university supervisors viewed that equal number of student teachers developed abilities in planning instruction in five criteria including understanding about curriculum, content knowledge, teaching strategies/techniques, learning media and resources and assessment techniques. It was also noticed that most of student teachers showed their abilities in understanding about curriculum and teaching strategies/techniques in stable level and showed unstable level in criteria about understanding about learning. Moreover, the cooperating teachers viewed that the majority of student teachers developed abilities in planning instruction in two criteria including understanding about student learning and learning media instruction.

Picture 2: University supervisors and cooperating teachers' views on student teachers' abilities in aspect of instruction



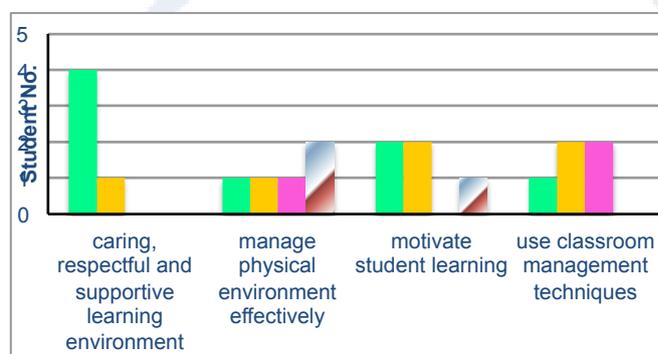
University supervisors' views

Cooperating teachers' views

In the aspect of teaching, six criteria including effective instruction, meaningful learning, appropriate assessment, effective communication, and effective use of media, resources and technology, and time management were evaluated (See picture

2). The perceived teaching practice level of the student teachers rated by university supervisors and cooperating teachers in were equivalent. They viewed that student teachers' abilities in teaching were placed in increase level. The university supervisors viewed that the majority of student teachers developed abilities in teaching in two criteria including use appropriate assessment techniques and effective use of media, resources and technology. It was also noticed that most of student teachers showed their abilities in organizing meaningful learning in unstable level. Similarly, the cooperating teachers viewed that the majority of student teachers developed abilities in teaching in criteria of use appropriate assessment techniques.

Picture 3: University supervisors and cooperating teachers' views on student teachers' abilities in aspect of learning environment



University supervisors' views

Cooperating teachers' views

In the aspect of learning environment, four criteria, including care and respect to students, physical environment, motivates student learning and classroom management were evaluated (See picture 3). The perceived teaching practice level of the student teachers rated by university supervisors and cooperating teachers in were equivalent. They viewed that student teachers' abilities in organizing learning environment were placed in stable level. The university supervisors viewed that equal number of student teachers developed abilities in this aspect in two criteria including care and respect to students and manage physical environment. The remained number of student teachers showed their abilities in increase level. However, the cooperating teachers viewed differently that the majority of student teachers developed abilities in managing learning environment in two criteria including motivates student learning, and use classroom management techniques.

**DISCUSSION OF FINDING**

The present study aimed to develop a criterion for evaluating pre-service science teachers' teaching practices and to assess the efforts in using reflective process infused into the teaching practice of student teachers in a faculty of education in Thailand. The finding of the study revealed that reflective process stimulated majority of the student teachers to be greatly developed in teaching practices in two aspects of planning instruction and instruction. In aspects of planning instruction,

understanding about curriculum and understanding about teaching strategies were mostly developed because in 5 year teacher preparation program, student teacher has to spend the time for course work study intensively for 4 years and teaching experience practice in the school for another year. During 4 years for course work, student teachers had experiences in writing lesson plans and microteaching with their peer in many method courses. However, it was found that student teachers were struggled in understanding about content knowledge when they planed lessons which content did not related to their major field. In aspect of teaching, the abilities of student teachers on the use effective instruction, effective use of media, resources, and technology and use appropriate assessment techniques was highly developed because the reflective process provided opportunities for them to assess taught lessons, determine their strengths and flaws, thereby taking positive action in subsequent lessons. However, the ability in using effective communication was still the problems. Some student teachers should ask more probing questions. Moreover, the ability in using classroom management techniques also should be developed.

### **RECOMMENDATION**

A number of recommendations are derived from the findings of this study. The first concern of the study was the supervision process that normally included only conducting classroom observations to observe the teaching and learning process by cooperating teachers and university supervisors. It would be recommended that the reviewing artifacts of teaching and monitoring evidence of student learning should be included in reflective supervision process. Moreover, the reflective supervision process should involve continuous self observation and evaluation of student teachers to understand individual actions and reactions of learners. Another concern of the study was the comparisons between cooperating teachers and supervisors' perceptions of student teachers' teaching practices. The findings were that, the perceived teaching practice level of the student teachers rated by cooperating teachers was higher than university supervisors. It might be the reason that the university supervisors normally viewed as very knowledgeable regarding content and methods. However, cooperating teachers appears to provide high scores for student teachers because they ensured whether student teacher practices into their classroom related to what they have learned at the university.

### **ACKNOWLEDGEMENT**

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## REFERENCES

California Commission on Teacher Credentialing. 2009. *California Teaching Performance Assessment Candidate Handbook*. California. Retrieved September 9, 2011, from [www.ctc.ca.gov/educator-prep/TPA-files/CandidateHandbook.pdf](http://www.ctc.ca.gov/educator-prep/TPA-files/CandidateHandbook.pdf)

Office of Education Field Experiences. (2001). *The Report of Problems during Field experiences of Preservice Teachers, Faculty of Education, Kasetsart University from academic year 1996-2001*. Faculty of Education, Kasetsart University.

Office of the Higher Education Commission. (2004). *Handbook for Teacher Education Program in Basic Education (5 year program)*, Bangkok.

Karmos, A., and Jacko, C. (1977). The role of significant others during the student teaching experience. *Research in Teacher Education*, 28, 51-55.

Lowther, M. (1968). Most and least helpful activities of supervising teachers. *The Clearing House*, 40, 4043.

Roadrangka, V. and Srisukvatananan, P. (2002). Problems in field experiences of preservice teacher, Faculty of Education, Kasetsart University. *Kasetsart Journal (Social Science)*, 23, 104-117.

Schon, D.A. (1987). *Educating the Reflective Practitioner*. San Francisco, C.A. Jossey Bass.

The Commonwealth of Massachusetts Department of Education. 2011. *Preservice Performance Assessment for Practicum or Practicum Equivalent*. Retrieved September 9, 2011, from [www.doe.mass.edu/edprep/ppa\\_form.doc](http://www.doe.mass.edu/edprep/ppa_form.doc)

Westfield State College . 2011. *Candidate Evidence Sheet for Preservice Performance Assessment Form*. Retrieved September 7, 2011, from [www.wsc.ma.edu/TEC/CandEvidenceSheet1.pdf](http://www.wsc.ma.edu/TEC/CandEvidenceSheet1.pdf)

Wittenberg University. 2011. *Student Teaching Evaluation Rubric*. Retrieved September 9, 2011, from [www4.wittenberg.edu/academics/.../student\\_teaching/ST%20Rubric\[3\].pdf](http://www4.wittenberg.edu/academics/.../student_teaching/ST%20Rubric[3].pdf)

*Interactive Weblogs: Breaking Barriers in L2 Writing in the Philippines*

Shiela Maderal Manzanilla

Southern Luzon State University, Philippines

0627

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Abstract

Mastery of the rules of a language is often clearly reflected in written outputs. In the Philippines, where English is a second language (L2), students are oftentimes reluctant to perform writing tasks as this will expose their ignorance in the skill. With the ubiquity of social networks in mind, this study sought to find out students' needs and motivations in writing, with weblogs used as learning journals in a virtual teaching and learning environment. The experimental method was employed in this research. A standardized writing test from the Purdue University's Online Writing Lab (OWL) and TOEFL Writing test were used in gathering the data. Data were treated with statistical tools such as weighted mean, frequency count, standard deviation and t-test. Results revealed that the respondents from the experimental group and the control group can comprehend meaningful input but their knowledge of the rules governing sentence construction and the actual writing of the material (application) are the root cause of their difficulty in writing. The experimental group has been found to have improved their writing ability specifically in the knowledge and application dimensions, indicating that weblogs have generally made a huge difference in performance. Hence, it was recommended that weblogs be used in writing subjects to motivate the students to discover the joy of writing. In addition, further studies should also be done concerning how to best motivate students to explore the full potential of blogs as learning aid.

## 1. Introduction

English language learning is a complex process of acquiring the ability to comprehend and apply its structure to communicate largely in various domains. Mastery of the language is clearly reflected in printed forms- writing.

Writing is the most complex of the four areas in language learning. Students are quite adamant to embark in the journey of the written world fearing that this will expose their ignorance in expressing their thoughts and emotions. Still, development of the ability to write will give them the facility to be able to finish the arduous tasks they are going to face in the academe.

Furthermore, writing clarifies and extends understanding. It enables the person to clarify and deepen his understanding of a new concept and to find ways to relate it to other ideas within a discipline. It also makes an individual a potent thinker and an active learner as he eventually gains a better understanding of himself in recording, clarifying and organizing his personal experiences and innermost thoughts (Axelroad & Cooper, 2000).

Educators must devise new strategies to rekindle the fire of using their writing ability in the midst of cyberspace and social networks.

Thus, language learning needs the best motivational strategies, especially in writing. Using electronic media resources provides appeal to many students (MacBride & Luehmann, 2008). The world of today's student is saturated with alluring media images and messages. In the past, music and film engage students in listening comprehension, vocabulary building, and grammar lessons. Now, internet search activities can draw them into writing.

A new technology strategy in the teaching practice is weblogs that spark online conversations and improve student writing. Weblogs are online (on the web) journals or diaries (logs) which can have audio and visual media embedded, and often include hyperlinks to other websites. Blog is the common reduction of the word weblog and is used as both a noun and verb in various forms (blogging, blogger, to blog, etc.). Blog was first included in the online version of the Merriam-Webster dictionary in 1999 (BBC, 2004) and the print version of the Oxford English Dictionary in 2003 (USA Today, 2003). In 2004, Merriam-Webster said it was the most commonly accessed word of the year and they finally included it in their print dictionary in 2005 (BBC, 2004). These popular media increase their interest and the volume of their writing. Blogging might help language learners to obtain, process, and construct words in the English language.

In the last few years, there have been a lot of experimentation with regards to blogging. All of these are happening inside the classroom. Much of this experimentation is informal and research focusing on blog use in English language classes is still relatively scarce in the literature. There are endless possibilities of using blogs as learning journals in the virtual teaching and learning environment.

### 1.1. *Background of the Study*

Students are motivated to use technology to write. Using this idea, teachers can assimilate what the students are already doing through personal websites/blogs and classroom content with a meaningful audience. Students, no matter what their gender or ability level is, need to see that writing is a vehicle to show individual thought on subjects, and that this is powerful. Technology, such as web logs, can provide one part of the answer, but educators should recognize that the key to conscientious writing among students is that they need to be a more active part of the educational community.

The aim of this study is to shed light on a range of student needs, and show that the different ranges in levels of motivation to write with consideration for an audience can be addressed through web logs. A very real audience is out “there,” the Internet, for students to use.

As blogs become more and more commonplace, educators in recent years have begun seeing the potential of blogs for teaching and learning. At this time, using blogs in education, particularly in language learning is still novel and there had not been many formal studies done on this topic.

Studies that have been published include research on blogging effect on learner’s autonomy, increasing writing fluency as a place for writing assignments, posting class materials and as a way to open up communication with bloggers outside the classroom.

University students, nowadays, specifically in the Philippines, particularly in Southern Luzon are “tech savvy” and communicate widely in social network sites and blog spots to express their uncensored thoughts through blogging. Since language learning is a communicative process, this growing interest can be channeled to develop their writing ability in English.

As a language teacher, the researcher has been searching for a tool that will motivate her students to write effectively. Blogging can create a huge impact in the preparation of materials for language teaching. Through this, students will discover once again the necessity of writing effectively in English in their own turf- the internet.

Thus, the researcher believes that this new insight in learning the English language will considerably motivate the students in the Philippines especially in Southern Luzon to communicate widely in the English language guided by rules set by the researcher conducting the writing lessons. Expertise in written communication will definitely aid them in choosing their career path, where the use of this skill is inevitable.

## 1.2. Objectives

This study was conceptualized to discover the effectiveness of interactive weblogs as a tool to improve the writing ability of Tertiary Students studying at the Philippines specifically at Southern Luzon State University. The results of which will lead to the improvement of the level of performance and development of further interest in writing through weblogs.

Specifically, this study sought to answer the following questions:

1. What is the level of performance of the respondents in terms of the following writing dimensions for both the control group and the experimental group:
  - 1.1 Knowledge
  - 1.2 Comprehension
  - 1.3 Application?
2. How significant is the difference between the two groups in terms of their level of performance in the following dimensions
  - 2.1 Knowledge
  - 2.2 Comprehension
  - 2.3 Application?
3. How significant is the difference in the level of performance of the experimental group before and after using weblogs?
4. How significant is the difference between the two groups in terms of their performance level after the use of weblogs in the experimental group?

## 1.3. Assumptions

Based on the identified objectives, the following assumptions were drawn and were proven in the study.

There is no significant difference between the writing ability of those who are studying writing in English through blogging and those who are using the traditional method.

There is no significant difference between the performance of the experimental group before and after using weblogs.

There is no significant difference between the two groups in their performance level after the experimental group use weblogs.

#### 1.4. *Significance of the Study*

Since this study will focus on the effectiveness of using weblogs in writing, the following will be able to adopt solutions, innovations or strategies this study can offer.

**Students.** This study will open up opportunities to hone their skills in writing in preparation for their future careers and preparation for their participation in the global arena.

**Educators/Teachers.** This will offer another strategy that can be used in achieving proficiency in learning the English language specifically in the written domain.

**Administrators.** This will help them realize that creating a program for language learning is an integral part of any learning process. Aside from this, this endeavor is in consonance with the university's thrust in social development specifically in the following dimensions: instructional/resource materials and teaching approaches/methods/techniques

**Curriculum Planners.** This will lead to the accomplishment and development of methodology suitable to the needs of its clientele.

**Future Researchers.** This study will lead them to the path of discovering related problems rooted from the findings of this research and the possible solutions to remedy those difficulties especially in language learning.

#### 1.5. *Scope and Limitations*

This study centered on the effectiveness of weblogs in L2 learning as a tool to improve the writing ability of the Filipino students specifically at Southern Luzon State University during the S.Y. 2012-2013. Its limitation lies on the 80 students who served as respondents who comprised the experimental group and the control group. Also, it is further limited to the following dimensions for assessment: knowledge, comprehension and application which were tested through the Purdue University's OWL (Online Writing Lab) and TOEFL.

## 2. **Framework**

### 2.1. *Theoretical Framework*

A number of theories supporting teachers' efforts to understand second language writing and learning have developed since L2 writing first emerged as a distinctive area of scholarship in the 1980s. In most cases, each has been enthusiastically taken up, translated into appropriate methodologies and put to work in classrooms. Equally, however, each has typically be seen as another piece in the jigsaw, an additional perspective to illuminate what learners need to learn and teachers need to provide for effective writing instruction.

Following first language learning composition theorists such as Elbow (1998) and Murray (1985), many writing teachers see their classroom goals as developing L2 students' expressive abilities, encouraging them to find their own voices to produce writing that is fresh and spontaneous. These classrooms are organized around students' personal experiences and opinions and writing is seen as a creative act of self-discovery. This can help generate self-awareness of the writer's position and to facilitate "clear thinking, effective relating, and satisfying self-expression" (Moffett, 1982).

Teachers here see their role as to provide students with the space to make their own meanings within a positive and cooperative environment. Because writing is a developmental process, they try to avoid imposing their views, offering models, or suggesting responses to topics beforehand.

Instead, they seek to stimulate the writer's ideas through pre-writing tasks, such as journal writing and parallel texts. This orientation urges teachers to respond to the ideas that learners produce, rather than dwell on formal errors (Murray, 1985), and to give students plenty of opportunities for writing.

In contrast to the rigid practice of a more form-oriented approach, writers are urged to be creative and to take chances through free writing. Typical writing tasks ask students to read stories, discuss them, and then to use them as a stimulus to writing about their own experiences.

This approach, however, leans heavily on a social view of the writer and on an ideology of individualism which may disadvantage second language students from cultures that place a different value on 'self-expression'. In addition, it is difficult to extract from the approach any clear principles from which to teach and evaluate 'good writing'.

It simply assumes that all writers have a similar innate creative potential and can learn to express themselves through writing if their originality and spontaneity is allowed to flourish. Writing is seen as springing from self-discovery guided by writing on topics of potential interest to writers and, as a result, the approach is likely to be most successful in the hands of teachers who themselves write creatively.

On the other hand, most teachers are familiar with process writing techniques and make use of brainstorming, peer and teacher feedback, multiple drafts, and so on. Writing is seen as a process through which writers discover and reformulate their ideas as they attempt to create meaning. It is more of a problem solving activity than an act of communication - how people approach a writing task as the solution to a series of problems. Essentially, process theorists explain writing using the tools and models of cognitive psychology and Artificial Intelligence.

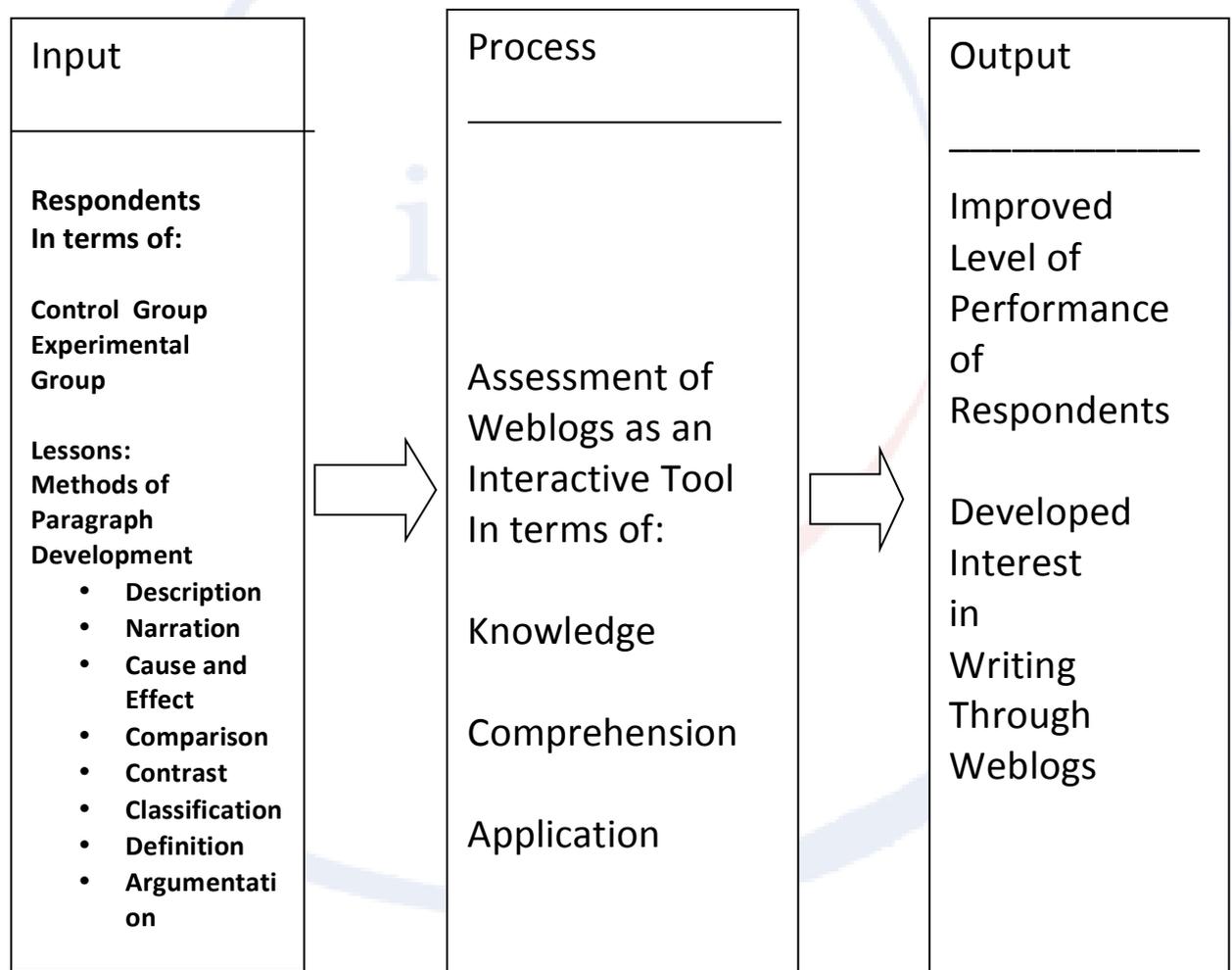
Thus, the former theory about learning the rudiments of writing is favored by educators for its flexibility and novelty.

## 2.2. Conceptual Framework

The researcher used the Input- Process-Output Model. Input includes respondents in terms of control and experimental group. It also incorporates the lessons that were utilized in the study featuring the methods of paragraph development namely: Description, Narration, Cause and Effect, Comparison, Contrast, Classification, and Definition.

Process constitutes the assessment of weblogs as an interactive tool in terms of knowledge, comprehension, and application through a standardized writing test.

On the other hand, the output is composed of the improved level of performance of both the control and the experimental group in terms of their writing skills. In addition to this, the development of further interest of the students in writing through weblogs comprises the outcome of this study.



*Fig. 1. Input-Process-Output Model of the study*

### **3. Design and Procedures**

#### *3.1. Research Design*

This study used the experimental method of research. This is one of the strongest available method for educational researches to use in comparing treatments and its effect. The researcher has an opportunity to exercise more control than in most researches. Choosing this method would ensure that the results would be conclusive and deter the occurrence of threats to validity.

#### *3.2. Sampling and Sampling Technique*

The respondents were purposively chosen and were divided into the experimental and the control group. They were composed of 80 freshmen students from Southern Luzon State University. The researcher's standardized tests were distributed at the beginning of the semester and at the end of the semester to determine the effectiveness of using weblogs.

#### *3.3. Instrumentation*

A weblog was constructed by the researcher which featured paragraph writing lessons. Consequently, for each topic, instructions were stated after the interactive activity which includes videos and pictures. The experimental group utilized the researcher's blog to be able to study writing and do the online writing exercises, while the control group are submitting their papers personally inside the classroom.

To determine its effectiveness, a writing test from the Purdue University was used to assess their competence. The test was composed of six parts. Each part has its own corresponding questions to measure the respondent's level of writing ability, namely: Knowledge, Comprehension, and Application. Then, another writing test was given to each group from the TOEFL writing test to determine the effectiveness of the methodologies used in both groups.

#### *3.4. Data Collection Procedure*

The researcher administered the questionnaires to the control and experimental group after getting the permission from the Dean of the College of Arts and Sciences to be able to evaluate their writing performance.

In the conduct of the study, post- tests and pre -tests were also conducted to ensure the validity of the proceedings through the abovementioned standardized writing tests.

#### *3.5. Statistical Treatment of Data*

The following statistical tools and techniques were used to ensure valid and systematic presentation, analysis and interpretation of data: weighted mean, frequency count, computation of grade, standard deviation and t- test.

#### 4. Results and Discussion

This presents the analysis made and interpretations of data gathered through the use of the questionnaire. Findings were presented in tabular forms and the details were organized based on the statement of the problem presented.

The first part presents the level of performance of the respondents in terms of the following writing dimensions for both the control group and the experimental group: knowledge, comprehension, application.

The second part previews if there is a significant difference between the two groups in terms of their level of performance in the following dimensions: knowledge, comprehension, application.

The third part shows if there is a significant difference in the level of performance of the experimental group before and after the use of weblogs.

Lastly, this part presents if there is a significant difference between the two groups in terms of their performance level after the use of weblogs in the experimental group.

##### 4.1. Level of Performance of the Respondents in Terms of Knowledge, Comprehension and Application

Table 1. *Level of Performance of the Respondents in terms of Knowledge*

Level of Performance	KNOWLEDGE			
	Control		Experimental	
	Freq	%	Freq	%
Above Average	0	0%	0	0%
Average	2	5%	6	15%
Below Average	38	95%	34	85%
TOTAL	40	100%	40	100%

Table 1 shows the level of performance of the respondents in terms of knowledge. From the 40 students in the experimental group, 38 or 95% obtained a below average level. The control group, on the other hand, shows that 34 or 85% of the respondents falls on the same level.

Table 2. *Level of Performance of the Respondents in Terms of Comprehension*

Level of Performance	COMPREHENSION			
	Control		Experimental	
	Freq	%	Freq	%
<b>Above Average</b>	39	98%	38	95%
<b>Average</b>	1	3%	2	5%
<b>Below Average</b>	0	0%	0	0%
<b>TOTAL</b>	40	100%	40	100%

The table shows the level of performance of the respondents in terms of comprehension. The data focus on the level of performance of the experimental and control group. It indicates that both have above average performance in terms of comprehension. In the control group, 39 or 85% are above average and in the experimental group, 38 or 95% got the same level of performance.

Table 3. *Level of Performance of the Respondents in terms of Application*

Level of Performance	APPLICATION			
	Control		Experimental	
	Freq	%	Freq	%
<b>Above Average</b>	0	0%	0	0%
<b>Average</b>	0	0%	0	0%
<b>Below Average</b>	40	100%	40	100%
<b>TOTAL</b>	40	100%	40	100%

Table 3 presents the data concerning the level of performance of the control and experimental group. The data under the level of performance show that both the control group and the experimental group fall under the below average level with the same frequency of 40 or 100%.

This concretizes the concept of Robles (1990) that every sentence have more than just words in it. Words go together in certain ways according to the system called grammar. He also stated that awareness of the sentence's basic parts and patterns is a must to develop English proficiency.

This means that most of the students in the experimental group had a below average performance in the knowledge and application writing dimensions, whereas in the comprehension dimension, it is above average. The study conducted by Veluz (1991) that aimed to enhance students' awareness in writing an organized and logically arranged sentences and ideas proved that indeed students are having some difficulty in their writing ability.

Among the writing dimensions, comprehension has the highest number of frequency followed by knowledge and application. Students develop in different phases. Alcantara (2003) even asserted in her book that the process of learning is seen to be natural and gradual, through which students' progress at their own rates. In the Philippines, the objectives of the English program are: to equip the learner with adequate language skills in listening, speaking, reading and writing; and develop those skills to a level so that he can use the language efficiently and independently in oral and written communication.

#### 4.2. Significance of Difference of the Experimental and the Control Group in Terms of the Writing Dimensions

Table 4. *Significant Differences of Two Groups on their Level of Performance in terms of Knowledge*

	Control	Experimental
Number of Students	40	40
Mean	71.83	74.40
Standard Deviation	4.21	3.77
Observed Significance Level	0.005	
T-value	2.880	
Decision	Reject the null hypothesis	

Level of Significance = 0.05

Decision Rule: *Reject the null hypothesis if the observed significance level is less than the level of significance*

The data show that the difference in the scores in the test of knowledge in both the control and experimental group is significant at .005 level with a T- value of 2.880

Table 5. *Significant Differences of Two Groups on their Level of Performance in terms of Comprehension*

	Control	Experimental
<b>Number of Students</b>	40	40
<b>Mean</b>	95.88	95.08
<b>Standard Deviation</b>	2.89	3.73
<b>Observed Significance Level</b>	0.287	
<b>T-value</b>	-1.072	
<b>Decision</b>	Accept the null hypothesis	

Level of Significance = 0.05

Decision Rule: ***Reject the null hypothesis if the observed significance level is less than the level of significance***

The table presents the significance of difference in the test of comprehension of the experimental and the control group. Since, the observed significance level is 0.287 with a T- value of -1.072, there is no significant difference in the test scores for comprehension of both groups.

Table 6. *Significant Differences of Two Groups on their Level of Performance in terms of Application*

	Control	Experimental
<b>Number of Students</b>	40	40
<b>Mean</b>	66.75	69.73
<b>Standard Deviation</b>	3.22	3.12
<b>Observed Significance Level</b>	0.000	
<b>T-value</b>	4.198	
<b>Decision</b>	Reject the null hypothesis	

Level of Significance = 0.05

Decision Rule: ***Reject the null hypothesis if the observed significance level is less than the level of significance***

The table shows that the difference in the test scores of application of the experimental and the controlled group is significant with a T- value of 4.198 at 0.000 observed significance level.

The data conveys significant difference on the knowledge and application dimensions with an observed significance value of 2.880 and 4.198 at 0.05 level of significance, respectively. Comprehension, on the other hand, shows that there is no significant difference between the two groups with a computed t-value of -1.072 at 0.287 level of significance.

This clearly identifies the similarity of the level of performance of the experimental and the control group in the knowledge and application. They only differ in the comprehension level. To develop the comprehension level, appropriate materials should be used. In fact, as Monica Taylor covers in her article, "Using Collateral Material to Improve Writing Performance," building a library of materials for struggling students can be a drawn out process, but can be accomplished over time, and then monitored for use (Taylor, 2001).

#### 4.3. Significance of Difference on the Level of Performance of the Experimental Group Before and After Using Weblogs

Table 7. *Significant Differences on the Level of Performance of the Experimental Group before and after the Use of Web Blogs*

	<b>Before</b>	<b>After</b>
<b>Number of Students</b>	40	40
<b>Mean</b>	70.98	87.48
<b>Standard Deviation</b>	3.45	4.80
<b>Observed Significance Level</b>	0.000	
<b>T-value</b>	-17.653	
<b>Decision</b>	Reject the null hypothesis	

Level of Significance = 0.05

Decision Rule: ***Reject the null hypothesis if the observed significance level is less than the level of significance***

Table 7 shows that there is a significant difference in the scores of the experimental group before and after the use of weblogs.

The data exhibits that there is a significant difference on the level of performance of the experimental group on the writing dimensions in terms of knowledge, comprehension, and application with a t value of -15.460, -3989, -32.419, at 0.05 level of significance, respectively. In a short blog posting titled "Do weblogs improve

writing?”, Bernstein (2004) advocated that “Frequent writing improves writing”, “Writing for an audience improves writing”, “Writing that matters improves writing”, and “Writing on a computer improves writing”. Therefore, this medium can really make a difference in the performance of the students in the long run.

#### 4.4. Significance of Difference Between the Experimental Group and the Control Group After Using Weblogs in Terms of the Writing Dimensions

Table 8 reveals the significance of difference between the experimental group and the controlled group after the use of weblogs in terms of the writing dimensions.

Table 8. *Significant Differences on the Level of Performance of Two Groups after Using Web Blogs*

	Control	Experimental
<b>Number of Students</b>	40	40
<b>Mean</b>	84.25	87.48
<b>Standard Deviation</b>	4.49	4.80
<b>Observed Significance Level</b>	0.003	
<b>T-value</b>	-3.103	
<b>Decision</b>	Reject the null hypothesis	

Level of Significance = 0.05

Decision Rule: ***Reject the null hypothesis if the observed significance level is less than the level of significance***

These data show that there is a significant difference in the scores of the control group and experimental group with a T- value of -3.103 at .05 level of significance.

According to the data presented, knowledge and application are significant with a t-value of -4.632 and -5.119, respectively at .05 level of significance. In contrast, comprehension has no significance with a t- value of -0.510 at .05 level of significance. This supported the study of Ware (2004) who interviewed college-level ELLs that had participated in threaded discussions and debates and found that those that are often afraid of making usage mistakes or being embarrassed by an unintelligible accent, relish the chance to share their thoughts and ideas with their classmates in an environment that seems safer to them.

In addition to this, MacBride and Luehmann (2008) discuss blogging as a way to “capitalize on emerging technologies” and student interest. They also cited increased

exposure time with the content and increased inter-student communication as beneficial to overall learning.

Lastly, Bower (2006) explores how the teens of the 21<sup>st</sup> century are doing this through online communities, discussion boards, and blogging. He suggests that teachers take the opportunity to go to where the students already have an interest, to capitalize on these out-of-school literacy practices.

## **5. Conclusions and Recommendations**

### *5.1. Conclusions*

Based on the comprehensive findings of the study, the following conclusions were drawn:

1. The respondents from the experimental group and the controlled group can comprehend meaningful input but their knowledge of the rules governing sentence construction and the actual writing of the material (application) shows mediocrity.
2. The level of performance of the experimental and the control group in terms of knowledge and skills are at par with each other. They differ in comprehending reading materials in preparation for the writing activity.
3. The use of interactive weblogs is effective in developing the writing ability of the Filipino students in the experimental group.
4. The experimental group and the control group experienced development in their writing ability, specifically in the knowledge and application dimensions. Their comprehension level are not correlated with each other

### *5.2. Recommendations*

Based on the conclusions drawn, the researcher recommends that:

1. A comprehension test in writing should be given to Filipinos specifically in their first year in the tertiary level to know their abilities as basis for the construction of lessons in the course syllabus.
2. Weblogs should be used in L2 writing subjects to motivate the students to discover the joy of writing.
3. Professors/teachers should attend seminars and workshops, specifically in writing through the use of multimedia/innovations to enhance their skills and to upgrade their knowledge in the field of classroom instruction.
4. Future researchers may conduct studies using weblogs in other subject areas and update/upgrade the site to be able to cope up with the fast changing trend in the virtual world.
5. Security features should be added to protect the intellectual property rights of future bloggers.

## References

- Bernstein, M. 2008. *Do We Blogs Improve Writing?* Retrieved from [http://markbernstein.org/Jan0401.html#note\\_35302](http://markbernstein.org/Jan0401.html#note_35302). 2008-1-29.
- Blood, R. 2002. *Weblogs: A history and perspective*. Cambridge: Perseus Publishing.
- Campbell, A. P. 2003. Weblogs for Use with ESL Classes. *The Internet TESL Journal*, 9(2): 33-35.
- Campbell, A. P. 2004. Using Live Journal for Authentic Communication in EFL Classes. *The Internet TESL Journal*, 10(9): 64-68.
- Chapelle, C. 2003. *English language learning and technology: Lectures on Applied Linguistics in the age of information and communication technology*. Amsterdam: Benjamin.
- Dewey, J. 1933. *How we think*. New York: D. C. Heath.
- Dieu, B. 2004. Blogs for Language Learning. *Essential Teacher Journal*, 1: 26-30.
- Eastman, D. 2005. Blogging English Language. *Teaching Journal*, 59 (4).
- Egbert, J. 2006. The End of CALL and How to Achieve it. Teaching English with Technology. *A Journal for Teachers of English*, 6 (2).
- Galina Kavaliauskiene. 2006. Application of Blogging for Learner Development. *Journal of Language and Learning*, 2(4).
- Godwin-Jones, B. 2003. Blogs and Wikis: Environments for On-line Collaboration. *Language Learning & Technology*, 7 (2).
- Johnson, A. 2004. Creating a Writing Course Utilizing Class and Student Blogs. *The Internet TESL Journal*, 10 (8).
- Pinkman, K. 2005. Using Blogs in the Foreign Language Classroom: Encouraging Learner Independence. *The JALT CALL Journal*, 1 (1).
- Stanley, G. 2008. *Blogging for ELT*. Retrieved from <http://www.teachingenglish.org.uk/think/resources/blogging.shtml> 2008-4-10.
- Thorne, S. & Payne, S. 2005. Evolutionary Trajectories, Internet-mediated Expression, and Language Education. *Computer Assisted Language Instruction Consortium Journal*, 22 (3).

Ward, J. 2004. Blog Assisted Language Learning: Push Button Publishing for the Pupils. *TEFL Web Journal*, 3(1).

Walker, J. 2005. Weblogs: Learning in Public. *On the Horizon*, 13 (2).

Wu, W. *Using Blogs in an EFL Writing Class*. Paper Presented at the 2005 International Conference on TEFL and Applied Linguistics. Retrieved from: [www.chu.edu.tw/wswu/publications/papers/conferences/05.pdf](http://www.chu.edu.tw/wswu/publications/papers/conferences/05.pdf) 2007-10-13.

The logo for the International Association for Applied Linguistics (iafor) is centered on the page. It consists of the lowercase letters "iafor" in a light blue, sans-serif font. The text is enclosed within a large, stylized circular graphic composed of two overlapping, thick, curved lines. The upper-left portion of the circle is a light red color, while the rest of the circle is a light blue color, matching the text.

*The Factors of Research and Innovation Management Using Electronic Supply Chain  
for Thai Higher Education Institutions*

Sudasawan Ngammongkolwong, Namon Jeerungsuwan

King Mongkut's University of Technology North Bangkok, Thailand

0628

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Abstract

The purpose of the research study was to study the factors of research and Innovation management by using electronic supply chain for Thai higher education institutions. The research procedures consisted of three Steps : 1) study of the document and related research to create a conceptual framework , 2) study research and innovation management of Thai Higher education institute by in-depth Interview 5 out of 19 Executives of university research offices. Stratified Random Sampling was used as a sampling plan together with semi-structured interviews questionnaire, and 3) do an in-depth interview of 15 professionals in three areas, research and innovation management in the university, supply chain management and electronic, and information technology management. Purposive sampling was used as a sampling plan together with semi-structured interviews questionnaire. According to the research study we found that there were six factors of research and innovation management using electronic supply chain for Thai higher education : 1) supplied input for research and innovation, 2) research and innovation management in the university, 3) research and innovation distribution, 4) customers benefit from research and innovation , 5) the main activities of the research and innovation supply chain, and 6) electronic supporting system . All factors will lead to the development of research and innovation management using electronic supply chain model for Thai higher education institutions.

**Keywords:** Electronic Supply Chain, Research and Innovation, Higher Education

## INTRODUCTION

Higher education institutions have 4 main duties and responsibilities: managing the quality of teaching, promoting doing research, providing academic services for community, and maintaining and promoting cultural values. These are the most important for developing country if they are conducted efficiently and effectively. Research and innovation by According to the Office for National Education Standards (ONESQA,2009) and Quality Assessment and the Office of the Higher Education Commission (OHEC,2011) in System approach show in Fig 1

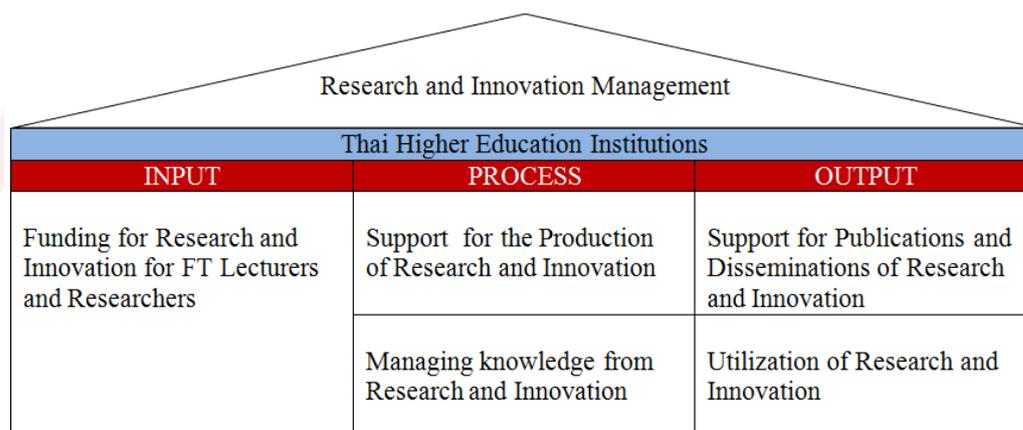


Fig 1. Research and Innovation Management in the University

According to the Office for National Education Standards and Quality Assessment, the universities in Thailand may be divided into two groups, depending on their teaching and learning systems and student admission. These two groups are close universities or universities with the limit of student numbers and open universities or universities with the unlimited of student numbers. The universities may also be divided into four groups, according to the missions emphasized. The first group includes institutions that emphasize producing graduates to have academic excellence and the best researches that are useful. The second group includes institutions that emphasize producing the great majority of undergraduates and some higher degrees of graduates of some fields and providing academic services for the public. The third group includes institutions that emphasize producing graduates and maintaining and promoting arts and culture. These institutions emphasize the great majority of undergraduates and some higher degrees of graduates of some fields in order to apply the knowledge to develop the standard of arts and culture as well as contribute the knowledge and wisdom to the public. The fourth group includes the institutions that emphasize producing graduates. These institutions emphasize giving instruction to undergraduates to have academic excellence and vocational skills. 15 higher education institutions in the third group which emphasize producing graduates with academic excellence and maintaining and promoting arts and culture, nine state universities and six private universities, were assessed for the third time by the Office for National Education Standards and Quality Assessment, which is the organization outside the institutions. The results of assessment concerning research works and innovations were as follows: (ONESQA, Executive Summary.2006-2010) only one institution was at a very good level, five institutions were at a good level, and eight institutions were at a fair level. The results overall indicated that research works and innovations of higher education institutions were not at a standard level of education standards and quality assessment. One of the most successful business administration

methods is a supply chain or a supply chain consists of all stages involved, directly or indirectly, in fulfilling a customer request. The supply chain not only includes the manufacturer and suppliers, but also transporters, warehouses, retailers, and customers themselves (Chopra, Sunil, and Peter Meindl, 2001). The researcher had the idea of using business administration method in developing research works and innovations in higher education institutions to have both connection and cooperation so that the research works and innovations could be supplied to those who need on time. The researcher would use electronics system available at present to support producing research and innovations more effectively.

## **RESEARCH OBJECTIVE**

The main objective of this research study was to study the factors of research and Innovation management by using electronic supply chain for Thai higher education institutions.

## **RESEARCH METHODOLOGY**

This research was divided into 3 parts: (1) the study of documents and research works, (2) the in-depth interview with the administrators of research and development departments, and (3) the in-depth interview with the specialists in 3 areas: supply chain, electronics and technology information, and research and innovations.

Part 1: This part was the study of documents, texts, and research works, both in Thailand and in foreign countries, concerning the electronics supply chain for research and innovations in Thai higher education institutions and the standards and quality assessment of the Office for National Education Standards and Quality Assessment.

Part 2: This part dealt with the in-depth interview with the administrators of research and development departments of five higher education institutions. The samplings used in this study were divided into 2 groups: 9 state higher education institutions and 6 private higher education institutions. The samples of these 2 groups of higher education institutions were selected by means of stratified random sampling (Johnnie Daniel, 2011). The ratio of 5 higher education institutions was 3:2:3 state higher education institutions chosen were Bansomdejchaopraya Rajabhat University, Phranakhon Rajabhat University, Valaya Alongkorn Rajabhat University, and 2 private higher education institutions chosen were Pathumthani University and Southeast Bangkok College. The format used to collect the data in an interview was a half-structured form and it was checked for the correctness of the data collected by the advisor (Namon Jeerungsuwan, 2015).

Part 3: This part dealt with the in-depth interview with 15 specialists in 3 areas: that is, 5 specialists in supply chain, 5 specialists in electronics and technology information, and 5 specialists in research and innovations. The sampling used for the study was a purposive sampling (Johnnie Daniel, 2011). The format used to collect the data in an interview was a half-structured form and it was checked for the correctness by the advisor (Namon Jeerungsuwan, 2015). The interviewing was recorded.

**RESULTS**

A Comparative concept of Supply Chain Management and research and innovation management

SCM Concept	Research and Innovation in Higher Education Institutions Concept
1. Suppliers	1. Supplied Input
2. Manufacturer	2. University (Research and Development Institution)
3. Distribution	3. Conferencing ,Journal and Innovation center
4. Customers	4. Organizations or individuals to apply the knowledge from research to both directly and indirectly.

Tables : 1 A Comparative concept of Supply Chain Management and research and innovation management concept

Factor	Interviewer	1	2	3	4	5	6	7	8	9	Recommendations
	Elements										
1. Supplied Input	Man	ü	ü	ü	ü	ü	ü	ü	ü	ü	This domain of creative and research management will help to support the creative and research works in the university. The outcomes quality of the creativities and researches depend on the input quality of the information to the system.
	Money	ü	ü	ü	ü	ü	ü	ü	ü	ü	
	Material	ü	û	û	ü	ü	ü	ü	ü	ü	
	Methodology	ü	û	û	û	ü	ü	û	ü	ü	
2.University	Dimension of the structure within the University.	ü	û	û	ü	ü	ü	ü	ü	ü	This domain of creative and research management acts as a creativities and researches manufacturer. For the knowledge synthesis, university should has good planning in creativities and research development to answer the
	Dimension of research and innovation management	ü	ü	ü	ü	ü	ü	ü	ü	ü	

	within the university.										users' benefits at the right time.
3. The distribution center of research and innovations	The Conference	ü	ü	ü	ü	ü	ü	ü	ü	ü	Other than organize academic conferences and publish the creativities and researches, the creativity and research center should distribute its works to the interested parties.
	The Journal	ü	ü	ü	ü	ü	ü	ü	ü	ü	
	The Innovation Center	ü	ü	ü	ü	ü	ü	ü	ü	ü	
4. Customer benefits of the research and innovations	The Public	ü	ü	ü	ü	ü	ü	ü	ü	ü	Research users sometimes mean the university whose creativity and researches were produced.
	The Policy	ü	ü	ü	ü	ü	ü	ü	ü	ü	
	The Commercial	ü	ü	ü	ü	ü	ü	ü	ü	ü	
	Indirect innovation	ü	ü	ü	ü	ü	ü	ü	ü	ü	
	The Academic	ü	ü	ü	ü	ü	ü	ü	ü	ü	
5. The main activities of the Research and Innovation supply chain	The Procurement	ü	û	û	ü	ü	ü	ü	ü	ü	Supply-chained management actually is the procedure to develop a sequencing for all the operations from upstream to downstream to deliver the value for the customers. University Supply-chained management should has a good planning and collaboration among all the activities in supply-chained.
	The Warehousing	ü	ü	ü	ü	ü	ü	ü	ü	ü	
	The Distribution	ü	ü	ü	ü	ü	ü	ü	ü	ü	
	The Transportation	ü	ü	ü	ü	ü	ü	ü	ü	ü	
6. Electronic supporting system	e-Procurement	ü	û	ü	ü	ü	ü	ü	ü	ü	Technology selected should be appropriated for the university ecology.
	e-Data and	ü	ü	ü	ü	ü	ü	ü	ü	ü	

	Warehousing										Cost concerning also be concentrate, both for the software and hardware. The emphasis must be the connectivity between all members in supply-chained to share and use the information.
	e-Distribution	ü	ü	ü	ü	ü	ü	ü	ü		
	e-Transportation	ü	û	û	ü	ü	ü	ü	ü		

The experts' opinions on the factors of research and innovation management in Thai higher education institution using electronic supply

Agree  Disagree

Tables : 2 Factors of research and innovation management in Thai higher education institution using electronic supply

According from Table 2 leads Factors of research and innovation management in Thai higher education institution using electronic supply, the study was found that there were 6 suitable factors for research and innovations in Thai higher education institutions:

1. Supplied Input for Research and Innovation (raw materials)  
Raw materials include 4 M'S: man, money, materials, methodology (Habib, M,2010)

1) Man refers to researchers, people helping research works, research advisors, and specialists., 2) Money refers to the fund resources for research promotion, both inside the institutions and outside the institutions such as National Research Council., 3) Materials refers to any materials used for conducting research works such as computer, hardware, software., and 4) Methodology refers to knowledge for use in research, such as internal and external resources for research.

2. Research and innovation management in Thai higher education institutions

Research and innovation management in Thai higher education institutions includes 2 dimensions: (Duangdean Phutayanant, Teravuti Boonyasopon and Pairote Stirayakorn, 2011)

(1) duties and responsibilities in the institutions include setting structure, philosophy, vision, mission, and objectives, (2) research and innovations in Thai higher education institutions include providing funds for research, improving research and innovations, managing research and innovations, publishing and contributing research and innovations, and applying the research and innovations in developing organizations. In order to fulfill the research and innovations in Thai higher education institutions, there should be four important steps: (1) planning (2) doing (3) checking (4) assessment (PDCA).

1. Planning (P) refers to setting strategy, policy, and the plan, both long plan and short plan for developing research works., 2. Doing (D) refers to starting doing research according to the plan set, promoting researchers, providing research lab., 3. Checking (C) refers following up the completeness and correctness of the research

and innovations., and 4. Assessment (A) refers to the evaluation of standards and quality of the research and innovations in 3 steps: (1) first step (2) middle step (3) last step.

First step dealt with preparing manuals or research methods, planning research development according to the policy of the institutions.

Middle step dealt with the following up and the budget management, and supporting researchers.

Last step dealt with the budget, progress of research project, presentation of research works, the assessment of the standards and quality of research, and applying the research works in teaching and learning and in developing communities.

3. The distribution center of research and innovations  
This factor includes the distribution of research and innovations in national conference, in international conference, in national journals, in international journals, and in innovations centers of provinces, country and ASEAN countries.

4. Customer benefits of the research and innovations  
The research results may be used in 5 ways: 1) The research results may be used in improving the public such as in improving the quality of life, economy, democracy, arts and culture, sufficient economy., 2) The research results may be used in setting policy such as establishing law or regulations in organizations, both state and private sectors., 3) The research results may be used in economy such as producing goods or giving services., 4) The research results may be used in creative works such as entertainments, sports. , and 5) The research results may be used in improving the academic work such as teaching and learning.

5. The main activities of the Research and Innovation supply chain consists of 4 main 1) the utilities procurement and human resource recruitment., 2) Creativities and Researches gathering and inventory management in the university., 3)Creativities and researches distribute to the public awareness network such as academic international conference and journal., and Transfer creativity and research knowledge to the target groups for their benefits at the right time.

6. Electronic supporting system  
Electronics are used to support supply chain for research and innovations. This factor includes 4 systems: (1) e-procurement such as purchasing materials, goods; recruitment of personnel, advisors, and specialists; (2) e-data and warehouse research such as collecting data concerning research works of research center in the institutions, checking the number of research and innovations; (3) e-distribution of research such as academic conference concerning research and innovations, publishing of research and innovations; (4) e-transportation of research such as sending of research and innovations to the people who wish to use the results of research in developing their organizations. and The four major supply chain drivers with electronic support system (Michael Hugos, 2005) show in Fig.2

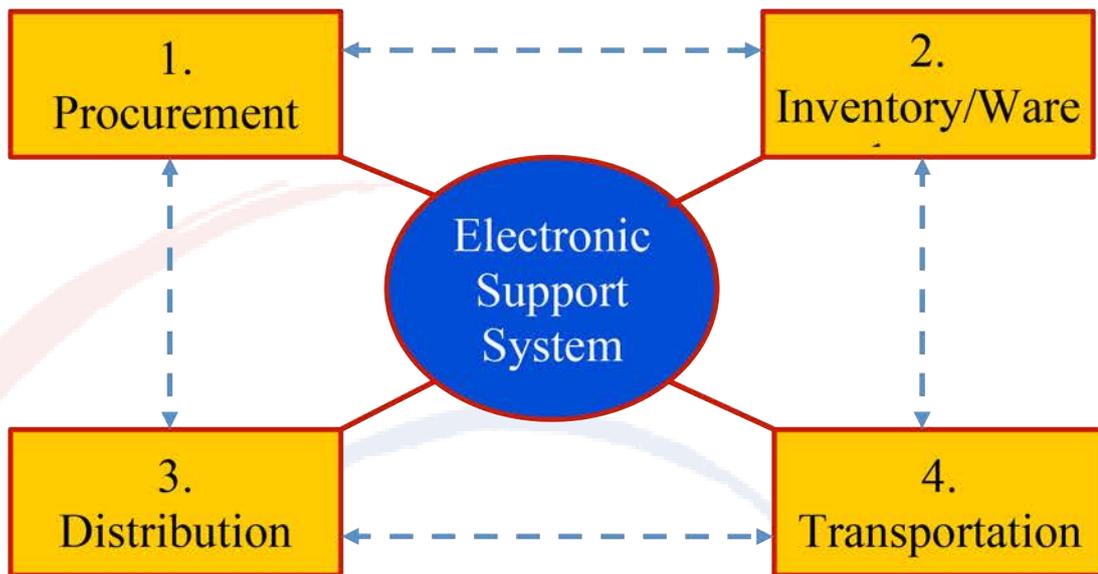


Fig.2 The four major supply chain drivers with electronic support system

Information is the basis upon which to make decisions regarding the other four supply chain drivers. It is the connection between all of the activities and operations in a supply chain. To the extent that this connection is a strong one, (i.e., the data is accurate, timely, and complete), Information is used for two purposes in any supply chain of Research and Innovation Can be Evaluate in 2 Aspects:

1. Coordinating daily activities related to the functioning of the other four supply chain drivers: procurement; inventory; Distribution; and transportation.
2. Forecasting and planning to anticipate and meet future demands.

### DISCUSSION

From the results of research concerning electronics supply chain for research and innovations in Thai higher education institutions, it was found that there were 6 factors that were suitable for supply chain and relevant to the education standards and quality assessment by the specialists, inside and outside the institutions. The specialist agreed that the cooperation among the offices outside the universities about the research and innovations were at the good level. All factors will lead to the development of research and innovation management using electronic supply chain model for Thai higher education institutions.

### ACKNOWLEDGEMENT

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## REFERENCES

- [1] Duangdean Phutayanant, Teravuti Boonyasopon, and Pairote Stirayakorn. (Vol. 21, No. 2, May. - Aug. 2011). **The Development of Research Management Model in Universities**. The Journal of KMUTNB.
- [2] Habib, M. (2010). **An Empirical Study of Tertiary Educational Supply Chain Management**, International Conference on Knowledge globalization, 2010", Bangladesh, May, 2010
- [3] Johnnie Daniel. (2011). **Sampling Essentials: Practical Guidelines for Making Sampling Choices (Google eBook)**. SAGE Publications
- [4] Michael Hugos. (2005). **Essentials of Supply Chain Management**. Bangkok. I.E Square
- [5] Namon Jeerungsuwan. (2555). **Principles of design and evaluation**. 2nd edition. Bangkok. Textbook production center of King Mongkut's Institute of Technology North Bangkok.
- [6] Office for National Education Standards and Quality Assessment (ONESQA). **Journal of Quality Assurance**. Bulletin No. 12 September 2552. [online]. <http://www.onesqa.or.th/onesqa/th/information/>
- [7] Office of the Higher Education Commission (OHEC). **Quality Assurance in Education Manual**. [Online] [http://www.mua.go.th/users/bhes/bhes2/QA%20MUA\\_54/ManualQA\\_MUA\\_February2554.pdf](http://www.mua.go.th/users/bhes/bhes2/QA%20MUA_54/ManualQA_MUA_February2554.pdf)
- [8] The Office for National Education Standards and Quality Assessment. 2006-2010. **Executive Summary**. Retrieved Jan 8, 2013 from: <http://www.onesqa.or.th/onesqa/th/Report/index.php>

*Teaching Critical Thinking in Second Language Learning: an Intercultural Approach*

Maria del Mar Calero Guerrero

Mahidol University International College, Thailand

0630

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Abstract

It is commonly agreed that critical thinking is a significant concept to be promoted in our students at higher education level, particularly considering the time of turbulent changes that societies are immersed nowadays. In this study I have developed the idea of critical thinking taking Brookfield, Paul and Elder's conception and it has been applied to Second Language Learning, more specifically to learning Spanish as a L2. This study is based on critical thinking as a means of questioning your assumptions and reflecting about your own thinking process in order to improve it through different perspectives. The ultimate goal is to apply these strategies in making decisions in real life situations.

Teaching and learning a second language is a privileged ground to develop this kind of thinking because the students are facing a different culture, a new way of thinking and living. This factor can make them reassess their own way of thinking. As a result, they can discover some assumptions that they have taken for granted because they are part of their cultural background. This is especially relevant if we take into consideration the importance cultural shock. In this study I have interviewed people from Spain who live in Thailand and I have used their stories reporting a cultural shock experience. Afterwards I have used these stories in order to create activities based on real experience. The idea of reading these stories is to provoke the reflection in our students about their assumptions in relation to their own culture and to be more aware of their own cultural code of behavior and their own identity. Finally, this reflection will help them to be more intercultural competent citizens.

## **Introduction**

21st centuries societies are increasingly shaped by a profound change in human communication means. Given the fact that we have access to an increasingly larger amount of information within our daily routine, the problem has been shifted from the amount of information that we receive to the quality of the material available. Furthermore, the vertiginous pace of changes has provoked a remarkable necessity of new strategies to approach this constantly evolving communication. Hence, a critical attitude towards that vertiginous flux of information has become undoubtedly essential at any level of the education system. Fomenting critical thinking can become a weapon against incoherent and fragmented knowledge as well as a shield against ideological, political and economic alienation.

Why did I relate critical thinking to the development of an intercultural competence? The globalized world comes into the picture at this point because it can be seen as a threat against cultural diversity. Learning a foreign language means facing a different perspective of the world, a different way of thinking and living that can make us question our own assumptions, inquiring ideas that we would not have posed otherwise. Therefore, learning a foreign language promotes the social dialogue among diverse cultural identities, fostering the reflection about our own identity as well. The awareness of our own cultural identity can benefit a holistic epistemological view of knowledge, values and social behavior as well as it can foster the respect towards diverse cultural communities.

## **The Context of the Study**

The idea behind this article came into being because a remarkable necessity was observed in my students, a lack of curiosity and a certain indifference towards questioning themselves and others. The context of my research is fundamental in order to comprehend the relevance of promoting critical thought together with the promotion of an intercultural competence. I am a Full time Spanish Lecturer at Mahidol University International College (MUIC), in Bangkok, Thailand. We do not offer a Major degree in Spanish. 90 percent of students who learn Spanish take it just as part of their General Education requirements during 2 or 3 terms, depending on their major degree. However, there is a part of the students who take it as a Minor during 4 years if we count the Elementary levels. This information is crucial given the fact that these students, who decided to accomplish a Minor program in Spanish, are the focus of this research. The Spanish Minor provides the perfect opportunity to observe how the students develop academically, emotionally and personally in the course of three years. The class in which the research was carried out has been taking Spanish for 3 years already. 13 students conform to this group.

A distinctive feature of the MUIC curriculum is its strong focus on liberal arts and the promotion of a learning culture that prepares its students to meet the challenges of living and working in the 21st century. In its website, MUIC states that the college fosters analytic and critical thinking as well as creativity, problem-solving and research skills. It also emphasizes a well-rounded education, promoting life-long learning and social responsibilities, keeping in mind the complexities and demands of an ever-changing and inter-connected global community (MUIC, 2013). The international environment promoted in MUIC also aims to develop cross-cultural sensibilities in the students. Fulfilling critical thinking ability can be seen as a means to address the goal of a more holistic education. This article seeks to encourage that critical thinking can be fostered and should be promoted in foreign language classes.

Teaching and learning a foreign language at University level transcend the mere transfer of grammatical, lexical and phonetic knowledge. Professors at higher education are responsible of enabling well-rounded, reflective, autonomous and responsible citizens.

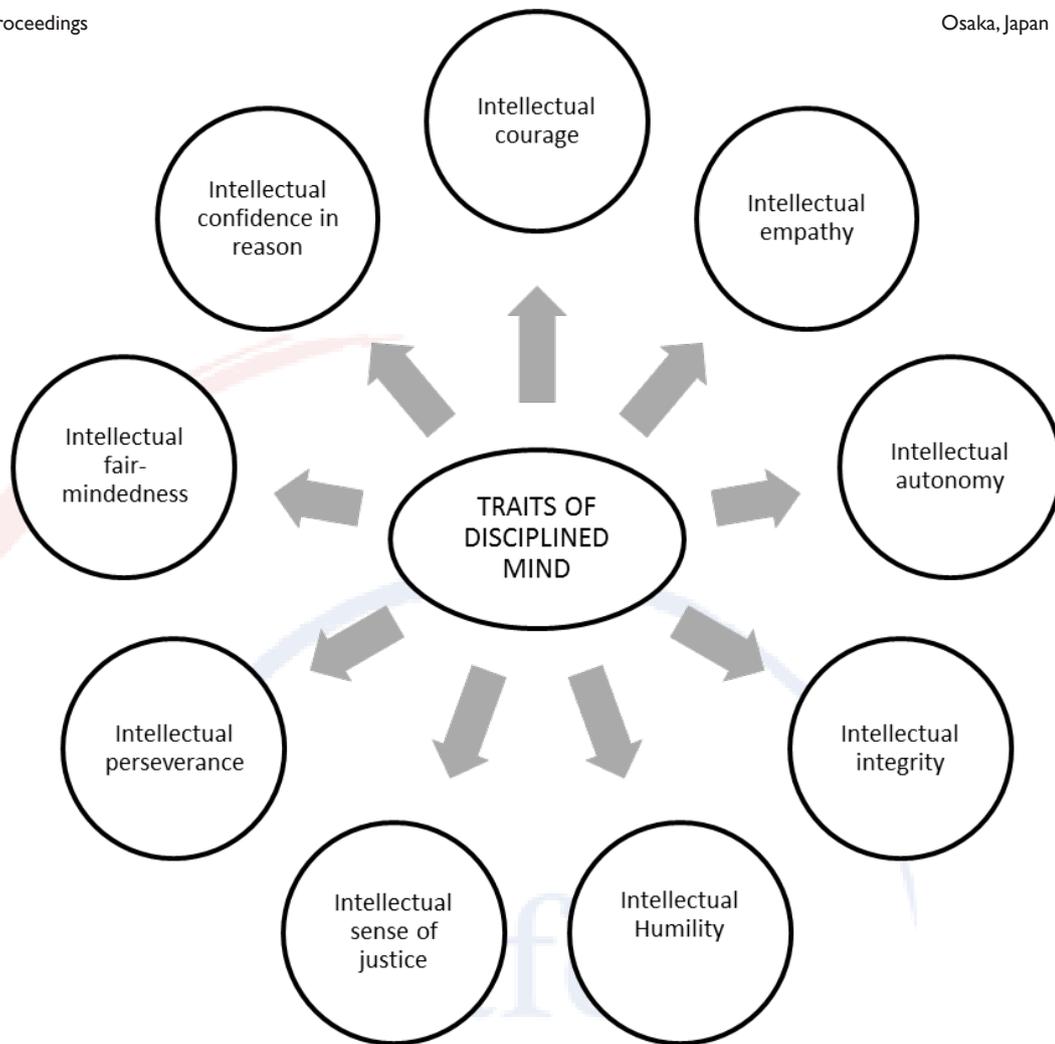
### **Theoretical Framework**

There are different approaches that we can take into consideration when we start talking about critical thinking. The work of Stephen Brookfield (2012) sheds some light to discern this concept. This author states that the problem of teaching critical thought is the existence of a wide range of perspectives which lack coherence among them. He proposes five traditions that encompass the melting-pot of various views about this concept taking into account diverse disciplines: Logic, Natural Sciences, Pragmatism, Critical Theory and Psychoanalysis (Brookfield, 2012: 32-52)

Within the logical perspective, reading and writing are highlighted because we can practice the logic organization of the discourse by working with these two skills. Authors such as Paul and Elder (2002), Wittgenstein (2009), Searle (1995) and Ennis (1995) belong to this group according to Brookfield. Paul and Elder have been highly influential in the conception of critical thinking for the development of this article. On the other hand, pragmatism was also relevant in this conception of critical thinking because its advantage is the connection with personal, professional and intellectual development in students. (Brookfield, 2012: 39) In this sense it is important to create communities of learning and inquiry, where the students feel comfortable and develop their thinking abilities through dialogue, sharing of ideas, questioning themselves and each other. Lipman (2003), Brookfield (2012), Vygotsky (1978) are interested in this social dimension of learning. Eduard Lindemann (1961) and Paulo Freire (2005) belong to this pragmatic approach as well.

One aspect that appears in the five approaches proposed by Brookfield is the concept of opening. An intellectual opening is necessary in order to question our assumptions. These approaches deal with the importance of being open to question ourselves, check our assumptions and make informed and conscious decisions later. In order to achieve this goal, Paul and Elder talk about the features of a disciplined mind.

These authors highlight humility that is necessary in order to listen; courage to recognize that we can be mistaken; empathy to try to understand the points of view of other people; integrity to face points of view that can be opposed to ours. This disciplined mind also needs to be perseverant and believes that this effort makes sense because we trust our reason and the capacity of thinking for ourselves. The ultimate goal is to be autonomous, the owners of our lives, our judgments and our decisions. Critical thinkers do not passively accept the beliefs of others without questioning them. These features, that characterized a disciplined mind, are relevant when making



a distinction between a strong and a weak thinker and a strong fair-minded thinker. The difference is marked by the usage of thinking in a responsible and ethically responsible manner (Paul and Elder, 2002: 18)

According to Stephen Brookfield (2012), the process of developing critical thinking is structured in 4 steps. Firstly, we need to enquire our assumptions. Secondly, we should ensure that these assumptions are based on authentic and reliable evidences. Thirdly, we need to consider other points of view to check the validity of these assumptions, evaluating them from another perspective. Finally, taking into account the previous steps, we are better prepared to make informed decisions and well-founded judgments, understanding this as a way of behaving based on reflection, analysis and evidences. This is the conception of critical thinking that was taken into account for this study.

Why should we promote critical thinking in higher education? The new modernity demands new approaches for learning that make connections with real world challenges. This new learning requires dialogical, participatory and problem-solving methods. (GUNI, 2009: 12) Regarding the intercultural competence, Ruiz Roman (2003: 33) states that every individual is a permeable system in an open, dynamic and constant process of construction. This permeability is nowadays accentuated because of the populations growing mobility. Therefore, the frontiers have been blurred, the

world has become smaller and more cosmopolitan. This fact brings us an imperious necessity of fostering dialogue among cultures, even if they are apparently distant such as Thai and Spanish. Learning languages and comprehending a diverse range of cultural codes of behavior have been raised as unavoidable requirements in order to achieve certain professional level in an international environment. This is notoriously relevant when we are considering the city where my students live, Bangkok.

Byram (1995), when picturing the concept of intercultural competence, asserts that learning a foreign language implies facing a divergent interpretation of values, behaviors and cultural beliefs that we thought were universal; values and beliefs that we took for granted and assumed as dominant in our society can be relative when seen from a divergent prism in other societies. The intercultural competence is the ability of managing situations when individuals from different cultures are in contact, being aware of their contradictions and differences. Likewise, the 21st century citizen needs to be interculturally competent, meaning that he/she has to be shaped by a deep capacity of flexibility, observation, reflection, comprehension and adaptation. These skills will be strongly required in our students' personal and professional lives and they are particularly relevant when we talk about an International University context and teaching a third language.

Intercultural competence also includes the capacity of balancing our own identity in the cultural mediation process. (Meyer, 1991) A fundamental aspect of intercultural competence is the awareness of our own identity. The identity of a person is not simply a mosaic of different individual belongings. Instead, it is like a drawing made on our tense skin. As soon as you touch one of these belongings, the whole person trembles. (Maalouf, 2010) He defines the concept of belonging as the feeling of being part of a social group that can be connected to our country, religion, ethnic or language. According to this author we should not make anyone choose a specific sense of belonging because identity lies in the unique combination of belongings that defines each specific person.

At this point, we can face the most important question: How? How can we develop capacity for critical thinking in our students? How can we make them aware of their own identity? How can we make them discern their assumptions? In this article the answer is: cultural shock. Nevertheless, these skills can be cultivated through a wide array of means. I chose cultural shock because it implies different aspects involving critical thinking. It means facing a dilemma, confronting a conflict due to diverse cultural identities reflecting divergent cultural codes; it also fosters curiosity, giving perspectivism to our conception of the world.

Angels Oliveras (2000) and Pérez de Herrasti (2010) dealt with cultural shock stories related to teaching and learning Spanish as a second language. The former interviewed foreign people who lived in Spain and they reported their experiences regarding this topic. They explained whatever had surprised them when living in Spain. The latter is concerned with the cultural differences between Spain and Germany. If this happens when we consider close enough cultures such as European ones what can we find if we consider Spain and Thailand? I was curious about the upcoming results of these questions so I decided to interview Spanish people who lived in Thailand. They reported their experiences, what they had noticed being different from their native culture, what had surprised them. Afterwards, I used these stories with my students demanding them to reflect on why cultural shock was happening, what the differences were between the cultural codes and what we can learn from these anecdotes.

## **Objectives**

The objectives of my research were the following: gathering information about cultural shock, showing the students an external perspective of their cultural code, promoting reflection and understanding Spanish way of thinking and behaving as well. Later they needed to transcend these specific anecdotes, attempting to glimpse the abstract code lying beyond these experiences: the cultural code that is shaping our identity, values, way of thinking in order to gain a more subtle awareness of our cultural and social self.

The idea behind this article is to gather personal and real experiences of Spanish people regarding a cultural shock experience and present them to the students. The objective of doing this is to visualize the cultural code behind these pieces of behavior. Analyzing notable examples of sentences can help us to visualize the grammar rules behind them. Likewise, reflecting and comprehending the cultural values discovered beyond the anecdotal stories can lead us to understand the subtle and abstract cultural code that lies beyond these stories, the grammar of the culture (Herrasti, 2010: 11).

The ultimate objective of this project is to increase the reflective capacity in our students, their adaptability, their curiosity, their capacity of developing a more profound contemplation and comprehension of human and social behavior as well as their awareness and critical ability. This study is grounded in authentic and personally valuable experiences. The observation of concrete anecdotes about cultural shocks can make them gain awareness of their own code, which is an abstract way of thinking. If the learning process is successful they will transfer this abstract knowledge to their daily life when interacting with people from other cultures. Moreover, they will also be more aware of the assumptions they make because of their culture. This awareness will address their critical thinking, because they will be able to make more informed decisions when interacting with people from other cultures.

## **Methodology**

I developed a qualitative research based on personal interviews. I followed the following steps:

- 1) Theoretical framework. That it was explained at the beginning of this presentation. Authors such as Brookfield, Paul and Elder, Lipman, John Dewey have been vital in this stage.
- 2) Gathering of information. 19 Spaniards filled a questionnaire. 10 of them were interviewed personally.
- 3) After completing the didactic unit, my students answered a similar questionnaire about their experiences in Spain or in other foreign countries. Some of them have not had this experience, so they reported about their impressions on foreign people living in Bangkok.

### Analysis and discussion

The impressions reported by the Spanish people (19 individuals) and my students (13 individuals) were compared to the concepts developed in Hofstede and Hofstede (2005). These authors compile data from employees of the company IBM from 74 countries and they classify this data into 4 dimensions. A fifth dimension was included later on. Nevertheless, the original 4 dimensions conceived by Hofstede and Hofstede (2005) will be used in this article in order to illustrate the impressions and cultural shock stories reported in the interviews with a theoretical framework.

	SPAIN		THAILAND	
	Puntuation	RANK	Puntuation	RANK
Power Distance index	57	45-46	64	34-36
Individualism index	51	30	20	56-61
Masculinity index	42	51-53	34	64
Uncertainty avoidance index	86	17-22	64	44

In this chart you can see the position of Spain and Thailand regarding these dimensions:

#### *Power distance.*

This dimension encompasses the relationship between bosses and employees, family members, teacher and students. It is concerned with the establishment of hierarchical relation within the society of a country or cultural community. Whereas the distance is lower, an interdependency between bosses and subordinates is noted. This can be applied to different fields such as the school, family and workplace. The position of Thailand (34-35) reflects a higher power distance which was pointed out by the Spanish people (45-46). 48 per cent of Spaniards highlighted the power distance established between parents and children, bosses and subordinates, older and younger siblings. For instance, one of them explained that his cultural shock was related to the protocol followed when interviewing a monk. This power distance is showed in the rules behind the *Thai wai*: the protocol when greeting depends on a hierarchical organization of the society while in Spain two kisses on the cheek is the normal way of greeting.

In Hofstede and Hofstede (2005) the distance established between Spain (position 45-46) and Thailand (34-35) is not significantly apart. However, during the interviews this factor was highlighted as a profound distinction between both cultures. This can

be explained by a generational aspect. People interviewed were around 30 years old and there is a remarkable generational gap in Spain regarding values. It would be interesting to research this aspect in further studies about Spanish cultural code.

Obedience was as well emphasized for both Spanish and my Thai students as a means of establishing a difference between both cultures. Two of my students, who were living in Spain for a month in order to take a summer course over there, told me that they were surprised when they saw how teenagers could answer back to their parents and disagree with them. They considered this behavior was disrespectful. Family is important for both cultural communities, Thai and Spanish, however the relationship among the members of this social group differs. This hierarchical relationship is also shown in the language when calling each other they use the word *pi* to refer to the older and *nong* to call the younger. They even use this with friends and it marks a difference between them. Respect was also a concept highlighted by the Spanish people, they felt that Thais showed more respect to elders than it is done in Spain.

How can we transfer this knowledge to the classroom? The fact that a power distance is established influences the dynamic in the classroom. The students can feel that questioning the teacher, asking questions and specially disagreeing with him is not permitted. Therefore, this has to be taken into account when working with critical thinking. The goal is to establish a community of learning where everyone has a role that it is interconnected with that of others. The teacher will lose her protagonist role in order to become an observer, a guide. The students will question each other and themselves and they will construct the knowledge working together.

#### *Individualism versus collectivism.*

The idea of creating a community of learning is connected to this dimension and to the information. This dimension is related to the feeling of integration within a given social group. More collectivist societies define their identity by the pronoun "We", whereas more individualist societies based their identity in the idea of "I". According to Hofstede and Hofstede (2005), most Western countries are situated in a more individualist zone. Regarding this dimension, Thailand is situated in a less individualistic zone (position 56-61) than Spain (position 30). The importance given to keeping harmony is connected to the relevance conceded to the social group. Two of the Spaniards said that they were shocked when Thai people smiled because they did not know the answer, when they felt uncomfortable, when they did not know what to do or say.

The meaning of a smile is different depending on the degree of individualism and collectivism of that culture. Two of the Spaniards noted that a smile in Thailand can mean that the person is uncomfortable, does not know the answer or does not know what to say. This is also noted by Hofstede and Hofstede (2005) and it can be a cause of cultural shock experiences. The idea behind this smile is to avoid conflicts. 30 per cent of the Spaniards highlighted the smile as a characteristic of Thai people, this country is well known as *The land of Smiles*. (Hofstede and Hofstede, 2005: 34) Another aspect connected to the fact that Thailand is a collectivist society is the importance given to the image and the social opinion, 30 percent of the Spaniards noted the relevance of image within Thai society.

Hofstede and Hofstede (2005) quote the study of Yoshy and Emiko Koshima regarding the usage of personal pronouns in different languages. These authors state that in languages where the first person of singular I is necessary the individualism is bigger than in cultures of countries where the language does not force the expression

of this pronoun such a Spanish, ex *Te quiero*. We can go a step further when talking about the culture in Thailand because the pronoun is not necessary either but they do not conjugate the verbs so sometimes the subject of the verb is ambiguous.

#### *Masculinity versus femininity.*

Masculinity is applied to societies where the roles of genders are clearly defined. Men are expected to be assertive, successful and women are modest and they are worried about quality of life. Feminin orientated societies show an undistinguished separation of roles, both men and women are supposed to be modest, etc. Both countries are considered feminine and Thailand is emphasized in Hofstede and Hofstede's work (2005) as the most feminine Asian country. Competition is also an outstanding aspect in societies marked shaped with a strong masculine orientation. 30 per cent of the Spaniards interviewed noted a lack of effort and competition within Thai society specially regarding the professional field. This fact can be translated to the classroom setting. In my teaching experience in Thailand I came to realize that competition does not work in the same way than in Spain. Students tend to avoid winning over other classmates and they do better when working together in groups. This lack of interest and competition is also noted in the Spanish classes (Srivoranart, 2011).

#### *Uncertainty avoidance.*

This dimension is concerned with the degree of the feeling of being threatened because of unknown situations in the future. This sensation is expressed by the level of stress. Countries where this feeling is lower tend to develop a negative disposition against the expression of feelings. Thailand is situated in the 44<sup>th</sup> position among 74 countries other countries. One of the cultural shocks' stories reported for one of the interviewed described a situation where two women overcome a Spaniard when waiting for a taxi. The Spanish person started talking to these people loudly telling them that this behavior was not right. He was surprised because his Thai friends did not support him at that time. One of these friends explained to him later on that one is not supposed to show emotions in public, especially when they are negative. There is a feeling called *krenyai* that it means you should not hurt other person's feelings. This was explained to me in class by the students when working with the story. This is also connected to the collectivist feature that characterizes Thai culture because harmony prevails over personal interests.

Finally, I would like to note some obstacles found when elaborating this research. The first one was that the questionnaire and the interviews were too open. This openness difficulted the process of drawing conclusions from the questionnaire because each person reflected about different topics. The second main problem was that in this questionnaire people were asked to judge if these impressions were positive or negative without reasoning why. Because of this some unfounded and not argued judgements were made which conflicted with the research's aims. This study does not look for stereotypes; contrarily, the objective is to make students aware of cultural differences in order to comprehend in a more profound and complex way the Spanish cultural code as well as their own.

#### **Didactic proposal**

A didactic proposal to work with assumptions was elaborated. Stories based on both Spanish and Thai culture were created taking into consideration the information gathered previously through the interviews. Later on the students needed to acknowledge their assumptions within their cultural code. This activity is based on Brookfield's Basic Protocols of Critical Thinking (2012, 77-103). For instance, one of

the stories proposed is about Thai university student whose name is Ploy who wants to live in Chile but her parents prefer that she goes to England because they think it is safer and more prestigious. She does not know what to do. Marta, a friend of her from Spain tells her she should do whatever she wants, she should follow her dreams. The students do not need to make a decision for Ploy but discover the assumptions that she, her family and Marta are having and how it reflects their culture. Finally, they can connect this to their personal life and talk about what they would do in this situation and why.

I would like to address different possibilities of developing this line of research:

- 1) Firstly, I think it would be interesting to extend this research to other countries, comparing other cultures. My idea is to create a closed questionnaire based on Hofstede and Hofstede (2005) and apply it to my research. After gathering this information, different activities can be elaborated in order to work with these aspects and to develop their cultural awareness.
- 2) Secondly, proposing a method of developing critical thinking applied to learning a Second Language will be interesting. I think reading and writing skills can be worked upon keeping in mind a critical thinking approach, specially related to the Logic and Analytic Philosophy.

### **Conclusion**

The attitude of opening and questioning has to impregnate every piece of work concerning culture. This paper involves at least three cultures: Spanish, American and Thai. The concept of critical thinking is specially researched in the United States, which is placed in Hofstede and Hofstede (2005) as the most individualist country. Transferring a concept from an individualist culture and apply it in the education system of a much more collectivist society, such as Thailand, should not be made without some questioning. The concept itself of critical thinking has to be adapted to the new setting.

In conclusion, this study has been very enriching, rewarding because it sheds light over the concept of critical thinking in a Thai context when teaching and learning Spanish. Moreover, it establishes connections between cultures. This factor develops the students' intercultural competence and their critical thinking enhancing attitudes such as respect, curiosity, humility, perspectivism, questioning and courage. This research has also helped me personally to better understand Thai culture which I consider to be very important when teaching Thai students because I can improve my teaching practice.

## References

- Brookfield, S. D. (2012) *Teaching for Critical Thinking. Tools and Techniques to help students question their assumptions*. San Francisco: San Francisco.
- Byram, M. (1995). 'Acquiring Intercultural Competence. A Review of Learning Theories'. In L.Sercu (ed.) *Intercultural Competence*. Vol. I, 53-70.
- Ennis, R.H. (1995) *Critical Thinking*. New York: Prentice Hall.
- Freire, P. (2005) *Education for Critical Consciousness*. New York: Continuum.
- GUNI (2009) *Higher Education at a Time of Transformation: New Dynamics for Social Responsibility*. Hampshire: Palgrave Macmillan.
- Hofstede, G. and Hofstede, G.J. (2005). *Cultures and Organizations. Software of the Mind*. New York: McGraw-Hill.
- Lipman, M. (2003). *Thinking in Education*. Cambridge: Cambridge University Press.
- Maalouf, A. (1999). *Identidades asesinas*. Madrid: Alianza editorial.
- Meyer, M. (1991). 'Developing Transcultural Competence: Casa Studies of Advanced Foreign Language Learners'. In D.Butjes and M.Byram (eds.) *Developing Languages and Cultures*.
- MUIC (2013). Mahidol University International College. Available at [http://www.muic.mahidol.ac.th/eng/?page\\_id=1071/](http://www.muic.mahidol.ac.th/eng/?page_id=1071/) (Accessed 29 November, 2013)
- Oliveras, A. (2000). *Hacia la competencia intercultural en el aprendizaje de una lengua extranjera. Estudio del choque cultural y los malentendidos*. Barcelona: Editorial Edinumen.
- Paul, R.W and Elder, L. (2002). *Critical Thinking. Tools for Taking Charge of Your Professional and Personal Life*. New Jersey: FT Press.
- Perez de Herrasti, N. (2010). *Gramática de la cultura (I). Estilos de conversación. Teoría y práctica a través de los textos, imágenes y tareas*. Norderstedt: Herstellung und Verlag: Books on Demand GmbH.
- Ruiz Roman, C. (2003). *Educación intercultural. Una visión crítica de la cultura*. Barcelona: Ediciones Octaedro.
- Searle, J. (1995). *The Construction of Social Reality*. New York: Simon and Schuster.
- Srivoranart, P. (2011). *El proceso de aprendizaje de ELE por parte de los alumnos tailandeses: Condicionantes lingüísticos y culturales*. Alcala de Henares: Universidad de Alcala de Henares (unpublished thesis)
- Wittgestein, L. (2009) *Philosophical Investigations*. Malden: MA. Blackwell-Wiley.

*Mathematics Assessment in Primary Classes – Formative or Summative,  
or Seize the Moment*

Mithu Pal

Institute of Advanced Studies in Education, India

0634

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Abstract

There is a need to move away from the present day conflicts and tensions that surround formative and summative assessments. Much assessment is happening in the primary mathematics classrooms which is informal, spontaneous and is often undertaken as the normal process of teaching rather than under the overemphasized aegis of formative or summative assessments. The type of professional judgements made instantly by the teacher when she seizes a 'teachable moment' on the run in a busy classroom by assessing the situation the child is in and giving immediate feedback, during the normal course of teaching, often go unnoticed. It is this quality of the teaching practice which makes the teacher help the child to take small steps to go to the next higher level of understanding, and is the need of the hour and not assessments in their formative or summative disguise. Based on research from India and overseas, some causes of the perceived tensions between the formative and summative functions of the assessments are explored and aspects of quality assessment practice in primary mathematics are looked at in this paper.

**Keywords:** Assessment, formative, summative, teaching practice, primary classrooms, feedback

## 1. INTRODUCTION

For over a quarter of a century, assessment practices have been an on-going focus of educational research so much so that in this period of time numerous new tools have been developed and the focus of curriculum has leaned towards the learning outcomes in the classrooms ( Black & Wiliam, 2003). In fact, for most of the last century, assessment was seen as a way of finding out what students had learnt. Teachers, researchers and people in general argued about different forms of conducting assessments like portfolios, standardized tests, year end and terminal examinations, etc because seemingly there was a disagreement among them as to what they thought was important in education. The common point that stemmed up from these arguments was that they all agreed on assessments being primarily concerned with evaluating the effectiveness of instructions. Towards the end of the century people and researchers in the field of education began to look more intensely and systematically at the role of assessments in enhancing student learning instead of just measuring it and this led to the demarcation of its function as ‘assessment for learning’ and ‘assessment of learning’ ( Gipps and Stobart, 1997).

The description of the formative and summative functions as ‘assessment for learning’ and ‘assessment of learning’ respectively is comparatively recent in educational thinking and arose from the view of learning that positions the child as an active agent in constructing his own learning. Central to this view is also the role of the teacher in providing a range of supports designed to maximise both the extent and the rate of learning.

Major shifts in assessment practice in the recent years are summarized in the following table.

<b>Major Shifts in Assessment</b>	
<b>Away from Traditional Practice....</b>	<b>Toward.....</b>
Atomised learning outcomes, student’s knowledge of specific facts and isolated skills	Assessing student’s full mathematical power
Treating assessment as independent of curriculum or instruction	Aligning assessment with curriculum and instruction
Regarding assessment as sporadic and conclusive	Regarding assessment as continual and recursive
Not permitting any discrimination between rote application of algorithms and conceptual thinking & reasoning	Designed to discriminate between the two
Basing inferences on restricted or isolated sources of evidence	Basing inferences on multiple sources of evidence

Restricting to use of only paper and pencil	Relying more on concrete materials, manipulatives and making knowledge connections
Making assessment process secret, exclusive and fixed	Making assessment process public, participatory and dynamic
Developing assessment by oneself	Developing a shared vision of what to assess and how to do it
Viewing students as objects of assessment	Viewing students as active participants in the assessment process
Simply indicating whether or not answers are correct	Communicating with students about their performance in continuous and comprehensive manner
Generally avoiding conversation and oral one to one discussion	Involving the child in a conversation and one to one discussion to explore her thinking

## 2. ASSESSMENT- IN CONTEXT TO PRIMARY CLASSROOMS

The term 'assessment' derives from the Latin word 'assidere' meaning 'to sit beside'. In many respects this simple phrase tells a lot about the essence of assessment in the context of the primary school classroom. Its tone is soothing yet affirming and it points towards a bond based on mutual trust and understanding and reminds us that there should be a positive rather than a negative undertone between assessment and the process of teaching and learning in the school.

In the broadest sense assessment is concerned with the children's progress and achievement. Classroom assessment may then be seen as the process of gathering, recording, interpreting, using and communicating information about a child's progress (Harlen, Gipps, Broadfoot, Nuttal, 1992) and achievement during the development of knowledge, concepts, skills and attitudes and sharing it with teachers, students, parents and other stakeholders. Assessment, therefore, involves much more than testing and is an on-going process that encompasses many formal and informal activities designed to monitor and improve teaching and learning in all areas of the curriculum.

An assessment activity can help learning if it provides information to be used as a feedback, by the teachers and by their pupils in assessing themselves and each other, to modify the teaching and learning activities in which they are engaged. When assessment is taken across the whole class, the teacher can gain insights into her own pedagogic practice which help her identify areas where she needs to focus more or alter her current practices.

The attitude towards becoming a learner of mathematics and towards mathematics itself are strongly formed by the nature of experiences children have while learning mathematics in primary classes and this in turn influences their motivation and ability to learn. This includes not only the abilities of computation, mathematical reasoning and problem solving but also the appreciation of the beauty of mathematics. The developmental concerns also require that we provide ample opportunity for children to show their mathematical understanding independent of school-learning based

symbolic representation. Hence several tasks, which are oral, require one-on-one interaction, and involving the use of materials, manipulatives and pictures are very important.

Even the child's statement 'I don't know' provides us is more valuable information, and we must not mark 'zero' for the question. In addition to telling us that the child does not know the answer, it does tell us that the child is confident and comfortable enough to say that she does not know.

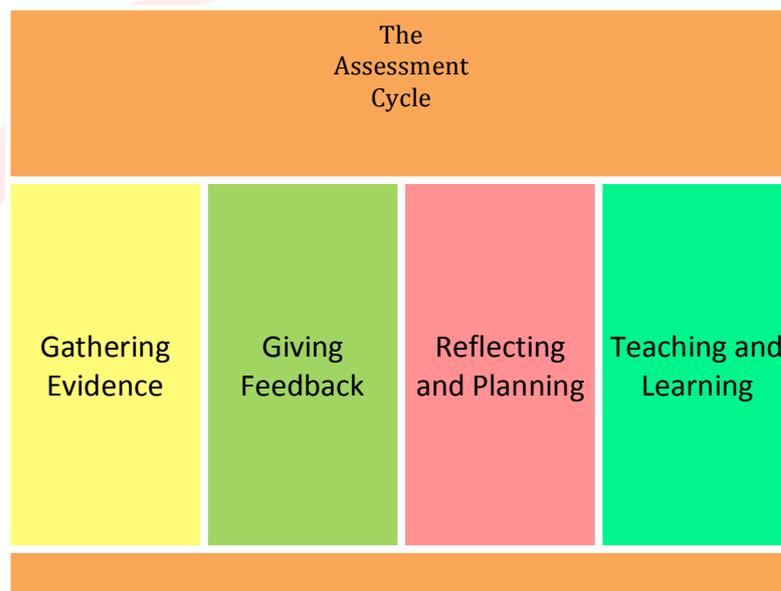


Figure 1

### 3. ASSESSMENT FOR LEARNING (FA) Vs ASSESSMENT OF LEARNING (SA)

The terms formative and summative were introduced by Michael Scriven almost 36 years ago (Scriven, 1967), and tracing the history of these terms and their various 'pluses and minuses' seems like a worthwhile exercise.

Scriven made the first distinction between Summative Assessment (SA) and Formative Assessment (FA) in terms of their being more related to interpretations and time. According to him the process of assessment is a single process and that FA is the same process as SA. In addition, for an assessment to be formative, it requires feedback which essentially would reduce the gap between the required standard and the quality of work produced. It also should indicate as to how the level of work can be improved to reach the required standard. So both SA and FA are both essentially the same process and differ only in the type of information that can be inferred at two different timings that can either lead to changing the set of instructions leading to better learning or can lead to a cumulative judgement about the learning that took place at the end of the program.

According to Black et.al (2004) assessment for learning is any assessment for which the first priority in its design and practice is to serve the purpose of promoting pupils' learning. It thus differs from assessment of learning which is primarily designed to serve purposes of accountability, or of ranking, or of certifying competence or learning outcomes..

The available research evidence increasingly suggests that formative assessment is more effective in terms of achieving learning outcomes (William & Thompson, 2007). The enormous volume of research advocating assessments for learning have led to a splurge in the products and services disguising themselves as ‘formative assessments’ but practically they contain very little in essence of what makes up the formative functions of assessment (Shepard, 2007). There has been a substantial increase in the advocacy of assessment for learning and it is increasingly being recommended, but regarding its relationship to summative assessment, there is much that has to come in as yet (Taras, 2005a).

Regarding the position of assessments of learning or summative assessments in the recent years – it seems that teachers are strongly against the notion of this type of assessment. Biggs (1998) however has tried to argue that summative assessments should be seen as a part of a comprehensive assessment plan and that it does have a very important role to play in classroom assessments. He advocated this by using graded portfolios as a form of summative assessment as well as formative assessment and through this suggested that whether an assessment was formative or summative was largely a matter of ‘timing’. Samples of students’ works collected at the end of a teaching sequence can perform a summative function providing a record at one point of time. In contrast, collected during a teaching sequence, the same sample could provide formative information helping the teacher to improve her planning.

#### 4. CONFLICTS

Educational assessments are conducted in a variety of ways and their outcomes can be used for a variety of purposes. There are differences in who decides what is to be assessed, who carries out the assessment, where the assessment takes place, how the resulting responses made by students are scored and interpreted, and what happens as a result. In particular, each of these can be the responsibility of those who teach the students, while at the other extreme, all can be carried out by an external agency. Apart from these, there are also differences in the purposes that assessments serve. For example, it is often widely assumed that the role of classroom assessment should be limited to supporting learning and all assessments with which we can hold educational institutions to account must be conducted by an external agency, even though in some countries, this is not the case. However, the fact that the different functions that assessments may serve are in tension, is quite evident.

Many educationists have come forth with the argument that in order for these tensions and conflicts to be resolved, a unitary assessment system cannot suffice to serve all functions and that distinct systems are required. No matter how suggestive the argument in favor of this suggestion may be, it seems that it must not be given in to because the consequences are so non-conducive for learning. Separate assessment systems result either in the exclusion of teachers from summative assessments, or requiring them to operate parallel but distinct assessment systems for summative and formative functions, which almost always results in the marginalization of the formative function (Black & William, 2004).

Perhaps the most injurious aspect is that FA is seen as a magic formula which is not only separate and distinct from SA, but incompatible with it. This is the perceived

'tension' between SA and FA (Taras,2005a). The advocacy of FA over SA is not only becoming fashionable but elitist too and in the humorous yet hard hitting words of Taras (2005,b)- ' FA is the antiseptic version of assessment and SA has come to represent all the negative social aspects.'

There is a need to dissolve the tension between SA and FA by whichever way possible but it seems like a major undertaking and cannot be handled by isolated arguments. There must be a denial to accept SA and FA as being insoluble with each other (Wiliam, 2000b). There are reports suggesting teachers refuse to separate FA and SA and that evidence collected from teachers suggest that there is usefulness in using summative assessment for formative purposes (Black *et al.*, 2004).

This development means that the current frameworks of assessment require teachers to repeat and duplicate the assessment process if both SA and FA are needed (Black, 2003; Torrance, 1993; Wiliam, 2000b ; Wiliam and Black, 1996). The perceived necessity of duplicating assessment has been prohibitive to the development of FA: teachers, already harassed and overstretched, will not willingly agree to double their workload. Indeed, Black (2003c, p. 1) states that the teachers were persuaded to take on FA as 'extra work'.

Furthermore: experience in many countries indicates that very few teachers are able or willing to operate parallel assessment systems - one designed to serve a 'summative' function and one designed to serve a 'formative' function. (Wiliam, 2000b)

The current issue of the Central Board of Secondary Education (CBSE) recommending three FAs and one SA in primary classes in each term, in the name of Continuous and Comprehensive Evaluations (CCE) in India has evoked a lot of discussion around assessments in the country. Eighteen teachers from six South Delhi private schools who have started following these CBSE guidelines when interviewed, clearly stated that the new system under the CCE would definitely increase the workload of the teachers, much of which could have been utilized in concrete classroom activities instead. Thirteen of them felt that formative assessments were actually summative assessments and would hardly improve the child's learning even if feedback is given and that the decisions taken by the teacher within the classroom to modify her own methodology are much more effective than any assessment taken even at the end of the teaching unit. These teachers were qualified mathematics teachers from schools which are reputed to be progressive.

## **5. SEIZE THE MOMENT!**

True assessment tells you why something went wrong. The only way for remediation is by observing the child's failure and trying to understand it. The whole idea of observing the child is to pin-point areas of difficulty and also the level of difficulty which the child is facing while working on a problem and that is the essence of assessment. For assessment to be truly effective and meaningful for the child it is the moment of identification of the problem and thereafter the immediate remediation which are of significance to the child. Added to it is also the pleasure or the sense of victory for the child that he has been able to 'crack the problem'. These are very 'encashable moments' for the teacher without her having to wait for the test results to

be consolidated and a formal feedback to be given. At the same time it is given to the child as 'a matter of fact' and not with the usual frills or threats of regular assessments when the child is aware that he is being assessed. A timely contact at the right moment with the child to give a push can make all the difference serving as a motivating factor jolting the student into action, to getting the grey cells in his brain activated over the task in hand. And all this in the least threatening way!

A grade 4 teacher in a class of fractions asked the students to write out what fraction of the figure was shaded. The figure (1a) was a rectangle with 4 equal bands with one band shaded. One of the students wrote  $\frac{1}{3}$ . The teacher seeing this decided to ask the students to shade  $\frac{1}{3}$  of another figure (1b), a rectangle with three equal bands, immediately after. The child did this correctly and instantly went back to the previous problem to rub out the wrong answer and write  $\frac{1}{4}$ .



(1a)



(1b)

Figure 1

The teacher had helped the child correct himself without explaining anything but intelligently giving another problem which would make the child realise his mistake and rectify his mistake.

It also happens quite often that the teacher finds a student engaged in a learning task prescribed by her and as a response to the child's difficulty in doing the particular task gets into a 'dialogue' with the child. The discussion that follows makes the child change her actions to arrive at the solution. Primary teachers perceive this kind of an activity as a normal process of teaching rather than feedback from assessment. This is instant feedback that has helped the child learn.

In the words of Wiliam (2000) there are moments that arise continuously in classroom teaching, where teachers are constantly having to make sense of students' responses, interpreting them in terms of learning needs, and making appropriate responses. But they also arise when the teacher circulates around the classroom, looking at individual students' work, observing the extent to which the students are involved in the activity especially in the teaching of mathematics. Such reflective moments in education, in which the teacher contemplates what has passed and what is still to come, are important.

Spontaneous assessment may be anticipated by the instructor but is unplanned and arises during the course of the lesson to provide evidence of student learning. For example, during a discussion the students might say something that the teacher had not anticipated and which leads the teacher to ask further probing questions. These questions are not pre-planned but are prompted by student responses. Such assessment is informal and spontaneous and involves the teacher recognise a teachable moment and acting upon it. The teacher is able to assess the situation the

child is in and give immediate feedback in such a way that the child moves ahead with the learning. These moments are neither recorded nor consciously noticed since the teacher instinctively responds to them as a part of her routine teaching activity.

## 6. WHAT NEXT?

Consider the scene at a workshop conducted for primary mathematics teachers in a school in South Delhi:

The topic of discussion was equivalence of fractions. A teacher was asked to give an example of how she would take a student to the next higher level of understanding fractions if the child shades  $\frac{2}{3}$  of the figure given below correctly.

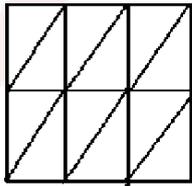


Figure 2

The teacher was able to tell that the idea of equivalence was implicit in the problem but was not able to come up with a concrete follow up idea. She had good conceptual knowledge of equivalence of fractions but it seemed in a classroom situation with students completing a task successfully she would need to promptly think and be ready with 'what to do next' activities.

According to Watson et al (2008) primary mathematics teachers can recognise and predict responses likely to be given by students (including both correct and incorrect ones) but when it comes to identifying the next step needed to develop different levels of student understanding, they face considerable difficulty. This issue has considerable scope for sustainable professional development of the teachers focussing on minute by minute judgements within the classrooms to bring about substantial increase in students' learning .

Figure 3 tries to depict the levels of difficulty encountered by the teacher in a classroom.

### Easy

Providing a task addressing a desired mathematical concept  
Selection of quality material

### Easy

Predicting likely responses  
Grouping responses into categories of correct and incorrect

### Difficult

Identifying what to do next  
Taking students to the next level of understanding

Figure 3

## 6. PREPAREDNESS FOR 'THE TEACHABLE MOMENT'

### 7.1. Dialogue and Discussions - Interactive character of the teaching process

It is impossible to talk about assessment sans pedagogy. Classroom is the real field of work and efforts to improve learning outcomes of the students need a lot of focus on teacher practice. Teachers make a difference (Hattie, 2009). The interactive character of the teaching process (Treffers, 1991) often defines the quality of the assessment that happens on the spot. Basically interactive teaching is giving students something to do, getting back what they have done, and then assimilating it yourself, so that you can decide what would be best to do next.

Classroom assessment for learning relies heavily on dialogue & discussion between the child and the teacher (Callingham, 2008). In order to truly fathom what the students know and understand, one should discuss their answers with them. Rather than focusing on the registration of externally perceptible behavior, these observation and interviewing techniques are primarily intended to display the students' underlying thought processes and insights. Primary teachers know this and often take a call to reason out well with children who are making mistakes to know what is the level of understanding.

'How' the students solve the problems is the whole point. It is the way in which the student works on a problem that determines the level of understanding. And this can become evident to the teacher by interviewing the child or asking him how he solved it. Consider the scene in a grade 2 mathematics class in Mumbai where a child figures out  $8 + 7$  by counting 7 further from 8 on. Another child figures out that  $8 + 7$  is simplified by  $8 + (2 + 5) = (8 + 2) + 5$ . This latter discovery shows a high comprehension level. Once this is grasped, it becomes mere knowledge of the method. As soon as the teacher was able to figure it out by asking how the child had

solved the problem she guided that particular child to higher order problem solving by giving him a challenging problem where the child had to figure out  $48+27$  using the same knowledge of the method. The child took a while but figured it out after a while and in the third problem which came his way from the teacher, he solved  $35+49$  in no time at all. The child was helped by the teacher to master the knowledge of the method once she got an insight into his thought process by interacting with him at that moment when his mind had chanced upon the method.

For the teachers it falls under their regular and routine daily activities to reason out with the child as he is attempting problems in mathematics and is taken as the normal process of teaching rather than feedback from assessments and this perception has scope for professional learning (Callingham, Pegg & Wright, 2009). As Socrates discovered, a good question can accomplish this result better than, just telling the answer. The teachers monitoring students' participation in discussions and deciding when and how to encourage each student to participate are often able to make quick instructional decisions which benefit the whole class in better learning.

### **7.2. Learning to Observe Learning Processes**

If one wishes to improve assessment, one must, (begin in the micro-environment by first helping teachers learn to observe learning processes. The teachers must become aware of when learning processes are taking place and when they are not. For this reason, learning to observe 'how students learn' is regarded as the principal part of all courses in mathematics education.

Assessment would also need to include classroom observation in the form of mental notes the teacher makes as she teaches and while children work, regarding aspects of each child's participation as well as individual work characteristics. Some of the aspects to note would include: does the child ask questions, is he/she able to follow arguments and make their own, what does she/he do when confronted with a new type of problem, etc.

Broaden and sharpen the teacher's awareness of the presence (or absence) of learning processes. The formalized tests are absolutely inadequate for this purpose. Information set in a rigid framework is useless for making a diagnosis. Moreover, the object is to open the eyes of the evaluator, which cannot be done by handing him mechanized tests.

### **7.3. Planning by the Teacher – Her Readiness !**

The approach adopted by the teacher largely determine the quality of learning in the classroom (William & Thompson, 2007). Such kinds of approaches comprise of ways of assessment in the classroom scenario which help in identifying a student's readiness to learn (Griffin, 2000), so that planned learning experiences can be used fruitfully by the teacher. It is win-win situation for teachers to ask students to work together in small groups to solve a problem. It goes without saying that in group work a discussion would ensue that not only would serve in itself to build more robust knowledge structures, but also to motivate. The anticipation of immediate feedback in the form of reaction from their peers, or from the teacher is a very strong motivator. If

it is not embarrassing or threatening and students want to know desperately whether their understanding is progressing or just drifting aimlessly in concept space.

It is important to note here that for such type of assessment to go on smoothly the teacher needs tasks ready up her sleeve that seek to address and clarify misconceptions in the particular mathematical concepts. Her preparedness, readiness and foresight for handling classroom situations which inadvertently arise during the teaching-learning process would spearhead her attempts in grabbing these moments for meaningful assessments.

## **7. CONCLUSIONS**

Interactive teaching is the call of the hour and the time has come to ignore the tussle between FAs and SAs. Aspects of quality assessment practice in the classrooms need to be looked at more closely and the conflicting cloak of formative and summative nature of assessments to suit political means, needs to be shed. Due acknowledgement and emphasis need to be built on role of classroom observations, dialogue and discussions between the teacher and pupil, teacher's planning for contingency tasks and right questioning and her ability to change pedagogical approaches on the spur of the moment. This needs sustainable professional development of the teachers focussing on minute by minute and 'on the spot' judgements within the classrooms to bring about substantial increase in students' learning.

## REFERENCES

- Biggs, J. (1998). Assessment and classroom learning: A role for summative assessment? *Assessment in Education: Principles, Policy & Practice*, 5(1), 103-110.
- Black, P., & Wiliam, D. (2003). 'In praise of educational research': Formative assessment. *British Educational Research Journal*, 29(5), 623-637.
- Black, P., Harrison, C., Lee, C., Marshall, B. and Wiliam, D. (2004) *Assessment for Learning. Putting it into Practice* , Maidenhead: Open University Press.
- Black, P., Harrison, C., Lee, C., Marshall, B. and Wiliam, D. (2004) *Working inside the Black Box: Assessment for Learning inside the Classroom*, Phi Delta Kappan 86 (1), 8-21
- Black, P. J. & Wiliam, D. (2004). *The formative purpose: assessment must first promote learning*. In M. Wilson (Ed coh.) Towards erence between classroom assessment and accountability: 103rd Yearbook of the National Society for the Study of Education (part 2) *Chicago, IL: University of Chicago Press*.  
(Online)  
[http://www.dylanwiliam.org/Dylan\\_Wiliams\\_website/Papers\\_files/IAEA%2004%20paper.pdf](http://www.dylanwiliam.org/Dylan_Wiliams_website/Papers_files/IAEA%2004%20paper.pdf)
- Callingham, R. (2008). Dialogue and feedback: Assessment in the primary mathematics classroom. *Australian Primary Mathematics Classroom*, 13(3), 18-21
- Callingham, R., Pegg, J., & Wright, T.(2009). Changing teachers' classroom practice through developmental assessment: Constraints, concerns and unintended impacts. In R. Hunter, B. Bicknell, & T. Burgess (Eds.), *Crossing divides* (Proceedings of the 32nd annual conference of the Mathematics Education Research Group of Australasia), 8pp. [CDROM]. Palmerston North, NZ: MERGA.
- Gipps, Caroline V., and Gordon Stobart.(1997) *Assessment: A Teacher's Guide to the Issues*. 3rd ed. London: Hodder & Stoughton
- Griffin, P. (2000). *Students! Take your marks, get set, learn. Identifying 'Readiness to Learn' as a benefit of outcomes based education*. Keynote address delivered at the Education Queensland Mount Gravatt Symposium, Assessment and Reporting in an Outcomes Framework, July 17, 2000.
- Harlen, W., Gipps, C., Broadfoot, P. and Nuttall, D. (1992) 'Assessment and the Improvement of Education', *The Curriculum Journal* 3(3) pp. 215 - 230.
- Hattie, J. A. C. (2009). *Visible learning: A synthesis of meta-analyses relating to achievement*. Abingdon: Routledge.
- Scriven, M. (1967) *Perspectives on Curriculum Evaluation* (AERA MonographSeries - Curriculum Evaluation) Chicago: Rand McNally and Co.

Shepard Lorrie A., (2007). “ Will Commercialism Enable or Destroy Formative Assessment?” In *The Future of Assessment: Shaping Teaching and Learning*, edited by Carol A., Dwyer, Mahwah N.J.:Lawrence Erlbaum Associates

Streefland, L. (1991). *Fractions in Realistic Mathematics Education. A Paradigm of Developmental Research*. Dordrecht: Kluwer Academic Publishers.

Taras, M. (2001) Summative assessment: the missing link for formative assessment, *Journal of Further and Higher Education*, 33(1), 57-59

Taras, M. (2005). Assessment – Summative and Formative – Some Theoretical Reflections. *British Journal of Educational Studies*, 53(4), 466-478

Treffers, A. (1991). Realistic mathematics education in The Netherlands 1980-1990. In L. Streefland (ed.), *Realistic Mathematics Education in Primary School*. Utrecht: CD-b Press / Freudenthal Institute, Utrecht University.

Watson, J. M., Callingham, R., & Donne, J. (2008). Proportional reasoning: Student knowledge and teachers' pedagogical content knowledge. In M. Goos, R. Brown, & K. Makar (Eds.), *Navigating currents and charting directions. Proceedings of the 31st annual conference of the Mathematics Education Research Group of Australasia* (Vol. 2, pp. 555-562). Adelaide: MERGA.

William, D. (2000a). *Integrating formative and summative functions of assessment*. Paper presented to the WGA 10 for the International Congress on Mathematics Education 9, Makuhari, Tokyo. Available from <http://www.dylanwilliam.net/>

William, D. (2000b) *Integrating summative and formative functions of assessment*. Keynote address to the European Association for Educational Assessment, Prague: Czech Republic, November. <http://www.kcl.ac.uk//depsta/education/hpages/dwilliam.html>

William, D. & Thompson, M. (2007). Integrating assessment with instruction: What will it take to make it work? In C. A. Dwyer (Ed.) *The future of assessment: Shaping teaching and learning*. Mahwah, NJ: Lawrence Erlbaum Associates.

*Comparative Effectiveness of a Programme of Movement Education and Traditional Physical Education on Movement Satisfaction, Attitude towards Physical Activity and Self Concept of Elementary School Children*

K.V.K. Reddy

L.N.C.P.E., India

0637

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## INTRODUCTION

The preparation of the young for late life is an activity to which almost all living species give considerable attention, time and energy. In human beings, this process is fairly prolonged and is termed 'education.' The ultimate aim of education is the fullest development of the individual's potentialities.

Well-organized and implemented programmes of physical education bring about not only psychomotor development, but also development in the cognitive and affective domains. Sound programmes of physical education, when implemented under effective leadership and with adequate facilities will bring about all-round development of the participants. Such programmes include a variety of sports, games and other activities, which are governed by a set of rules adopted universally. Although sports and games offer an opportunity for all-round development of participants, their contributory potential is limited, especially for children. Those concerned with the physical education of children have been trying to find and devise suitable games and activities, which will provide adequate opportunities for their all round development. However, most of the minor games so developed are again controlled by sets of rigid rules, though they are sometimes modified locally.

The concept of movement education is of fairly recent origin in this context. This provides movement experiences to children to satisfy their biological urge for movement, provide opportunities for exploration and discovery, develop creativity and enable them understand movement as it is relates to body parts and surroundings. Conceptually, these programmes are oriented to a problem-solving approach permitting greater flexibility and freedom in the movement experience than mere traditional sports oriented activities. Thus, Movement Education has been hailed as the ideal substitute for traditional physical education.

Movement Education is based on the inspired work of Rudolf V Laban and the development of his theories in British progressive schools after World War II. Laban stressed the fact that body is an instrument through and by which people move, and that each individual is endowed with certain natural types of movement. He believed strongly in exploratory movement and in a spontaneous quality in movement. He opposed the rigidity of any set series of exercises that left no room for creativity or self expression.

Movement education uses four components of movement developed by Rudolf Laban: Body awareness, Space awareness, Qualities of movement and Relationships. Body awareness refers to what the body can do – the shapes it can make, the way it balances, and the transfer of weight from one part of body to another. Space awareness describes the spatial aspects of movement as well as skills relating to moving in different directions and to different levels. The component of Qualities describes how the body can move, and includes skills relating to speed, force and flow of movement. Relationships refer to the connection between body and other performers or the body and small and large apparatus.

The essence of Movement Education is to make a child aware of the movement of its body and involve it intellectually as well as physically. It seeks not only to have the child understand and appreciate its own movement but also appreciate the variety of

movement of other children. The programmes of Movement Education provide movement experiences with sufficient freedom of expression so that children develop movement concepts relating to force, time, space and the like, besides deriving the benefits of health and fitness. Development of movement concepts is achieved through movement experiences, which are presented using the method of exploration characterized by guided discovery and problem solving.

Though some research studies have highlighted its usefulness, much of the acclaimed contribution of Movement Education has been philosophico-speculative in nature. Further, the utility and effectiveness of Movement Education in the sociocultural pattern of India are yet to be documented. Hence, the present investigation was made to compare the effectiveness of a programme of Movement Education and Traditional Physical Education on movement satisfaction, attitude towards physical activity and self-concept of elementary school children.

### **Methodology**

Subjects for the study were one hundred elementary school children studying in classes 4, 5 and 6 in Kendriya Vidyalaya, Trivandrum. A stratified random sample with proportionate number of subjects from each class was obtained using a table of random numbers. The average age of the subjects was 7.8 years, ranging from 7 to 9 years.

### **Administration of Tests and Collection of data**

Since the three tests involved in the study are based on self-report questionnaires, they were administered in a classroom of the school by the investigator himself. The subjects were called in four groups of twenty five each to the classroom and were given preliminary instructions. The groups were administered tests for one of the criterion measures on the same day, thus completing the pre-test data collection in three days.

### **Procedure of the Experiment**

Subjects from each class were randomly divided into two groups, and one group from each class was randomly assigned to Movement Education Programme and the other to Traditional Physical Education Programme. The Movement Education group (ME group) was administered a programme of physical activities based on the principles of Movement Education while the Traditional Physical Education group (TPE group) continued to participate in the regular physical education programme of the school. Movement Education and Traditional physical Education classes were scheduled at the same hour but on different days of the week alternately, each class meeting three days a week for a total duration of twelve weeks. The duration of each class was forty five minutes. The TPE group participated in a physical education programme comprising minor games, tag games and relays routinely offered by the school. The Traditional Physical Education programme was administered by the school physical education teacher with the assistance of the classroom teachers as had been the practice in the school.

### **Experimental Design**

A random group design with pre- and post- tests on the three criterion variables, namely, Movement Satisfaction, Attitude towards Physical Activity and Self-concept was used in this study. Comparison was made between the pre-test scores of the two

groups, the post test scores of the two groups and between the pre and post test scores of each group separately.

**Statistical Analysis of Data**

The pre- and the post-test scores in each variable were compared for the ME and TPE groups separately using the mean differences method (t-test, correlated data). Comparison of the two groups on pre- and post-tests was made using the mean differences method (t-test, uncorrelated data).

**Findings**

**Movement Satisfaction**

The findings of the study pertaining to the comparison of Movement Education (ME) and Traditional Physical Education (TPE) groups on pre- and post-tests of Movement Satisfaction are presented in Table 1.

**TABLE 1**

Mean Scores	Groups Compared		Difference Between Means	$\sigma$ DM	t
	ME	TPE			
Pre-test	105.98	104.52	1.46	2.035	0.717
Post-test	110.58	106.40	4.18	1.820	2.296

t. 01 (98) = 2.63 (Two-tailed test)

t. 01 (98) = 2.36 (One-tailed test)

Table 1 reveals that the two groups did not differ significantly either before or after the experiment.

The comparison of pre-and post-test scores of the two groups is summarized in Table 2.

**TABLE 2**

Groups	Mean Scores Compared		Difference Between Means	$\sigma$ DM	t
	Pre	Post			
ME	105.98	110.58	4.60	1.159	3.968*
TPE	104.52	106.40	1.88	1.236	1.52

\*Significant at .01 level.

t.01 (49) = 2.40 (One-tailed test)

It can be seen from Table 2 that the ME group exhibited a significantly higher level of movement satisfaction on post-test.

**Discussion of Findings**

The finding of no significant difference between the ME and TPE groups on pre-test clearly indicates that the two groups were comparable before the start of the experiment. The post-test group Means also do not differ significantly. However, while on the pre-test the difference between the group means was 1.46 in favour of the ME group the difference on the post-test was 4.18, resulting in a 't' ratio of 2.30, which is very close to the tabulated value of 2.36. Thus, it can be said that the Movement Education programme was quite effective in enhancing the satisfaction felt by the students in their movement experiences. As the two groups were quite similar on the pre-test and exhibited considerable difference on post-test, it may be inferred that the movement experiences involving freedom of exploration, creative self-expression, problem solving without imposed judgement, and guided-discovery of new movement patterns are more conducive to greater satisfaction than are the experiences provided by the Traditional Physical Education programme which are largely restricted to teacher-controlled participation, rigid patterns of movement, competition-oriented performance and finally judged as to their effectiveness by the outward results they produce.

Such a finding is not surprising as children, being active by nature and having multiple individual differences, like to participate in physical activity according to their choice, which necessitates a free atmosphere with ample facilities! These basic characteristics of children find correspondence in Movement Education and, hence, children perceive the Movement Education programme to be satisfying.

#### **Attitude towards Physical Activity**

The findings of the study pertaining to comparison of the groups on Attitude towards Physical Activity before and after the administration of experimental treatment have been summarized in Table 3.

**TABLE 3**

Mean Scores	Groups Compared		Difference Between Means	$\sigma$ DM	t
	ME	TPE			
Pre-test	235.38	235.9	0.52	1.412	0.368
Post-test	237.18	237.0	0.18	1.311	0.137

$t_{.01} (98) = 2.63$  (Two-tailed test)

$t_{.01} (98) = 2.36$  (One-tailed test)

The two groups did not differ significantly both on pre-test or on post-test.

Table 4 presents the comparison between pre- and post-test scores for the two groups separately.

**TABLE 4**

Groups	Mean Scores Compared		Difference Between Means	$\sigma$ DM	t
	Pre	Post			
ME	235.38	237.18	1.80	0.695	2.591*
TPE	235.90	237.00	1.10	0.635	1.733

\*Significant at .01 level.

t .01 (49) = 2.40 (One-tailed test).

It can be seen from Table 4 that only ME group made significant improvement in its attitude towards physical activity.

### **Discussion of findings**

A perusal of Tables 3 and 4 brings out a noteworthy occurrence in the present investigation. While the two groups did not differ significantly both on pre-test and post-test, and the TPE group did not exhibit significant improvement from pre- to post-test, Mean gain made by the ME group is significant.

This occurrence may be due to the fact that the ME group had a slightly lower score on, pre-test and a slightly higher score on post-test in comparison to the TPE group. Thus, the nett improvement made by this group attains statistical significance.

Both groups exhibited a very favourable attitude towards physical activity even before the experimental treatment was begun. This testifies to the overall adequacy of the regular physical education programme of the school where the investigation was conducted. Thus, the improvement made by the ME group was very small, though significant.

Thus, it may be safely inferred that inclusion of Movement Education in the curriculum would certainly bring about improvement in attitude towards physical activity not only in terms of immediate outward expression of attitude but also an internalization which will last through adult years, thereby acting as a positive influence for participation in physical activity.

### **Self-Concept**

The comparison of ME and TPE groups on pre- and post-tests of Self-Concept is presented in Table 5.

**TABLE 5**

Mean Scores	Groups Compared		Difference Between Means	$\sigma$ DM	t
	ME	TPE			
Pre-test	136.14	135.68	0.46	1.357	0.339
Post-test	138.16	136.82	1.34	1.297	1.033

$t_{.01(98)} = 2.63$  (Two-tailed test)

$t_{.01(98)} = 2.36$  (one-tailed test)

As the 't' ratios for both pre-test and post-test comparison between the groups are far below the value required for significance, the Mean differences of 0.46 and 1.34 on pre- and post-tests respectively may be attributed to sampling error; there was no real difference between the two groups with regard to self-concept either before or after the experiment.

The comparison of pre- and post-test Mean scores of the two groups on self concept is presented in Table 6.

**TABLE 6**

Groups	Mean Scores Compared		Difference Between Means	$\sigma$ DM	t
	Pre	Post			
ME	136.14	138.16	2.02	0.508	3.976*
TPE	135.68	136.83	1.14	0.607	1.878

\*Significant at .01 level

$t_{.01(49)} = 2.40$  (one-tailed best).

The ME group made an improvement of 2.02 which is statistically significant whereas the TPE group did not show significant improvement.

### Discussion of findings

Though the two groups did not differ significantly both on pre-test and post-test, the significance of improvement made by ME group from pre- to post-test is clearly indicative of the superiority of Movement Education.

The fact that subjects in the present investigation had a positive self-concept before the experiment, and, that only the ME group exhibited an improvement after twelve weeks of participation, indicates that though a good programme of Traditional Physical Education is conducive to the development of positive self-concept, children participating in such a programme for a fairly long duration, exhibit a levelling off of the increase in self-concept, but the Movement Education programme can lead the children through further improvement.

### **Conclusion**

The findings of the study lead to the conclusion that a programme of Movement Education can contribute significantly to enhancement of Movement Satisfaction, Attitude towards Physical Activity and Self-Concept of Elementary School Children more than a programme of Traditional Physical Education.

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## **BIBLIOGRAPHY**

### **Books**

Anderson, Margaret E. Physical Education in Primary Schools. Inventive Movement, Edinburg : W & R.Chambers,1970.

Bailey, Rebecca Anne and Burton, Elsie Carter. The Dynamic Self. Activities to Enhance Infant Development. St. Louis: The C.V. Mosby Company, 1982.

Boyer, Madeline Haas. The Teaching of Elementary School Physical Education, Games and Related Activities. New York: J. Lowell Praft- and Company, Inc., 1965.

Bucher, Charles A and Reade, Evelyn M. Physical Education and Health in the Elementary School 2nd ed. New York: Macmillan Company, 1.971.

Cameron,W. McD and Cameron, Marjorie. Education in Movement in the Infant School. Oxford: Basil Blackwell, 1971.

Fait, Hollis F. Experiences in Movement : Physical Education for Elementary School Child 3rd ed. Philadelphia : W.B. Saunders Company, 1976.

Gallahue, David L. Developmental Movement Experiences for Children. New York : John Wiley & Sons, Inc., 1982.

### **Journals and Periodicals**

Andrews, John C. "Enjoyment and Satisfaction in Physical Education." FIEP Bulletin 47 (April-June 1977): 25.

Baker, Barbara Anne. "Analysis of the Girl Student Attitudes Toward the Physical Education Programme of Arlington, Virginia." Dissertation Abstracts International 30 (September 1969) 997-A.

Beveridge, Sandra Kay. "The Relationships among Motor Creativity, Movement Satisfaction, and the Utilization of certain Movement Factors of Second Grade Children." Dissertation Abstracts International 34 (May 1974): 7022-A.

*Education for Sustainable Development*

Balaji Gade, Venkateswar Pujari

Indo American Institutions Technical Campus, India

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Abstract

The present academics in the undergraduate & graduate levels, particularly in the field of engineering & technology are contextualized to a specific subject area and less focused on experiential learning perhaps due the overcrowded curricula, limited resources for vocational training and lack of institutional drive and commitment. The academics should aim to prepare students to think critically and constructively about the practices of sustainable development and to have the knowledge and skills necessary to build a sustainable future. Sustainable development, stands for meeting the development needs of present generations. It focuses on environmental, economic & social issues and broadly captures the different dimensions of development. When exploring sustainability issues; teachers are encouraged to provide a range of experiential learning opportunities like industry-to-classroom interactions, internships, community services and taking study tours etc. Music can be used for relaxing muscle tension, changing pulse, and producing long-range memories which result in the development of thinking abilities and motivation for learning. Innovating a few divergent and novel ideas and solutions with creativity using some of the out-of-the-box settings for learning instead of the conventional classrooms have also been suggested.

Education is a prerequisite for promoting the behavioural changes and providing all citizens with the key competences needed to achieve sustainable development. Sustainable development is the one that meets the needs of the present without compromising the needs of future generations to meet their own needs. It is about using resources more efficiently and educating people about the issues of sustainable development in order for society to reduce not only its impact on the environment, but on the economy, whilst improving social impacts both locally and globally to ensure a fairer and more sustainable future. Education for sustainable development is about equipping learners with the skills, knowledge and understanding to be effective citizens in a complex and changing world through the curriculum.

Education for Sustainable Development (ESD) is not a separate subject; it is a holistic educational approach. Providers may well present evidence of how they promote the skills needed for sustainable development through teaching and learning. These could include team work, flexibility, analysis of evidence, critical thinking, making informed choices and participating in decisions, all of which will empower learners to voice their opinions and make a difference. Sustainable development broadly captures the different dimensions of development. Traditionally, it is conceptually considered in terms of three main pillars:

- Environmental sustainability
- Economic sustainability
- Social sustainability

It must be emphasized that these are interdependent and mutually reinforcing elements of the same integrated process of sustainable development.

#### Environmental sustainability

Environmental sustainability is defined as the ability of the environment to continue to function properly indefinitely. The goal of environmental sustainability is to minimize environmental degradation and to stop and reverse the process that leads to environmental degradation. The issues in this area can be

- Climate change issues
- Reduction of greenhouse gas emissions (i.e. understanding the impacts of human activity in particular the burning of fossil fuels on climate change)
- Biodiversity (i.e. stopping biodiversity loss by addressing the changes in natural habitats)
- Energy efficiency (i.e. actions to save energy and developing energy-saving technology)
- Development of clean technology
- Conservation and management of natural resources;
- Waste management
- Pollution (water, air, soil)
- Sustainable transport

### Economic sustainability

Economic sustainability is defined as the way to achieving economic growth whilst respecting environmental limits, finding ways to minimize damage to the natural world and making use of the earth's resources in a sustainable way.

A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders.

- The areas under consideration can be
- Sustainable consumption;
- Sustainable production;
- Corporate Social Responsibility;
- Urban and local development;
- Sustainable tourism;
- Integration of environmental concerns in business decision-making (Green Business);
- Sustainable trade

### Social Sustainability

The social pillar of sustainable development is defined as a compilation of actions and efforts to promote development that does not deplete the stock of social and human resources but rather contributes to the enhancement of their potential. The social pillar also refers to the concept of “building sustainable and harmonious communities”.

The area of focus can be

- Health
- Community cohesion
- Social equity
- Demography
- Management of migration and cultural diversity
- Equal opportunities
- Development of human capital and skills

### Type of learning and context

The sustainable education can cover 3 types of learning:

- **Formal learning:** learning that occurs within an organised and structured context (formal education institutions such as schools, colleges, vocational training institutes and universities), and follows a particular structured design. It typically leads to a formal recognition (diploma, certificate). In those cases, the issue of sustainable development tend to be inserted in the curriculum of the institution
- **Non-formal learning:** learning which is embedded in planned activities that are not explicitly designated as formal learning, but which contain an important learning element, such as vocational skills acquired on the workplace

- Informal learning: learning resulting from daily life activities related to work, leisure, free-time, etc. This type of learning is sometimes referred as experiential learning and can. Generally, it does not lead to certification.

### Experiential Learning

Over the years, the topic of learning has been examined extensively and has received considerable attention in educational areas. A no. of pedagogical topics have been published on how experts differ from novices, learning and transfer of knowledge, mind and brain, effectively designing learning environments, and effective teaching and learning. As per David Kolb, “Learning is the process where knowledge is created through the transformation of experience”. (Kolb, D.A. (1981). *Learning Styles and Disciplinary Differences*, In A.W. Chickering (Ed.), The modern American college)

He represented the theory of experiential learning by a four-stage learning cycle as follows:

- a) Concrete Experience : a new experience or reinterpretation of the existing experience
- b) Reflective Observation : Reviewing & reflecting on the experience
- c) Abstract Conceptualization : Thinking and concluding from the experience
- d) Active Experimentation : Planning and doing what has been learnt

All human beings have a natural propensity to learn; the role of the teacher is to facilitate such learning. This includes: (1) setting a positive climate for learning, (2) clarifying the purposes of the learner(s), (3) organizing and making available learning resources, (4) balancing intellectual and emotional components of learning, and (5) sharing feelings and thoughts with learners but not dominating.

It is important to orient the learning in the preferred style of the learner so that the learning can be more effective. Otherwise the gap of incongruity between the learning and what the students intends to learn will increase which is detrimental to the learning.

A person interested in becoming rich might seek out books or classes on economics, investment, banking, etc. Such an individual would perceive (and learn) any information provided on this subject in a much different fashion than a person who is assigned a reading or class. It is imperative that students are not mere receptacles for knowledge that their teachers deposit, but rather that teachers facilitate a classroom environment that allows students to play a role in creating their own knowledge. The experience-based education is a social process and in this processes the “teacher loses the position of external boss or dictator but takes on that of leader of group activities”; as observed by Dewey, John.

1. According to Dewey, democratic leaders of classrooms need to be “intelligently aware of the capacities, needs, and past experiences of those under instruction, and secondly, to allow the suggestions made to develop into a plan and project by means of the further suggestions contributed and organized into a whole by the members of the group.” (Dewey, John, *Experience and Education*. New York: Kappa Delta Pi. Kindle Edition.)

As teachers listen to suggestions from the students they are not obligated to put all thoughts into action. They must use their own intelligence and experiences to recognize in the concrete what surroundings are conducive to having experiences that lead to growth.

- Significant learning takes place when the subject matter is relevant to the personal interests of the student
- Learning which is threatening to the self (e.g., new attitudes or perspectives) are more easily assimilated when external threats are at a minimum
- Learning proceeds faster when the threat to the self is low
- Self-initiated learning is the most lasting and pervasive

The reasons why experiential learning is effective are:

- a) All participants in an experiential learning program are equal in terms of their knowledge and skills with regard to the tasks at hand. This creates a sense of equality among the participants, which is favorable for effective learning.
- b) Experiential learning programs help you learn how to quickly build a relationship. When resolving unfamiliar challenges collaboratively with a group of unfamiliar people, you quickly find ways to build relationships. This strengthens your communication, collaboration and interpersonal skills.
- c) In experiential learning, you are taken out of your comfort zone. When handling unfamiliar challenges, you learn how to focus on task and process related themes, and how to organize yourself around a challenge. Learning becomes more effective because most of your prior experiences are irrelevant in the present context.
- d) When you participate in experiential learning programs, you get an opportunity to improve your Meta learning skills. With improved focus on your process of learning, you get the space and flexibility to review your leadership skills, problem solving skills, communication skills and so on.
- e) You learn how to manage crises in an environment that is safe and supportive. This enhances your crisis management skills in real life situations.
- f) Rather than only listening and viewing, the kinesthetic learning method requires a learner to perform physical movements. Experiential learning incorporates kinesthetic learning methodology, thus ensuring holistic improvement of your mental, behavioural and physical strengths.

Experiential learning can be incorporated in many ways:

#### 1. Group project assignments from the industry

Group projects under an experienced guide can help students develop a host of skills that are increasingly important in the professional world. Positive group experiences have been shown to contribute to student learning, retention and overall college success.

Properly structured, group projects can reinforce skills that are relevant to both group and individual work, including the ability to:

- Break complex tasks into parts and steps
- Plan and manage time
- Refine understanding through discussion and explanation
- Give and receive feedback on performance
- Challenge assumptions
- Develop stronger communication skills.

Group projects can also help students develop skills specific to collaborative efforts, allowing students to:

- Tackle more complex problems than they could on their own.
- Delegate roles and responsibilities.
- Share diverse perspectives.
- Pool knowledge and skills.
- Hold one another accountable.
- Receive social support and encouragement to take risks.
- Develop new approaches to resolving differences.
- Establish a shared identity with other group members.
- Find effective peers to emulate.
- Develop their own voice and perspectives in relation to peers.

## 2. Industrial Training in the curriculum

Mandating industrial training as a partial requirement for the fulfillment of the award of engineering degree is the need of the hour. The field of engineering is among the oldest disciplines to promote internships, with roots beginning in the early 1900s. The benefits are numerous for both students and employers. Some companies may want to hire all entry-level engineers through internship programs while others simply want help to complete a short-term project. Regardless, having access to top students before graduation is an effective way for companies to recruit the most talented individuals, all while utilizing a low-risk, inexpensive technique.

The industrial training has the following objectives:

- to develop an appreciation of the structure and operation of an industrial organization
- to understand the role of the engineer and engineering in industry
- to appreciate the importance of good communication and interpersonal skills, and to develop these skills
- to foster creative thinking, initiative & resourcefulness
- to appreciate the ethical basis of engineering practice in industry
- to understand the importance safety & environment
- to infuse concepts of human resource management
- to contribute to the productivity of the employers and national development immediately after graduation

The benefits of an industrial internship are:

- Applying classroom experience and converting academic knowledge into industry skills
- Gaining confidence in the knowledge acquired in the academics
- Gaining valuable hands on work experience which is not available in classrooms

- Having an edge in the job market
- Possibility of transition into a job

The faculty should backstop student involvement in learning in the life size environment of nearby industrial institutions, research laboratories, pilot plants and engineering workshops etc. by mandating undergraduate students to take practical training in any of the areas of employable vocations. The training programmes would also involve lectures by subject matter specialists on technology, communication skills, business management, quality standards, management, cost reduction, social and environment issues etc. This way the training will infuse and strengthen conceptual learning with technologically advanced practices for field applications. In totality, training is expected to build practical skills and business management knowledge in all aspects of a vocation.

Unfortunately, although appreciation for experiential learning is more of rhetoric in the existing undergraduate course curricula, actual facilities & opportunities provided by engineering colleges India for learning by vocational training or hand-on-training are either non-existent or exist in a very rudimentary stage of development.

### 3. Vocational Training

Vocational education consists basically of practical courses through which one gains skills and experience directly linked to a career in future. It helps students to be skilled and in turn, offers better employment opportunities. These trainings are parallel to the other conventional courses of study in graduation/postgraduation. Time management and meeting deadlines play an important role in success in a vocational course and during their studies students normally produce a portfolio of evidence (plans, reports, drawings, videos, placements), which is taken as a demonstration of students' capabilities for a job. After finishing the courses, students are often offered placements in jobs. Vocational trainings in a way give students some work related experiences that many employers look for.

### 4. Exposure to the working of non-educational institutions

Financial institutions like banks or state administration such as water works, department of roads & buildings, power generation & distribution etc. provide excellent hands-on-experience to the under graduate students. The benefits are numerous for both students and employers ---- while these institutions benefit by getting extra assistance from knowledgeable students who bring a diversity of ideas, students benefit by forming valuable personal and professional relationships that could last a lifetime.

James W. Gentry observes that “the experience needs to be structured to some degree; relevant learning objectives need to be specified and the conduct of the experience needs to be monitored. Students need to evaluate the experience in light of theory and in light of their own feelings. And, process feedback needs to be provided to the student to complement (and possibly supersede) the outcome feedback received by the student.”(James W. Gentry, *What is experiential Learning?*, <http://www.wmich.edu/casp/servicelearning/files/What%20is%20Experiential%20Learning.pdf>)

The students after the industrial or the vocational training need to submit a report on their experience and learning; and share their experience with others in the form of seminars to enhance their presentation skills as well.

#### 5. Focus on community service

If today's college graduates are to be positive forces in this world, they need not only to possess knowledge and intellectual capacities but also to see themselves as members of a community, as individuals with a responsibility to contribute to their communities. They must be willing to act for the common good and capable of doing so effectively. Education is not complete until students not only have acquired knowledge but can also act on that knowledge in the community they live. There are numerous areas of community service where the students can be made to focus on; different from the didactic monotony of classwork; such as health care, sanitation, adult education, abolition of child labour, fighting drug addiction, etc., Although less tangible in terms of financial gains, by participating in service projects, students forge bonds with each other, as well as other members of the community. These bonds enhance their interpersonal skills and increase their social network. Additionally, volunteerism can lead to increased care for others and a desire to cooperate and get involved in positive ways.

#### 6. Experiential learning through meditation

Meditation is a state of profound, deep peace that occurs when the mind is calm and silent, yet completely alert. It is not just the mental concentration on something that gives us peace or satisfaction as it is generally conceived. In reality, meditation is a state of thoughtless awareness, not an act of doing. This is just the beginning of an inner transformation that takes us to a level of high awareness. This enables us to fulfill our true human potential. The field of experiential education can be enhanced through the use of meditation. The teacher must have the skills to cultivate peace of mind--skills provided through the ancient tool of meditation during the process of which each individual in the field is encouraged to become a just and compassionate person. Mindfulness meditation has no religious or ideological connotations and has the primary goal of bringing understanding into one's own thoughts and actions through a calm and focused mind and can be integrated into experiential education in the classroom and outdoors.

#### 7. Music-based learning

“An intelligence is the ability to solve problems, or to create products, that are valued within one or more cultural settings”---(Howard Gardner –*Frames of Mind : The Theory of Multiple Intelligences* (1983).

Arts-based teaching promotes effective development by increasing the learner's interest, motivation, and enthusiasm for learning. Music based instruction develops neural systems. Its influence on neural systems is another way to associate arts with learning. By engaging the brain, the music enhances neurobiological systems that support cognitive, emotional, attention, and immune systems. Music has been found to synchronize neural firing patterns. Instruction in music promotes and maintains this synchronicity, which increases the efficiency and effectiveness of the brain.

Music increases the neural activity in the right hemisphere of the brain. In a relaxed state of awareness, the mind is able to absorb and assimilate information much more readily and quickly than in the more normal state. The primary factors that influence

and moderate brainwave patterns are sound, especially music, and vibrational patterns, especially rhythm or beats. Millions of neurons can be activated in a single musical experience. It is through the activation of these neural connections that learning takes place. The more neurons that can be connected, the greater the learning potential.. Music is a way to use a multi-sensory approach to learning that can enable students to absorb content with a relaxing and creative vehicle as a catalyst.

#### 8. Learning by meditation

Meditation is a state of profound, deep peace that occurs when the mind is calm and silent, yet completely alert. It is not just the mental concentration on something that gives us peace or satisfaction as it is generally conceived. In reality, meditation is a state of thoughtless awareness, not an act of doing. This is just the beginning of an inner transformation that takes us to a level of high awareness. This enables us to fulfill our true human potential. The field of experiential education can be enhanced through the use of meditation. The teacher must have the skills to cultivate peace of mind--skills provided through the ancient tool of meditation during the process of which each individual in the field is encouraged to become a just and compassionate person. Mindfulness meditation has no religious or ideological connotations and has the primary goal of bringing understanding into one's own thoughts and actions through a calm and focused mind and can be integrated into experiential education in the classroom and outdoors.

Meditation enhances awareness which culminates into transformation & evolution. "The development of awareness is a fundamental pedagogical theme and it is the main goal of meditation as well: that is why we can speak of meditation as education. What we have to learn when we do mindfulness meditation is nothing else than being able to use our awareness to deepen our presence in the world. It is the embodied presence – embodied mind – which gets improved by meditation; it is a sort of cognitive posture that had to be educated, a new perspective on the world grounded in the lived experience;" observes Francesconi (Denis Francesconi, [http://www.academia.edu/2049382/The\\_Embodied\\_Mind\\_Mindfulness\\_Meditation\\_a\\_s\\_Experiential\\_Learning\\_in\\_Adult\\_Education](http://www.academia.edu/2049382/The_Embodied_Mind_Mindfulness_Meditation_a_s_Experiential_Learning_in_Adult_Education))

#### 9. Learning in the moonlight by the seashore

Over the decades there have been many scientific reports for and against the effect of the moon on human behaviour. All objects including stars, planets and satellite bodies along with their gross attributes emanate subtle and intangible frequencies. These physical attributes and subtle-frequencies affect us in varying degrees at a physical and subtle-level.

The frequencies emanating from the moon affect the frequencies of the mental body, i.e. mind of human beings. By 'mind' we mean our feelings, emotions and desires. The mind consists of the conscious mind and the sub-conscious mind. Within the sub-conscious mind we have a number of impressions that are embedded that decide our basic nature and personality. We are however not aware of the thoughts or impressions in our sub-conscious mind. These impressions in our mind are the catalysts for all our thoughts and subsequent actions. Both the impressions and our thoughts have their own subtle-frequencies and when they match the human mind is drawn to a mystical world consisting of channels that help us to meet our essence. The mystical experience encourages us to discover our unique sensibility. It connects

us to the universe and defines our role in the world. It is in this sense a step that allows us to recognize our mission, this deep desire inside that makes us want to become what we truly are. Neurologically, the mind, instead of hopping impulsively and at random from one thought to another, often in a state of considerable agitation, is invited---rather than compelled---to focus on fewer thoughts or indeed just one, thought or image. Through meditation, the learners reach a cognitive maturity which reflects the ability to calm the mind, to live a state of rest and control on the flow of consciousness. This will enable the learning more effective.

#### 10. Learning in a graveyard

Mysticism is the pursuit of awareness of an ultimate reality, divinity, spiritual truth, or God through direct experience, intuition, instinct or insight. It usually centers on practices intended to nurture these experiences. Even the eerie and uncanny silence of a grave yard can prove to be an effective class room. The tombstones sometime we see have cognitive inscriptions on them which foster imagination and elicit innovative ideas. When we see a dead body in the graveyard put on a pyre we actually pray to God to allow the soul which detaches from the mortal remains to rest in peace and at the same time we accept the rule that death is the ultimate reality for all of us. This humbles us, our egos, irrespective of our social or economic status and how knowledgeable we are.

*"Hypocrisy, pride, self-conceit, wrath, arrogance and ignorance belong, O Partha, to him who is born to the heritage of the demons."* (The Gita, XVI. 4).

While pride harms only the proud, arrogance due to overbearing pride brings contempt for others. An arrogant man is often rude and very fond of offending his friends, relatives, colleagues and everyone else who comes in contact with him.

The ego of wealth, knowledge, clan & youth is the human's self-imposed infliction, his highest burden and hinders the evolution. The learning in the mystic setting of a graveyard is another unconventional, yet very powerful platform for transformation.

#### 11. Learn while you travel

An experiential travel introduces one to the life beyond the experiences many tourists face and opens a whole new world of evolution. Travelling to distant locations inside the country & abroad, living in different terrains, experiencing varying climates, coming to new cultures and interacting with strangers teaches one as much about oneself as it does about other people. The challenge of new experiences will push one's personal barriers back and unravel misconceptions. You cope with situations that have not been previously encountered with; you interact with people with different expressions, emotions, customs & lifestyles.

An experiential travel is that which moves you, connects you with the people and the culture of that place such that it enriches you and changes you; and has a positive impact on how you perceive your environment and interact with your friends. When you walk away from an emotional journey, you take something very important back with you, the empathy---one of the building blocks of the human condition.

### Conclusion

Experiential learning is participative, interactive, and applied. It allows contact with the environment, and exposure to processes that are highly variable and uncertain. It involves the whole-person; learning takes place on the affective and behavioural dimensions as well as on the cognitive dimension. The experience needs to be structured to some degree; relevant learning objectives need to be specified and the conduct of the experience needs to be monitored. Students need to evaluate the experience in light of theory and in light of their own feelings. Experiential learning provides students with the motivation necessary to put forth effort in academics, it gives them more opportunities to integrate and elaborate on their knowledge, and it increases the likelihood of transferring theoretical knowledge to actual practice.

Certain unconventional settings for the classrooms, incorporating spirituality in the learning styles have also been suggested to make the learning a lifetime experience.

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## References

2. Kolb, D.A. (1981), *Learning styles and disciplinary differences*, In A.W. Chickering (Ed.), *The modern American college*
3. Kolb, D.A. (1985), *Experiential learning*. Englewood Cliffs, NJ: Prentice-Hall.
4. Dewey, John, *Experience and Education*. New York: Kappa Delta Pi. Kindle Edition
5. UNESCO: <http://unesdoc.unesco.org/images/0015/001524/152453eo.pdf>
6. Denis Francesconi,  
[http://www.academia.edu/2049382/The\\_Embodied\\_Mind\\_Mindfulness\\_Meditation\\_as\\_Experiential\\_Learning\\_in\\_Adult\\_Education](http://www.academia.edu/2049382/The_Embodied_Mind_Mindfulness_Meditation_as_Experiential_Learning_in_Adult_Education)
7. Howard Gardner, *Frames of Mind : The Theory of Multiple Inteligences (1983)*
8. Jack Kornfield, *Teachings of the Buddha*, Shambhala Publications Inc.
9. James W. Gentry, *What is experiential Learning?*,  
<http://www.wmich.edu/casp/servicelearning/files/What%20is%20Experiential%20Learning.pdf>

*Placing Digital Literacy in Audiovisual Translation Studies*

Muhammad Y Gamal, PhD

The University of Canberra, Australia

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Abstract

Audiovisual translation (AVT) is fast becoming an independent specialization requiring several linguistic, filmic and technical skills. Digital literacy is one such skill that plays a prominent part in the discipline and profession of AVT and consequently should have its place in any course on AVT. The paper looks at the situation of audiovisual translation in Arabic and argues that while AVT as a discipline is non-existent, steps should be taken to include filmic and digital literacy skills in the traditional translation program. The research examines some of the recent examples where digital literacy could have been applied to better results.

**Keywords:** Audiovisual translation, conferences, digital literacy, visual culture, youth and literacy.

## **Introduction**

The events in North Africa in the early weeks of January 2011 caught governments and academia in the region by surprise. Youth and social media have helped in bringing about unprecedented change: the Arab Spring. Exactly two decades earlier in 1991, the media world was revolutionized with the reach of news channel CNN and its power. It was digital technology that enabled one channel to inspire news channels in every country in the world where the Nightly News became part of the entertainment program. The emergence of satellite TV channels, and soon after the launch of AL Jazeera in 1996, changed the media, culture and educational scenes in the region beyond recognition. Digital technology began to dominate almost every aspect in Arab society from computers to cameras, banking to billboards and from games to gadgets. When the Arab Spring began in Tunisia in December 2010, Egypt January 2011 and Libya in February 2011 and soon after elsewhere (Yemen and Syria), it was obvious that two factors dominate the scene: youth and social media. The Egyptian government, for example, was faced with a young generation that mastered Facebook, texting and web sites to a degree that it had to turn off the Internet and mobile networks in a desperate bid to outfox the youthful masses. The youth who mobilized the masses were at the forefront of a new age and literate in a new cultural form: digital media. Despite the modest economic and educational realities the potential of digital literacy was plainly obvious from the start of the Egyptian revolution. It is against this background that Arabic translation scholars are invited to rethink Arabic translation studies and to espouse the new technology to help achieve the aspirations of a generation that is young, digitally-literate and impatient with the slow pace of print culture and its antiquated values.

## **Arabic translation studies**

Translation history in Arabic is both long and rich. It shows a deep appreciation of the cross-cultural activity in numerous places that served as beacons of enlightenment when dark ages were dominating elsewhere (Baker and Saldanha: 2008). The cities of Baghdad, Cordoba and Cairo are examples of strong translation movements that had an influence that far exceeded their geographical boundaries (Barnes: 1941). Today, every university in the Arab world has a foreign language school and a translation department that in addition to teaching and training conducts research on translation between Arabic and English and several other languages. Translation schools in Tangiers, Cairo, Beirut, Damascus, and Baghdad have been traditionally the powerhouse of translator training in the region. Other institutions in Algiers, Alexandria, Beirut, Casablanca and Medina embark on large-scale translation activities that involve the training of translators and interpreters. There is a network of translation schools in the Arab world and despite the available formal nexus there is however little contact and cooperation. This is obvious as there is no pan-Arab translation conference, or an Arab translation journal or even a single recognized translation web site. The absence of a viable professional translation society in many countries has had a negative impact on the development of a vibrant translation profession locally. Many Arab countries do not have a society for translators despite the existence of an academic institution teaching translation and the existence of a strong professional activity in translation and interpreting. Quite often, when a translation association exists, it tends to be shackled by narrow interests and limited professional scope. Given the vital need for translation in Arab societies, such an establishment could and should be a centre for enlightenment in the service of the community and the translation profession. It is not unusual when a foreign cultural

organisation takes the initiative and offers a translation event such as the Swedish cultural centre in Alexandria or the Instituto Cervantes in Cairo who organize translation seminars or subtitling for Spanish films shown in Egypt. The Arab Organisation for Translation, established in 1999, and based in Beirut provides a forum for translation academics and publishes a quarterly journal. However, its impact professionally and pedagogically is yet to be measured and determined. Its activities remain to be felt by both the students of translation and most importantly the practitioners who need constant guidance and development.

The fragmented professional scene of translation in Arabic is however offset by the existence of prestigious translation awards in some parts of the Arab world particularly in Saudi Arabia, the United Arab Emirates and Egypt. These awards are internationally recognized and come with handsome financial rewards. National translation programs sprang in Cairo in the early years of the Twentieth century and in the 1960s the government launched a book translation and publication initiative. With demographic, economic and technological changes there became a need for a more responsive translation initiative. A lot of debate in the country led to the examination of different models for a viable and socially responsible translation policy in Egypt. The effort culminated with the establishment, in 1996, of the National Program for Translation. Later in 2009 it gained more status and recognition and became an independent public organ known as the National Centre. Since then it has published several titles, initiated a translation award and the national Translator's Day. However, it remains a cultural phenomenon rather than a development tool. Notwithstanding the hurdles facing it, including limited budget and resources, the output remains small in a country that relies on translation in almost every aspect of life. Likewise, in Tunisia, the National Translation Centre was established in 2006 and had 2008 dedicated as the National Year of translation. The Tunisian initiative, the first of its kind in the Arab world, remained too 'official' high on celebration and short on programs that are relevant to practicing or aspiring translators. Similarly, the immediate benefits or effects the national translation year had on the average citizen remain to be determined.

### **Baghdad 1988**

Translation conferences in the Arab world are alive but not well. What they lack is long-term vision and purpose. Translation conferences in Arabic tend to be held on an *ad hoc* basis with little relation to what was discussed previously or what will be examined in the following conference. One of the reasons is that the organisation of a translation conference is seen, more often than not, as an academic activity by the professor in charge and not as an academic policy of the institution. This explains why some conferences never continue, and why a large number of conferences today bear the low number of the first, second, third or fourth conference on translation despite the long history of the institution and the activity in the country. Furthermore, what detracts from the viability of translation conferences in Arabic is the inadequate selection of topics to be discussed. Quite often, topics are recycled, narrowly-focused or simply confused with other areas of research. For example, the history of the House of Wisdom in Baghdad and the translation movement in the 9<sup>th</sup> Century has been a staple topic for too long. The over-emphasis on literary and religious translation obscures other relevant translation topics that need attention and discussion. Topics such as machine-aided translation, electronic resources, the online content, web site maintenance, translation ethics in the digital age, localisation and audiovisual translation are not addressed. As can be seen from the list all topics relate to digital

technology. Other topics such as religion, politics, literature and history of translation ought not to be included as the primary foci. Quite often they represent the work and research interests of senior faculty alone. Given the economic and demographic situation in the region, more attention should be given to translator development, translation research, and translation case studies. It is insightful to remember that this opinion was raised and discussed during the first Pan-Arab Translation conference held in Baghdad in March 1988. The huge conference was well organized and enjoyed the patronage of the government of the day and the sponsorship of senior organisations such as the Arab League. It was hailed as the conference that will usher in a new age of Arabic translation policy with recommendations designed to encourage cooperation not only between academic institutions but also with industry.

### **Doha and other conferences in 2013**

While recent conferences in Abu Dhabi, Baghdad and Doha (all held in 2013) attempt to shed more light on the training of translators and enabling them to acquire relevant and practical skills, the results are of limited benefit to young, beginning and freelance practitioners. As almost half the number of translation graduates end up working as full-time translators, the current translation pedagogy does not consider the other half that actually chooses to work on a freelance basis and in areas that are not even considered by the teaching faculty. Translation pedagogy tends to focus more on the political/economic and literary fields to the exclusion of technical, scientific and audiovisual fields. Likewise, professional ethics is not an area that is considered in the translation/interpreting degree. To my knowledge, there has never been a comparative study between the career paths of a full-time and a freelance practitioner in the Arab context. The lack of a well-defined conference policy that looks at the various aspects of each stage of the translation process; from training translators to employability to actual professional work and publication, needs to be tackled first in order to guarantee better and wider benefits. For instance, some of the 2013 conferences offered hands-on training sessions to a limited number of practitioners (Abu-Dhabi) while others followed the 30-minute presentation-style talks (Baghdad and Doha) but neither offered conference proceedings.

Translation conferences at Arab universities tend to shy away from controversial, complex and contemporary issues and find comfort and security in historical and well-trodden topics. For instance, the issue of “military interpreters” working and assisting the American invasion of Iraq has not received sufficient attention. The issue has professional, ethical as well as pedagogic aspects. Likewise, in the Gulf States there are sixteen million foreign nationalities working, residing and traveling and many of them appear before the local Arabic-speaking, Sharia-law-governed court and face the inquisitorial system (as opposed to the adversarial system applied in the English-speaking world) and yet there is no training in legal or court interpreting. The court interpreting service offered to non-Arabic-speaking foreigners in most Arab countries and particularly in the Gulf States has not been examined despite the political and economic significance such service has to the state. Medical interpreting is equally a huge area that remains outside the scope of the traditional translation degree in most Gulf universities despite obvious benefits to the native and Arabic-speaking residents. Likewise, the Arab and particularly Muslim image in western culture deserves to be examined from a translation point of view. For over a century the image of Arabs and Muslims in the west has been less than acceptable and notwithstanding the colonial past, the Hollywood contribution and American foreign

policy towards the Arab world, the image could have been better translated. The experience gained from what is essentially an exercise in public relations would have a direct bearing on how to deal with the offensive Danish cartoons that touched on one of the most revered symbols of the Muslim faith. Similarly, to what extent have the formal translation authority, centre or university department capitalized on the opportunities made available by the Internet and digital technology? For example, a generation or so ago, the book was the popular and preferred form of reading but today Arab society is characterised but young people who do not read but watch satellite TV channels, download, cut and paste, constantly. In this age, does translation matter? And if yes, then in what form? And for whom should national translation policies be designed? These questions are among many others that a pan Arab translation conference needs to tackle (Gamal: 2007). In the absence of cooperation and coordination among Arab translation organisations, the incident of a book translated in Casablanca and re-translated and published again in Dubai is still a very real possibility.

It is 25 years since the last Pan-Arab Translation Conference that was held in Baghdad in March 1988. The conference was a huge event with a well-designed agenda and ended up with recommendations for follow up and continued cooperation. However, the Baghdad spirit soon fizzled out and it marked the end of an age as translation studies was gaining a new stimulus that would make it a discipline sui generis (Snell-Hornby: 1995). Translation conferences continue to be held in Baghdad and in various other cities in the Arab world but there is a noticeable lack of vision and purpose, or perhaps both. Translation conferences in the Arab context need to engage industry and freelance practitioners and be relevant to the community and the translation profession. Anything less than that risks the activity becomes a mere vehicle or façade for academic researchers to showcase their theoretical research. As explained above, translation conferences should be like the modern Olympics, not an opportunity to show off facilities and resources but an activity to generate relevant opportunities and transferable skills.

### **The Arab *Digital Spring***

The Arab Spring that shook North African capitals from Tunis to Cairo and Benghazi and in western Asia from Damascus to Sanaa underscored some vital facts: youth take to (digital) technology faster than their parents, the youthful population of the Arab world must be given the opportunity to express itself and to share in governing and the fact that the current education system has failed both the young and the nation. The digital revolution broke barriers, abolished borders and introduced new concepts, values and behaviours. Two of these changes had a tremendous impact on the young: satellite channels and the Internet. It must be remembered that such technological changes occurred in an Arab society that is traditionally conservative, patriarchal and religious. Globalisation and its harsh realities were not phased in but imposed rather harshly in a business context that relies heavily on government subsidies and suffers a weak private sector and high unemployment among the young. The labour force is largely not multi-skilled and therefore inflexible and the absence of a viable and relevant vocational education/training sector leaves the market unable to deal with changes both economic and technical. The 2013 World economic Forum's Global Competitiveness Report (Schwab: 2013) paints a sombre picture of the global competitiveness of Egypt and Tunisia. It places the education system and the flexibility of the workforce among the last countries examined. This is hardly surprising as the

education system; both general and vocational has been stagnant and backward. This has led to the proliferation of foreign universities in the region and particularly in Egypt where a generation ago there was only one foreign university the American University in Cairo (established in 1919). Today in addition to a French university, there is a German, British, Canadian, Russian and a Japanese university in the country. Apart from the social equality issue, the controversy over the opening, ownership, the language of instruction and supervision of the foreign universities has not abated.

The advent of the Internet has brought obvious benefits to the professional translation community and to society however it also brought some serious challenges that ought to be examined. Just as online *fatwas* and online prescriptions must be challenged by the religious and medical authorities, translation departments do not seem to consider the online world as a viable opportunity. The Internet is under-utilized pedagogically and professionally. This is gleaned from the web sites of the translation schools which appear to be static, frugal and non-interactive. The principles of accessibility, interactivity and sharing of knowledge do not appear to be observed. This is a rather significant observation because it reflects a philosophy that will impact on the professional future of graduates. Familiarity with the online world is not only important to graduates but also the ability to interact and contribute content online. Against this background, translation departments in the Arab world have a role to play in the post-Arab Spring. Translation has been and will be a vital link to the outside world, both the west and increasingly the east (Mahmoud: 1989), and the often-cited literary image of translation being a 'bridge' and a 'window' to the other will have to be replaced by that of a *link* and a *web site*. This means that the traditional translation degree must be revolutionized to take advantage of the new technology and to harness its potential before unprofessional or unwanted practices take root. The new translation degree needs to espouse digital technology in order to be effective not only in teaching translation but also in creating opportunities for graduates.

### **A new form of literacy**

The new age of digital technology ushered in a plethora of digital tools and toys that have become indispensable. Yet, most translation departments in the Arab world have been slow and reluctant in espousing the new technology and its culture. The slow adoption and adaptation to digital technology could be attributed to cost, complexity and culture. There is no denial that digital technology is not cheap particularly at times of social and political upheaval. Furthermore, not being familiar with some of the basic digital toys tends to slow the adoption of the new technology. Most faculty members who are at the decision-making level grew up in pre-digital times and are, perhaps, unable to anticipate the impact or influence digital culture will have on society. This notion is gleaned through the conspicuous absence of sessions dedicated to audiovisual translation, machine translation, localisation, DVD authoring and content management systems (CMS) at translation conferences. While other professional societies may examine the role of the Internet on higher education or computational linguistics and the like, the point here is that the translation degree at most Arab universities remains paper-based, literary-focused and teacher-centred. The translation degree needs to be revamped and expanded to include different software programs that enable trainee/practicing translators to acquire relevant internet-based skills, include new topics and specialisations such as international law, arbitration,

copywriting, intellectual property, management, localization, professional ethics and finally to acquire a much higher level of digital literacy.

Digital literacy means the ability to create, access and understand digital resources (Gilster: 1997). The Arab Spring has clearly shown that many young people are already digitally-literate and able to create and access digital resources. Young people who grew up with Gameboy and PlayStation in the 1990s are now using smart phones and digital video cameras and are able to create video clips and to upload them on YouTube as can be seen in Tunisia, Libya and Egypt. Some of these files are uploaded with subtitles into English and other languages as well. However, translation departments need to be at the forefront of the new visual culture since the screen is now replacing the print format and “we are surrounded by screens” (Gambier 2003: 171). Visual culture necessitates that film become part and parcel of the educational process. This means film material is used in the classroom for teaching, learning and discussion. Filmic material does not solely refer to documentaries or educational films but also to feature films. The latter is an area that has not received sufficient attention by educationalists, sociologists or psychologists despite the significant role cinema plays in the formative years of millions in Egypt and elsewhere. Feature films, and particularly those based on a novel by a prominent writer like Naguib Mahfouz provide a rich source for discussion, analysis and comparative studies. For instance, Mahfouz’s most popular novel *Midaq Alley* written in 1947 and adapted into a film by Hassan Al-Imam in 1963 has not been examined in class. It is *Midaq Alley*’s 50<sup>th</sup> anniversary this year and the filmic opus needs to be examined for several reasons: its artistic merit as a film of significant form, a comparative study of its adaptation from the novel and more significantly to examine the subtitling into English (and French). One of the most salient benefits of using film in class is the sharpening of visual culture tools and the acquisition of film literacy. These are essential tools in the new digital age. The power of the image, in a culture that still has a high percentage of people illiterate, is a serious one. Even in highly literate societies visual culture is a significant part of the overall cultural framework as seen in France recently. French newspaper, *Libération*, removed all its images from its 14<sup>th</sup> November 2013 issue to underscore the “power and importance” of images in today’s world and also the difficulties the photojournalistic industry is facing (Laurent: 2013). The crude YouTube film about Prophet Muhammad that was aired in September 2012 inflaming Muslims from Tunisia to Indonesia attests to the power of the Internet. Bradshaw (2012) concurs

“There is naturally a great deal of ultra-dodgy stuff out there on the web, with no gatekeepers to enforce levels of technical competence or ideological good taste. All sorts of murky videos can be accessed. Throughout both east and west, a whole generation is disenchanted with conventional media and looks to the web, with its plethora of user-generated content, for explanations”.

This is a fine example that illustrates how the traditional translation degree needs to develop and to become more pro-active and responsive to society’s needs and trends. The increasing reliance on screens to access information and entertainment, the increasing number of gadgets that use screen from the Internet to iPhones and tablets and the increasing importance of the visual content in our life means that the translation department needs to see translation taught, created and delivered within the audiovisual format. Today, DVDs are not only about feature films and documentaries

but cover almost everything: children cartoons, how to renovate your house, corporate videos, tourist promotion, investments, hobbies, private tuition, health issues and have even replaced the traditional election leaflet as Australian candidate Clive Palmer (who wants to build another Titanic) organized a DVD-drop instead of a letter-drop in his election campaign in Sydney in September 2013 (Palmer 2013).

### **Contextualizing audiovisual translation**

Audiovisual translation studies seek to examine how translation is created and designed to be produced and consumed through the audiovisual format (Diaz Cintas, Matamala and Neves: 2010). While traditional translation is primarily concerned with the text, author, readership as well as other extra-linguistic features (of text) and factors of producing the final product (advertisement, children publications, the fine print, etc.) audiovisual translation is essentially concerned with the constraints imposed on the translation as the original audiovisual text employs two different channels that do not always complement each other. More often than not it challenges the translator as the translation needs to fit the format it is produced for: the screen.

In this respect, audiovisual translation is not primarily or merely concerned with feature films, subtitling and dubbing. It is concerned with any and all forms of audiovisual presentation be it a documentary, a 30-second video clip on YouTube, the news bulletin, an 8-minute corporate promotional video, a full documentary on a technical subject or a promotional DVD on the Pyramids. When the audio and visual channels are combined to produce 'a text' the translation process takes a different form and is subjected to a different list of constraints that need professional awareness, examination and creative solutions. With the increasing reliance on the Internet, smart phones and computers the traditional concepts of education and entertainment are constantly blurred. Indeed, the concept of *edutainment* is fast changing the way technical literature is produced and marketed. Gamal (2013) points out that the term 'edutainment' has no direct translation into Arabic, yet.

As discussed above, translation conferences in the Arab world, and despite the expertise of faculty, the established national translation organisations and the generous translation awards, continue to ignore audiovisual translation issues. Attention to audiovisual translation exceeds subtitling films and notwithstanding the large volume of subtitling foreign (mostly American) programs into Arabic. For instance, translating government web-sites should be given the utmost care and attention. A web site that is visited and seen by the whole world must be translated with the utmost care and supervised by a professional team of translators proficient in dealing with text in digital formats. For example, the web site of the Saudi city of Medina which celebrates the 2013 Islamic City of Culture could have benefited from an audiovisual translator who in addition to correctly translating the original text into English would be able to advise on other equally significant issues such as content, suitability and compatibility of text and images. This notion of the audiovisual translator working as a consultant escapes many people who are unable to see the link between text and image. There are some successful examples of multilingual web sites in Oman, Jordan, Abu Dhabi, Qatar and Lebanon and they deserve being examined as case studies both academically and professionally.

### Stamps and postcards

The age of postage stamps, postcards and posters, inserts, leaflets and special lift-outs is completely gone now. It is pedagogically insightful to observe that research on the translation of these publications from Arabic into English (and other languages) did not receive sufficient attention as can be judged from the papers and presentations at Arab translation conferences in the last two decades. The translation of the verbo-visual text, information and indirect messages constitutes the success and indeed the crux of the ability to carry meaning implied in verbo-visual texts to another language and culture. Despite the outmoded material of stamps and postcards they would make an interesting, if not intriguing, translation exercise in class. For example, on an Egyptian postage stamp celebrating the National Nursing Day the image on the stamp is that of a female and the Arabic lexical item for nurse is actually the feminine. This is because 'nurse' in Arabic is always a female. A postcard from New Zealand showing the map of the country consisting of three islands: the north island, the south island and the west island contains a humorous message that is difficult to translate. New Zealand has only two islands and the west island is actually Australia! It is the rivalry between *big* Australia and *small* New Zealand in Rugby that belies the humour. These socio-linguistic features of the outmoded publicity material continue in the now ever-increasing format of audiovisual material. Translation scholars, researchers, trainers as well as practitioners need to be aware of these features not only to accurately translate them but, and more significantly, to successfully carry over the meaning to the new filmic format which is moving, transient, rapid, and mixed with other features such as images, colour, music, etc. (Gambier: 2006).

Explaining the significance of audiovisual translation to academics, film makers, politicians, industry professionals and translation students is both important and vital (Diaz Cintas 2004). It is important because the age of the verbo-visual message is gone and is now superseded by the audio-visual and it is vital because many uninitiated decision-makers and untrained practitioners cannot see the difference.

In the new domain of audiovisual translation, meaning is constructed and consumed through a screen, by a new consumer whose taste, interests and accessibility of information is vastly different from the consumer of a generation earlier (Negm: 2009). This fact, as clearly demonstrated in the Arab Spring, should convince those reluctant to see the significance of audiovisual translation. To illustrate this further, with concrete examples, one has to examine the official and popular response to the New Seven Wonders competition ([www.new7wonders.com](http://www.new7wonders.com)) in its various stages in 2007 and 2011. The competition, an online activity, was targeting young people and designed to create a modern list of seven 'new' wonders by direct voting. The Egyptian government failed to appreciate the power of the Internet and the significance of the 'young voter' who was attracted to the new style of international online voting. When the Egyptian pyramids were excluded from the competition of the seven "new" wonders, the Antiquities Department in Egypt indignantly dismissed the competition as unofficial, which is true, but it attacked the significance of the whole exercise. This is where Cairo went wrong. The opportunity could have been better seized by creating a rival web site dedicated to the pyramids and translated into a hundred languages. The Antiquities Department could have commissioned a special DVD subtitled in up to 40 languages (Carroll: 2004) or a promotional activity marketing the Pyramids on the then famous voting day of 07/07/07. Egypt did not even produce any of the old verbo-visual material of marketing: not a single stamp or postcard was produced. It is estimated that 8 million Egyptians live and work abroad:

sending a Pyramid postcard with a 'Pyramid' stamp to each one of these expatriates would have sent a message 'abroad'. Similarly, Petra, in Jordan, which went on to win enough votes to join the seven 'new' wonders did nothing after the online activity was concluded. Again, the opportunity which called for an audiovisual response was lost: no documentary or a DVD was produced. The National *Al-Urduniya* (The Jordanian) TV channel quite often runs a 25-minute documentary on Jordan titled "An open air museum" but only in Arabic with no subtitles. The same documentary could be shown in Arabic but with several versions of subtitles since *Al-Urduniya* is the kingdom's international satellite channel serving as the façade to the Kingdom. In November 2011, Jordan, Lebanon and the United Arab Emirates failed to appreciate the lesson of the Egyptian Pyramids and The City of Petra. After the Arab Spring, all three governments failed to capitalize on the opportunity and to deal with the audio-visual challenge. No activity, save a limited coverage in the local media and mostly *in Arabic*, was sponsored to promote the candidate sites of the Dead Sea (Jordan), the Jaeta Caves (Lebanon) or the Bu Tinah Island (UAE) internationally and not surprisingly all failed to collect enough votes on the famous voting day of 11/11/11.

### **Saudi cinema abroad**

The examples cited and discussed above aim to show that audiovisual translation requires a different mindset that appreciates the power of the Internet and the multimodal nature of audiovisual text utilized in marketing and promotion. Other examples abound and Arab cinema is perhaps one significant domain that remains oblivious to the significance of academic examination audiovisual translation. On the one hand, Egyptian cinema industry, the largest in the region, is unaware of the damage done through the unprofessional subtitling of its masterpieces on DVD. On the other hand, new and emerging Arab cinemas in Jordan, Saudi Arabia and Palestine are equally oblivious to how detrimental unprofessional or inadequate subtitling could be to their chances of success. It must be remembered that new Arab cinemas are fighting an uphill battle for recognition. With no audience at home, Jordanian, Saudi and Emirati film makers exhibit their films abroad. For any chance of winning crowds, and awards, the films need to be carefully, if not perfectly, subtitled. In 2006, the so-called first Saudi film *Keif-el-hal* (how are you?) was produced on DVD and subtitled into English. However, the quality of the subtitles could have been better if it was carried out by a subtitler and not by a film-dialogue translator. Inadequate subtitles attract attention to them and deprive foreign viewers of the opportunity to follow and appreciate the film. In a meeting in Sydney with Saudi female film director Haifa Al-Mansour after she attended the screening of her first film *Wajda* in June 2013, she conceded that subtitling is an area that she needs to concentrate on. It is true, however, that most film makers do not seem to care, much, about the subtitling of their films abroad (Ivarsson and Carroll: 1998). Yet, when a film maker who does not have an audience at home and is showing her films abroad, as in the case of Al-Mansour and other Jordanian and Palestinian directors and producers, subtitling must be thought of as a part and parcel of film making, and not merely a post-production part.

### **Links with industry**

While translation departments and translation conferences in the Arab world continue to disregard audiovisual translation, political and social changes in the Arab world are forcing the media and translation professions to reconsider their positions. The youthful population in the Arab world, estimated at 40% under the age of 25, have

taken the lead in espousing digital technology as a vehicle for change. The spread of social media, citizen journalism, multiplicity of sources, blogs, forums, crowd sourcing, and the ease of publication online with audio, video and visual elements will have tremendous impact on the political, social and academic scene in the Arab world.

Translation departments will perhaps realize the significance of audiovisual translation when they start to look for professional alliance with industry. The academic 'ivory tower' image and style of existence is no longer tenable and academia must be responsive not only to what the market needs but also to what the society wants. Academia will benefit from an alliance with the cinema industry, the media, the ministry of tourism and the IT industry. Audiovisual translation requires a strong link between the IT world and the translation department and this is perhaps a sound and strong link that will benefit both the professors and the graduates in the long run (Gamal: 2012).

The translation departments in the Arab world are faced with some unique challenges that were not seen a generation ago. Today, Arabic is under threat. Almost all the hard sciences are taught in English, except in Syria, and there is an over reliance on English as the primary source of information in almost all fields. Moreover, the Internet has given boost to the local and regional Arabic vernacular to the detriment of the refined and educated register of Modern Standard Arabic. English is invading and violating spoken Arabic for no linguistic reasons save trendiness. Finally, the Arabic language content is almost non-existent online which, if left unchecked, will enhance the notion that Arabic is inadequate as a language of instruction and education. The social and cultural consequences could be costly.

Despite the state of flux in the Arab world in the wake of the Arab Spring, there are some good phenomena that should be examined and, if possible, capitalized upon. There is a clear level of maturity in the use of digital technology. It is obvious that some of the youth of today have grown up playing Game Boy and PlayStation. They saw laptops become affordable and digital cameras accessible both technically and financially. While their parents grew up with television and their grandparents with radio, the young today are growing up with the WiFi, GPS and information at their fingertips. What needs to be done is to capitalize on this tendency by embarking on teaching subjects that increase digital literacy in a society that still suffers from illiteracy. Creating content online and translating it (subtitling, dubbing or voice over) has become an essential skill. Likewise, same language subtitling has a direct benefit and impact on reading habits, enhancing the native language and encouraging literacy. Fan subbing is another phenomenon that has received little attention by Arab scholars despite the fact that fan subbing has been around for almost a decade and a half. What is relevant here is the exhibited skill in devising strategies in subtitling despite some of the no-holds-barred approach to translating some American expletives. This energy need to be channelled through well thought-out programs and policies by both academics and technocrats.

### **Conclusion**

Political changes in the Arab world are taking place at a much faster rate than before and the situation remains nebulous at best. However, in times of flux, efforts need to be far-sighted. In this paper, the impact of digital technology on the young is examined with the view of highlighting the significance of digital literacy. It also notes that film literacy is lacking and that alphabetic illiteracy is high in large sectors

of the community. Despite these two observations, translation departments in the Arab world need not reinvent the wheel. Audiovisual Translation Studies (ATS) could provide the solution and lead the way in creating opportunities for academic researchers and graduates alike. In this research it is suggested that digital literacy needs to be viewed as a separate skill and needs to be included as an essential part of the new discipline of audio-visual translation.

The digital age needs a new set of ethos and skills and these are best introduced early and through practical, hands-on and relevant topics. It is no longer sustainable to have a static web presence or a section under-construction for too long or a site translated only into English and French. Audiovisual translation is a new form and format of cultural and technical transfer that is on 24/7 and combines various channels that contribute to meaning making over and above text, image and sound.

Writing in the pre-digital age of 1971 Egyptian philosopher Zaki Naguib Mahmoud points out the significance of striking a balance between modern western sciences and traditional Arab values. He argues that “translating more and more books into Arabic is not the solution but rather a new balanced culture that combines the old with the new” (1993:6). Faced with the challenges of globalisation, the Internet, social media, the digital divide and the neglect of Arabic among its speakers Mahmoud’s words make more sense today than they did then. Audiovisual translation studies in Arabic are yet to make their debut locally and regionally and it is hoped that digital literacy will be part and parcel of this new genre of translation studies. Its early inclusion in the program will prove beneficial in the long run.

## References

- Baker, M. & G. Saldanha (eds.) (2008) Routledge encyclopaedia of translation studies. 2<sup>nd</sup> edition. Routledge. London.
- Barnes, H. E. (1941) An intellectual and cultural history of the western world. Heron Books. London.
- Bradshaw, P. (2012) "Innocence of Muslims: a dark demonstration of the power of film". The Guardian. Article available at: <http://www.theguardian.com/film/filmblog/2012/sep/17/innocence-of-muslims-demonstration-film>
- Carroll, M. (2004), "Focus on standards - Subtitling: Changing standards for new media", in *The Globalisation Insider* XIII, 3.3. [www.lisa.org/archive\\_domain/newsletters/2004/3.3/carroll](http://www.lisa.org/archive_domain/newsletters/2004/3.3/carroll)
- Diaz-Cintas, J. (2004) Subtitling: the long journey to academic acknowledgement. In the Journal of Specialized translation. Issue 1. Available at [www.jostrans.org](http://www.jostrans.org)
- Diaz Cintas, J, A. Matamala & J. Neves (eds) (2010) New insights into audiovisual translation and media accessibility. Rodopi. Amsterdam.
- Gamal, M. (2007) "Audiovisual translation in the Arab world". In Translation Watch Quarterly Vo3(2). TWQ. Melbourne.
- Gamal, M. (2012) "Audiovisual translation as an educational tool in Egypt.". In the proceedings of the Asian Conference on Education. Osaka.
- Gamal, M. (2013) Audiovisual translation in the Arab world v.03". In the proceedings of the Asian Conference on Arts and the humanities. Osaka.
- Gambier, Y. (ed) (2003) Screen translation. *The Translator* Vol 9(2). St Jerome. Manchester.
- Gambier, Y. (2006), Multimodality and audiovisual translation. In the *proceedings of MuTra Audiovisual Translation Scenarios Conference*. Paper available at: [http://www.euroconferences.info/proceedings/2006\\_Proceedings/2006\\_Gambier\\_Yves.pdf](http://www.euroconferences.info/proceedings/2006_Proceedings/2006_Gambier_Yves.pdf)
- Gilster, P. (1997) *Digital Literacy*. Wiley and Computer Publishing. New York.
- Ivarsson, J & M. Carroll (1998) Subtitling. Transedit. Simrishamn.
- Laurent, O. (2013) French newspaper removes all images in support of photographers. Article available at: <http://www.bjp-online.com/british-journal-of-photography/news/2307127/french-newspaper-removes-all-images-in-support-of-photographers>
- Mahmoud, Z. N. (1989) *Thaqafatuna fi muwajahat al'asr* ( Our culture versus modern times). Dar Al Shorouk. Cairo.
- Mahmoud, Z. N. (1993) *Tajdeed alfikr alarabi* (The renewal of Arab thought). Dar Al Shorouk. Cairo.
- Negm, A. (2009) 'Hawla waqi' al-thaqafa al-raqamiya fil buldan al-arabiya al-an' (On the situation of digital culture in Arab countries today). Paper presented at the First Alexandria Conference on Digital Culture October 2009. Paper available at: <http://middle-east-online.com/?id=86498>
- Palmer, C. (2013) To the voter: vote for Palmer United "We're fair dinkum". DVD. NSW. [www.palmerunited.com](http://www.palmerunited.com)

Schwab, K. (2013) 'The global competitiveness report 2013-2014'. World Economic Forum. Report available at [http://www3.weforum.org/docs/WEF\\_GlobalCompetitivenessReport\\_2013-14.pdf](http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf).

Snell-Hornby, M. (1995) *Translation Studies: an integrated approach*. John Benjamin. Amsterdam.

Films cited

*Midaq Alley* (1963) Hassan Al-Imam

*Wajdah* (2012) Haifa Al-Mansour

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The text is enclosed within a large, stylized circular graphic composed of two overlapping, thick, curved lines. The upper-left portion of the circle is a light red color, while the rest of the circle is a light blue color, matching the text. The overall effect is a large, faint watermark-like logo.

*The Impact of Engineering Education Accreditation Systems on Curricula and Teaching Practice*

Pei-Fen Chang, Miao-Chen Lin

National Central University, Taiwan

0653

The Asian Conference on Education 2013

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Abstract

Previous research on engineering education reform has tended to rely on quantitative data obtained from questionnaire surveys. The present study seeks to examine the impact of engineering education accreditation implementation over the past eight years from the multiple perspectives of faculty members, department chairmen and deans of colleges of engineering in Taiwan. A total of 471 valid questionnaires were collected from the deans, department chairmen and faculty members. In addition, in-depth interviews were conducted among 20 subjects from colleges of engineering located in the northern, central and southern areas of Taiwan. The results from the questionnaire survey are quite impressive with over 70% of faculty members expressing their agreement with almost all items in the questionnaire. Nevertheless, it should be noted that although the questionnaire survey responses revealed positive responses toward continuous improvement, there was a significant disparity between the questionnaire responses and the information provided during the in-depth interviews. On the basis of the findings and discussion presented above, the following two conclusions and recommendations are addressed. First of all, although engineering college faculty members did make certain adjustments to their curriculum planning and teaching activities, there is an urgent need for more professional development activities to align their professional expertise with respect to outcome-based assessing approaches, e.g. how to integrate the results of student evaluation as a basis for the continuous improvement of their courses. Secondly, accreditation could have the negative effect of leading faculty members to feel that the university authorities do not believe they are capable of doing their jobs properly. Future research in this field may involve the collection of multiple assessment resources in order to provide a paradigm of best practice for outcome-based accreditation approach.

**Keywords:** Engineering education accreditation; continuous improvement; curriculum and teaching

## **1. Introduction**

Over the past decade, institutions of higher education have invested considerable amounts of time, money, faculty members, and laboratory facilities towards improving teaching quality (Brawner et al., 2001; Salegna & Bantham, 2002). The underlying goal of engineering education accreditation is to assure the quality of the graduates, and to encourage engineering departments and graduate schools to revise their curricula by utilizing outcome-based teaching and assessment.

However, for many instructors in colleges of engineering, the adoption of outcome-based accreditation system has brought problems. Firstly, instructors are often unsure as to how much scope they should give students to explore a particular theme, and what their expectations should be. In some cases, this uncertainty leads to a failure to implement in-depth study where it is needed. Secondly, many faculty members fail to see that student learning outcome are linked with faculty members' curriculum planning, teaching and assessment approaches (Harper & Lattuca, 2010). Chambers and Fernandez (2004) suggest that sometimes faculty members who resist continuous improvement efforts do so because they had difficulty appreciating the simultaneous role of students as customers and evaluators. In some cases, accreditation can have the negative effect of leading faculty members to feel that the university authorities do not believe they are capable of doing their jobs properly (Arreola 2007). Similarly, Eijkman, Kayali and Yeomans (2009) also note that, while program refinement may provide faculty members with substantive opportunities to improve, it tends to be subject to considerable challenges and often encounters resistance and refusal.

Thirdly, many instructors in colleges of engineering assume that engineering students' learning outcome is limited to the accumulation of "hard skills." As a result, the content of traditional engineering courses tend to be limited to getting students to demonstrate knowledge of the basics by producing written or oral reports. Finally, there is the question of how, given the limited amount of class time available, instructors can manage both to inculcate the basic knowledge that students need to acquire, and also help students to develop higher-level skills such as those relating to inter-disciplinary communication.

## **2. Continuous Improvement of the Curriculum**

Engineering education accreditation systems offer several benefits when implemented within a university. In the past, curriculum planning has generally been undertaken by individual faculty members, with each instructor making an independent decision as to what content should be presented in a given course. In this condition, it appeared almost impossible to improve a curriculum (Lattuca & Stark, 2009).

Faculty members in a college of engineering should become effective cultivators and evaluators of their students' learning in order to help their students to prepare for the changing world of the future. To be effective in this role, faculty members should be engaged in continuous, ongoing evaluation of curriculum planning, taking into account differences between individual students, and their students' learning capabilities.

However, most faculty members in higher education do not have formal training in outcome-based curriculum development and teaching approaches, and have limited opportunities to develop their pedagogical skills (Harper & Lattuca, 2010).

Engineering education accreditation thus becomes a pivotal point and a unique opportunity for faculty members to review the way they implement their curriculum, and the way they evaluate their students' learning effectiveness.

### **3. Methodology**

This study triangulates a questionnaire survey, in-depth interviews and non-participatory observation of accreditation teams' on-site visits in order to develop a holistic understanding of the phenomena as engineering education accreditation is being implemented. It was anticipated that the interviews and observation would make it possible to supplement the findings of survey results with additional insights and interpretation.

#### **3.1 The Questionnaire Survey**

In order to gain a clear understanding of the impact that engineering education accreditation has brought, this study compiled a questionnaire that addressed the key aspects of outcome-based teaching and assessment approaches. The main purpose of this survey was to determine the views of faculty members, department chairs and deans at colleges of engineering in Taiwan as to the impact of engineering education after the implementation of outcome-based accreditation. This study adopted the faculty questionnaire developed by Lattuca, Terenzini and Volkwein (2006). To evaluate reliability, this study used Cronbach's alpha to measure the confidence level for each construct, finding that all the confidence coefficients were higher than 0.70. The overall confidence level for the questionnaire survey as a whole was 0.966, exceeding the 0.70 reliability coefficient specified in Cronbach (1951).

By May 2011, a total of 447 departments and graduate schools in Taiwan had been conditionally accredited. Of the 1,135 questionnaires distributed to all levels of faculty members of engineering departments, 471 were completed and returned, giving a response rate of 41%.

#### **3.2 In-depth Interviews**

The aim of the in-depth interviews was to examine how the implementation of engineering education accreditation has affected teaching and assessment methods of faculty members in departments of engineering. When selecting volunteers for in-depth interviews, the following prerequisites were used:

- (1) The department to which the interviewee belonged should have already entered the second cycle of accreditation.
- (2) The interviewee has demonstrated a considerable level of interest and concern regarding the accreditation process.
- (3) The interviewee played a key role during the accreditation process.

The rationale for using these three prerequisites was to ensure that, regardless of whether the interviewee held a positive or negative attitude towards accreditation, they were able to perceive the accreditation process from a broad and unbiased perspective.

In this section, interviews were conducted with a total of 20 faculty members from colleges of engineering, information technology or electrical engineering who were

willing to share their views frankly. To gain a more comprehensive picture of faculty members' responses to accreditation, the interviewees included faculty members who had been actively involved in the process of implementing accreditation, or who were serving as a department head. Of these, many of the interviewees had served both as a member of the accreditation committee and the dean of the college of engineering or some other administrative role within their universities.

### 3.3 Questionnaire Analysis

In the present study, the questionnaire data for the effective sample was coded and registered. SPSS for Windows 15.0 statistical software was used for data processing and analysis.

### 3.4 Interview Implementation and Analysis

Since the qualitative data were derived mainly from interviews with faculty members, department heads and deans, content analysis was performed as follows.

(1) First, the researcher read through the whole transcript, closely examining parts that were related to the present study. This preliminary reading could be used to develop and revise the research topics, while also identifying sections of the transcript not relevant to the research topics.

(2) In the coding process, the collected data was broken down into individual units, which were closely examined and compared; questions were then posed in regard to the phenomena reflected in the data.

(3) Close perusal of the interviewees' answers was combined with extended reflection on the relationship between the interview content and the research topics and on what this relationship implied.

## 4. Findings and Discussion

Figure 1 shows the results obtained for each questionnaire item in graphical form. The average score for each item was in the range of 4 – 4.7 out of 6 (strongly disagree=1 and strongly agree=6).

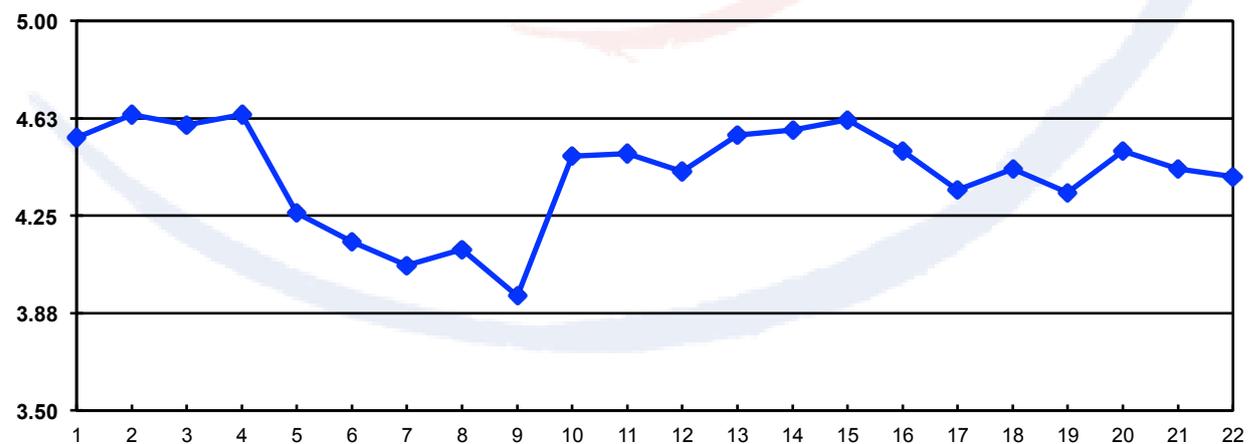


Figure 1. Average Score for Each Questionnaire Item

The highest average scores were for questionnaire items (2) "I am better able to explain to the students in the first class of the semester the capabilities they will need for the course" (M = 4.64) and (4) "I am better able to give students a detailed

explanation of the course objectives for the course they are taking” ( $M = 4.64$ ). The lowest average score was for item (9) “I am more likely to use various assessment methods to enhance students’ ability to read engineering drawings” ( $M = 3.96$ ). These results indicate that, after the implementation of engineering education accreditation, faculty members at engineering-related departments are better able to give students a clear idea of course objectives, and of the capabilities they will need, but they seem to unlikely to implement extra assessment tools to enhance students’ ability.

#### 4.1 Curriculum Planning and Teaching

As can be seen from the figure below, over 60% of faculty members reported giving students clear information to explain curriculum design and planning. Furthermore, faculty members were generally willing to make adjustments to their teaching in line with actual circumstances in the class. This is significant since students’ learning process and their incorporation of ongoing feedback are an integral part of ongoing curriculum evaluation and revision (Harper, 2008). The key issues here relate to whether faculty members in engineering departments and graduate schools perceive outcome-based curriculum planning as a process of continuous improvement.

However, we need to point out that most faculty members of colleges of engineering have never undergone formal training in curriculum design, teaching methods or student evaluation methods. Therefore, the requirements of engineering education accreditation often prompted negative comments from faculty members. Nevertheless, the qualitative results also indicated that, when asked to modify their curriculum or teaching methods in response to the needs of accreditation, some faculty members would comply with these requests and thus gradually developed their internal motivation for linking the accreditation process and continuing improvement of their teaching and assessment approaches. These professors noted that, during their process of accreditation-related change, they had benefited not only from learning more about how students learn, but also from being encouraged to examine whether there were any changes they could make to their own teaching. These results are in conformity with the findings by Harper and Lattuca (2010) that engineering education accreditation can help faculty members to achieve professional growth.

#### 4.2. Student Evaluation and Application of Results

As can be seen from Fig. 2, around 80% of the faculty members expressed slight agreement, agreement or strong agreement with all of the questionnaire items relating to student evaluation and the application of results. This suggests that faculty members already have a high level of awareness regarding the need for various student evaluation methods and understand how to apply the evaluation results to improve their courses. By and large, faculty members appear already to have a good grasp of what is required for evaluation.

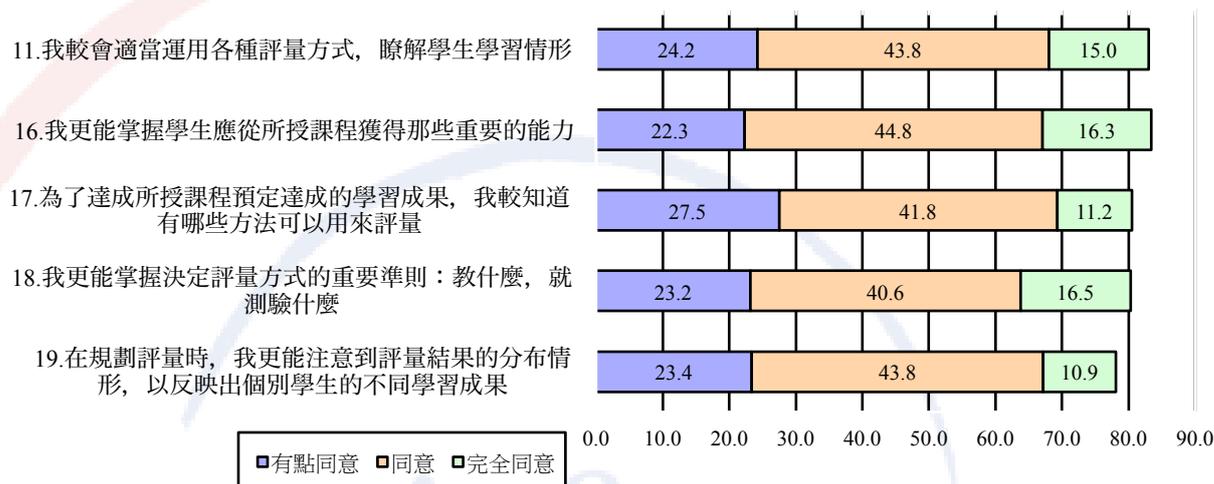


Fig. 2 Percentage of Faculty members Expressing Agreement with Items Relating to Student Evaluation and Application of Results

The interview results, however, showed a somewhat different picture from that suggested by the survey results. During the interviews, some faculty members felt that the evaluation methods they used had not changed significantly. Most of the faculty members reported that the method of evaluation they used depended on the nature of the class. In cases where a written test was the most appropriate evaluation method, they would continue to use written tests, and this applied particularly to basic theory classes. Depending on the nature of the class, some faculty members used a “competition” approach emphasizing creativity instead of conventional exams for end-of-semester evaluation.

One point that is quite clear is that most of the faculty members who were interviewed had received their Ph.Ds in engineering, and therefore had not undergone formal training in pedagogical knowledge of teaching and assessment. As a result, they were unfamiliar with different evaluation methods and the functions of each method. As noted in Harper (2008), faculty members often lack the training to extend their assessment activities beyond traditional measures such as exams and term papers.

[Q: Are you making less use of written tests?] “No, no I’m not, and given the nature of the class I probably won’t be doing that.” (B)

[Q: Is there any difference in the evaluation methods you use?] “I haven’t changed the methods I used, and I don’t think other people have changed theirs much ... In my case, the evaluation I perform takes the form of two mid-term exams and one end-of-term exam, something along those lines ...” (L)

“Of course, it depends on the nature of the course. We do have a competition for creative mobile phone handset design, and there are some experimental classes where

the students have to perform a demonstration at the end of the semester. In the past, the experimental classes didn't make so much use of demos, but now ... they seem to have taken off ... but you still need a written test so you can check whether the students have acquired the fundamentals ... (I)

As can be seen in Fig. 2, in the case of item 19, "When planning student evaluation, I pay more attention to the question of evaluation results distribution, so as to be able to reflect the different learning outcomes of different students", the percentage of faculty members expressing slight agreement, agreement or strong agreement was relatively low. Faculty members seem to feel it is pointless to implement further analysis of students' learning performance based on their student evaluation results. The interview results confirmed that teachers mainly viewed evaluation results as something just to be kept on file.

"How can you verify that your students have acquired the necessary competences? All the instructor can do is to hand out lecture notes; lecture notes can demonstrate that the instructor has actually taught the material. Also, there are written exams; written exams can show what you expected students to learn. And when the students have finished the exam, we keep the examination papers on file ..." (B)

"We haven't really tried to analyze any of that ... Actually, I should say that, what it asks us to do, what we are asked to do, we do all of that, but the other stuff, the analysis, we haven't been doing that ... It's really a case of we just don't have the manpower available to do it, so we can only cover the basics." (H)

Instructor B felt that students' competencies could be evaluated simply by submitting their lecture notes together with the students' written exam papers and transcripts. He assumed that any further analysis could be left to the assessment committees. This is understandable, as few faculty have training in curriculum development or revision, making it difficult for them to implement the feedback they receive about student learning (Wankat, Felder, Smith & Oreovicz, 2002; Harper, 2008).

In the vast majority of departments, faculty members have only submitted student transcripts and grade reports to the accreditation committees and never gone beyond that to explain their students' learning performance or the extent to which the students have succeeded in acquiring competencies. However, if faculty members do not implement further analysis of the evaluation results, it would be difficult for them to maintain continuous improvement.

Many faculty members mentioned that they were attending regular meetings to discuss the curriculum. This is similar with the study of Lattuca et al. (2006) that found 60% of faculty members at colleges of engineering reported having regular curriculum discussion meetings with their departments. However, these meetings all took the form of curriculum planning meetings to discuss the launch of new classes, rather than end-of-semester evaluation meetings, or meetings to brainstorm how to improve the curriculum based on the multiple sources contained in the evaluation results and the key principles of continuous improvement.

The present study differs from that by Lattuca et al. (2006) in that it draws more precise distinctions between curriculum planning, teaching methods and the use of

multiple evaluation methods. Nevertheless, there are similarities between the two studies. Lattuca et al. (2006) found that over three-quarters of department heads felt that they had done the best they could to integrate the elements such as communication skills, teamwork skills, utilization of modern tools, lifelong learning and engineering design in the curriculum mapping. In addition, between one-half to two-thirds of faculty members reported having increased their use of teaching strategies to enhance students learning in a more active manner. This finding is similar to the results reported by Lattuca, Yin and McHale (2010).

The disparity between these studies in terms of the questionnaire survey results lies in the fact that Lattuca et al. (2006) found over 90% of the faculty members reported making a deliberate effort to improve their student evaluation methods, and that over half of the faculty members felt they personally had made a significant improvement in this regard. Similarly, Lattuca, Yin and McHale (2010) reported a substantial increase in the share of faculty members using activity-based assessment methods. By contrast, though the questionnaire survey results from the present study did show that faculty members had a reasonable grasp of multiple assessment methods, during the interviews some interviewees reported that it was necessary to continue relying on written exams as the direct measures of their students' learning.

While the research undertaken by Lattuca was largely based on quantitative data, qualitative data constitutes an important source of evidence in the present study. What appears from the questionnaire survey to be quite impressive results (with over 70% of faculty members expressing agreement with almost all questionnaire items) is in some cases undermined by the information provided by the in-depth interviews. For example, it appears that the reported increase of practical applications and teamwork by faculty members is mainly attributable to the need to be able to demonstrate that this is being undertaken (for accreditation purposes). And though faculty members appear from the survey results to be using a diverse range of evaluation methods, the interviews suggest that, in reality, this is not the case. An even more significant point is that faculty members are apparently finding it difficult to implement the analysis and discussion of student evaluation results.

## **5. Conclusions and Implications**

The goal of stimulating continuous improvement in engineering education through the accreditation process is a mission-driven approach. The emphasis is on constantly-improving processes, as well as the alignment between teaching and assessment. In other words, student learning outcomes should be systematically linked with faculty members' curriculum planning, teaching and assessment approaches. To develop the curriculum mapping, this process of continuous improvement also stresses faculty members' continuing professional development and training, as well as collaborative decision-making within their departments.

The present study examines the impact of engineering education accreditation implementation on continuous improvement. This study uses a questionnaire survey, in-depth interviews and a literature review to analyze and explore the benefits, and challenges relating to the implementation of engineering education accreditation. On the basis of the findings and discussion presented above, the following conclusions and recommendations are described below.

As a result implementing engineering education accreditation, these programs have begun to pay more attention to what elements faculty members need to include in their teaching plans, e.g. educational objectives, teaching strategies, corresponding learning outcomes and evaluation methods. Faculty members also need to be aware of whether their teaching objectives and course content are properly aligned. As regards actual teaching, many faculty members reported that, because of accreditation, they are now more likely to assign practical and hands-on work for their students, and to incorporate more cooperative learning activities into their courses. However, some faculty members still rely on written exam and other traditional evaluation methods. While the questionnaire survey results showed that most faculty members reported positive changes in their curriculum planning and teaching following the implementation of engineering education accreditation, this was not fully supported by the data obtained through the interviews. For example, the interviews showed that although faculty members did seek to expand the amount of time for hands-on practices, group discussion, team work, or global issues in the classes they taught. In fact, they appeared to have made these modification largely to fulfill the requirements of accreditation, and only a minority of faculty members had changed their teaching strategy from their own internal motivation. As regards evaluation, in the interviews the faculty members displayed a lack of familiarity with different evaluation methods, and evaluation results were merely kept on file without further analysis or attempts at continuous improvement.

The underlying goal of engineering education accreditation is for all accredited departments to undertake continuous improvement, and the core prerequisite for continuous improvement is to ensure close linkage between curriculum, teaching and evaluation. This study found that although engineering college faculty members did make some adjustments to their curriculum planning and teaching activities, their limited understanding of the significance of engineering education accreditation and their lack of formal training in either curriculum design or teaching prevented them from implementing a more proactive approach to teaching, and from using the results of student evaluation as a basis for continuous improvement. There is an urgent need for professional development activities to align their professional expertise with respect to outcome-based curriculum planning and teaching, e.g. how to integrate the results of student evaluation as a basis for the continuous improvement of courses.

Finally, according to the results of this study, accreditation could have the negative effect of leading faculty members to feel that the university administration does not believe they are capable of doing their jobs properly. Future research in this field could involve the collection of multiple assessment resources in order to provide a paradigm of best practice for outcome-based accreditation approach and how student evaluation results can be used to revise future curriculum. If this can be achieved, it should support the development of a holistic perspective on how to implement continuous improvement in curriculum planning and teaching.

## Reference

- Arreola, R.A. (2007). *Developing a comprehensive Faculty Evaluation System* (3<sup>rd</sup> ed.). Bolton, MA: Anker
- Brawner, C. E., Anderson, T. J., Zorowski, C. F., & Serow, R. C. (2001). Quality approach supports engineering education reform: This 10-step technique can be effective in other economic sectors. *Quality Progress*, 34(7), 75–81.
- Chambers, D. W., & Fernandez, A. A. (2004). The quality of learning. *Quality Progress*, 37(3), 50–56.
- Cronbach L. J., (1951). Coefficient Alpha and the Internal Structure of Tests. *Psychometrika*, 16(4), 297-334.
- Eijkman, H., Kayali, O., & Yeomans, S. (2009). *Using soft systems thinking to confront the politics of innovation in engineering education*. In Patil, A. S. & Gray P. J. (Eds.), *Engineering Education Quality Assurance: A Global Perspective* (pp.223-234). New York: Springer.
- Harper, B. J. & Lattuca, L. R. (2010). Tightening Curricular Connections: CQI and Effective Curriculum Planning. *Research in Higher Education*, 51 (6), 505-527. DOI 10.1007/s11162-010-9167-2.
- Harper, B. J. (2008). *Tightening curricular cohesion: The influence of faculty continuous improvement activities on student learning*. Unpublished doctoral dissertation, The Pennsylvania State University, University Park.
- Lattuca, L. R., & Stark, J. S. (2009). *Shaping the college curriculum: Academic plans in context* (2nd ed.). San Francisco: Jossey-Bass.
- Lattuca, L. R., Terenzini, P. T., & Volkwein, J. F. (2006). *Engineering change: A study of the impact of EC2000*. Baltimore, MD: ABET.
- Lattuca, L. R., Yin, A. C., & McHale, I. M. (2010, November 18). Influences on Engineering Faculty Members' Teaching and Beliefs about Teaching. Research paper presented at the 2010 Annual Conference of The Association for the Study of Higher Education, Indianapolis, IN.
- Salegna, G. J., & Bantham, J. H. (2002). Curriculum assessment—a systems approach. *Quality Progress*, 35(3), 54–59.
- Wankat P.S.; Felder, R.M.; Smith, K.A.; Oreovicz, F.S. (2002) The Scholarship of Teaching and Learning in Engineering. In: Huber, M.T.; Morreale, S. (eds.). *Disciplinary Styles in the Scholarship of Teaching and Learning: Exploring Common Ground*. AAHE/Carnegie Foundation for the Advancement of Teaching, Washington.

*The Effect of Poverty on English Language Learning Outcome: College Level*

Narathip Thumawongsa

Srinakharinwirot University, Thailand,  
National Institute of Development Administration (NIDA), Thailand

0661

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Abstract

The purpose of this paper is to investigate the effect of poverty toward English language outcome in college level. Some techniques of quantitative methodology were applied. Twenty university students who enrolled in English I (EN101) were asked to complete the questionnaire consisting demographic information in order to categorize their family's economic status. Independent sample *t*-test was utilized to tabulate the difference mean scores of students between high and low income family background from collective data. The result is shown that the students who come from low income family background tend to gain lower English scores than students who come from high income's family background. This finding could be interpreted that students' family income could affect the language learning outcome. The key finding of this study is inequality in language classroom is still reproduced by applying communicative approach pedagogy which has been promoted from the Education Reform Act since 1999 to college education in Thailand. Hence, language teachers should realize that individual language learner has his or her unique social identity. This mentioned social identity could affect students' education attainment in college level where authentic activities are required.

**Keywords:** Poverty, high and low income family background, and English language outcome

## **Introduction**

Poverty is a stubborn fact of life especially in developing countries like Thailand. In particular, the poverty of Thai children has been a continuing concern for Thai government. It is believed that the source of poverty come from the lack of education. As Encyclopedia of the Nations (2012) reported that the growing of the Thai's income gap between city and rural people is occurred from inadequate education. Poverty in the rural are worsened, many people could not be able to send their children to school, hence their children unqualified for the higher paying jobs in the manufacturing and service sectors. Moreover, the financial and economic crisis that was occurred in mid-1997 also worsened the Thai economic, and it has also affected Thai education as mentioned by Ziderman (2003). Thai government realized the problem of student drop out due to the effect of economic crisis and poverty. Therefore, they initiated the student loan to promote educational equality for Thai children in 1996 (Ziderman, 2003). However, enrollment fee is only offered to students from this loan campaign, there are other extra costs for learning especially in college level. From the reform of National Education Act in 1999, government has focused on child-centeredness and communicative approach which might requires authentic activities or outside classroom activities which may require extra costs from students. It could be postulated that poverty is still be a problem of Thai students who is supported by student loan. Thus, question is raised from researcher whether poverty will affect the outcome of English language learning in Thai college level or not where student loan is offered? There are many studies reported about the effect of poverty toward education such as Ryan and Adams (2007), Phipps and Lethbridge (2007), and Hoddinot, Lethbridge and Phipps, (2007), as cited in Ferguson, Bovaird, and Mueller, 2007. But little has been paid attention to investigate the effect of poverty in Thai college level where communicative approach pedagogy has been applied. Discovering the inequality of language education improvement will shade light on language teachers to reconsider finding suitable language pedagogy and realize inequality in their classroom. Moreover, many educators have investigated the relationship between socioeconomic factor and school achievement in primary and high school education .However, there is little study on the poverty effect toward language outcome in college level. Hence, from all information reported, it leads to the research question;

How is poverty related to English learning outcome in college level?

### **Thailand Educational Loan Fund**

According to Ministry of Education (2008) defined Educational Loan Fund as loan fund that is provided for students who come from low income family and who study in non-formal. It is also established for students from high school level to undergraduate school (for both academic and vocational curriculum). After students' graduation, they must pay back the loan with 1% interest per year. The Student Loans Foundation was established on 28 March 1995 and is operated by 3 governmental sectors: 1) the Ministry of Finance, 2) the Ministry of Education, and 3) the Commission for Higher Education. Moreover, Ziderman (2003) also identified Educational Load funds as loans scheme that is proposed for alleviating the financial strain on studying at both upper secondary and college levels. Its ultimate aim is to increase educational accessibility and to increase equality of opportunity for education and enhance social impartiality. It plays a crucial role in sustaining student enrolments and protects student drop out from the education system.

Table 1 Number of loan recipients, open and closed public universities and private universities, 2008

University type	Number of loan recipients
<i>Open public universities</i>	
1. Ramkhahaeng University	36,757
2. Sukhothai University	51
<i>Closed public universities</i>	
	65,771
<i>Private universities</i>	
	70,306
Total	172,885

### Poverty and educational attainment

There are several studies from westerner scholars who studied the relationship between poverty and educational attainment. Start with the National Longitudinal Survey of Children and Youth (NLSCY) in Canada has several studies that reporting the relationship between socioeconomic factor and school achievement (Ryan and Adams, 2007; Phipps and Lethbridge, 2007; Hoddinot, Lethbridge and Phipps, 2007, as cited in Ferguson, Bovaird, & Mueller, 2007). Phipps and Lethbridge (2007) investigated the relationship between income and child outcomes in children age four to fifteen years. They found out that higher incomes were linked with greater children outcomes. There are six measures that associated with incomes factor ranging from the most associate to the least associate with income: 1) cognitive, 2) school measures (teacher-administered math and reading scores), 3) behavioral measures, 4) health measures, 5) social measure, and 6) emotional measures. These findings are relevant with many studies in the United States that have mentioned the disadvantage of socioeconomic and the factors of risk that are connected with poverty such as low education of parent and high family stress could produces negative effect on cognitive development and academic achievement (Brooks-Gunn and Duncan, 2007; McLoyd, 1998; Duncan, Brooks and Klebanov, 1994 as cited in Ferguson, Bovaird, & Mueller, 2007). Furthermore, McLoyd (1998) also reported that living in the condition of rigorous and continued poverty could create negative effects. Moreover, American studies found strong relationship effects between socioeconomic status of children and exposure to risk factors. For instance, poor parent backgrounds were not only have their babies born prematurely, but their born children were also gained higher risk for school failure than children who came from higher income families (McLoyd, 1998). It is important to be notified that international studies have consistently shown similar connection between socioeconomic factor and academic outcomes. For example, the Progress in International Reading Literacy Study (PIRLS) assessed the comprehensive literacy skills of grade four students in thirty five countries. The results showed that there was a significant relationship between comprehensive literacy skills and educational measure in all countries. In sum, the previous western studies above could be concluded that income produces negative effects on educational attainment in elementary school through high school. Therefore, it is worth to study in college level in order to examine whether poverty still produce negative effect toward language education attainment or not?

## **Methodology**

This study was a replication of a study conducted by Ferguson, Bovaird, and Mueller (2007) who examine the impact of poverty on educational outcome for children. According to Gall, Borg, and Gall (1996), the replication of the studies should be organized in order to confirm the validity and reliability of prior findings. Replication studies could promote the generalizability of previous results and furnish confirmatory data regarding the behaviors, subjects, and setting to which the findings are applicable. In the current study, researcher used a quasi-experimental design to replicate the study with a different sample in a different setting.

## **Research question and hypotheses**

The research question guided this study. Thus, research question was rephrased in the form of a testable null ( $H_0$ ) and directional ( $H_1$ ) hypotheses.

RQ: How is poverty related to Thai college students' English language learning outcome?

$H_{10}$ : There are no differences in English language learning outcome between Thai college students who have high economic background and Thai college students who have low economic background.

$H_{11}$ : Thai college students who have high socioeconomic background tend to gain higher mark in Basic English language course than Thai college students who have low socioeconomic background.

## **Instrumentation**

In order to obtain data for answering the research question, this study used the demographic questionnaire to categorize students who have high family's income background and low family's income background in order to find out the difference English learning outcome between two groups of student (see Appendix A). Then, Independent sample  $t$ -test was utilized to examine the significant difference in mean scores between two groups of college students who have different economic background. The dependent variable is Basic English language scores, and independent variables are 1) Student who has family's income over 150,000 baht annually, 2) Student who has borrowed government loan (has < 150, 000 baht annually).

## **Population and sample**

Participants are English major, 1<sup>st</sup> year student of Humanities faculty, Srinakharinwirot University. They were comprised of 100 freshmen. The sample size criterion was based on convenient sampling criterion, which represented 10% of the total population. Their information is summarized on table 2 below.

Table 2: The profile of participants

Independent Variables	Categories	N (Total N = 20)
1. Gender	Men	10
	Women	10
2. Multiage	18	0
	19	9
	20	11
	21	0
		<i>M=19.55 SD= 5.83</i>
3. Major study	English	20
4. Family's income	High (> 150,000 annually)	10
	Low (< 150,000 annually)	10

### Procedures

In this study, the researcher utilized the demographic questionnaire to categorize students who have high family's income background and low family's income background in order to find out the difference English learning outcome between two groups of student. First, at the beginning of the semester, students, who enrolled in English 1 (EN101) were selected as a sample group, filled out the demographic questionnaire. Next, at the end of the semester, their English scores were collected to compare the mean scores between two groups.

### Data analysis

Quantitative researchers, Borg and Gall (1989), suggest that the independent sample *t*-test nonparametric statistical test of significance should be "used when the research data are in the form of a continuous" (p. 559). The obtained data were analyzed using the Statistical Package for the Social Sciences (PASW Statistics 18). The level of significance for accepting the null hypothesis was set at .05. Independent sample *t*-test was utilized in order to find the differences mean scores between two groups of students who have high and low family income background. For this study, there is one independent variable: students' family income background which could be categorized as high and low family income. Moreover, there is one dependent variable: English scores of the sample size.

## Findings

One research questions were addressed in this study. The response to the research question is examined in the following section. In order to test the null hypothesis, independent sample *t*-test was performed to examine the differences English learning outcome between high and low family income students. In this analysis a significance level of  $p < .05$  was required.

In order to find an answer for Null hypothesis

$H_{10}$ : There are no differences in English language learning outcome between Thai college students who have high family's income background and Thai college students who have low family's income background.

The independent sample *t*-test was performed to find the difference between variables.

The result of this analysis was shown in table 3

Table 3: Independent sample *t*-test for English scores

		F	Sig.	t	df	Sig. (2-tailed)
English Scores	Equal variances assumed	.315	.582	2.671	18	.016*
	Equal variances not assumed			2.671	16.789	.016

\* $P < .05$ .

According to the table 3, ( $t= 2.67$ ,  $P < .05$ ), the Null hypothesis was rejected, because there are differences between students who are from high and low family income in English scores.

Furthermore, in order to find an answer for the directional hypothesis,

$H_{11}$ : Thai college students who have high family's income background tend to gain higher mark in Basic English language course than Thai college students who have low family's income background.

The descriptive statistic was performed to examine the mean scores between two groups of students. The result of this analysis was shown in table 4

Table 4: English mean scores between high and low family's income

	Annual family's income	N	Mean	Std. Deviation	Std. Error Mean
English Scores	High income > 150,000	10	76.20*	3.938	1.245
	Low income < 150,000	10	70.70*	5.187	1.640

According to the table 4, the directional hypothesis was accepted, because students who are from high family's income tends to gain higher scores mean than students who are from low family's income.

### Conclusion and discussion

The finding supported the idea that poverty affects learning outcome from many studies (Ryan and Adams, 2007; Phipps and Lethbridge, 2007; Hoddinot, Lethbridge and Phipps, 2007, as cited by Ferguson, Bovaird, & Mueller, 2007). First, supporting fact from McLoyd (1998) who reported that living in the condition of poverty could create negative effects. The negative effect of poverty from this research was low attainment of students. This inference could be supported by the study finding from Phipps and Lethbridge (2007) who investigated the relationship between income and child outcomes in children age four to fifteen years. They found out that higher incomes were linked with greater children outcomes. They also found the association between income and school measures (teacher-administered math and reading scores). It is surprised that not only reading comprehension skill that poverty influence its outcome as report by the Progress in International Reading Literacy Study (PIRLS) assessed the comprehensive literacy skills of grade four students in thirty five countries but also general English language skill or among 4 skills of language outcome were affected by poverty. In sum, student loan may assist students to be able to pay for their enrollment. However students still suffer with their disadvantage socioeconomic background, because there are some extra costs needed for EFL learning based on communicative language teaching pedagogy. Thus, it is language teacher and policy maker responsibility to equalize the opportunity of every college student. Moreover, it is not only promoting chance for being able to pay for enrollment fee, but equality in language classroom should be promoted.

### Limitations

This research was conducted in a college with only ten percent of the total target population. They are relatively small group of 20 students. Therefore, the results could not totally represent the whole picture effect of poverty toward language outcome. The main subject in this study was at the beginning level of English proficiency, and more advanced students may also enhance the whole picture of the poverty effect. Moreover, in regard to EFL issues, this study focused on young adult learners aged from 18-20 and there were 10 females and 10 males. Learners of different ages may have different problem. Furthermore, Girls may have different language learning problem regarding to poverty from boys, but this study did not focus on the issue of gender.

### **Recommendation**

It has contributed to knowledge about the awareness of inequality in the classroom. This awareness makes language teachers realize that their students have different social background. Moreover, it is expected that the study will be helpful for scholars and teachers in similar situations and that it may also give valuable information for language teacher to find the suitable pedagogy that could match with different income background of language learners.

### **Suggestions for further study**

For further research, researcher suggests that because this study was based on quantitative method only, the qualitative method should be applied in order to ensure and support the finding. In addition, qualitative method can also explore deep down details in which sub factor of poverty that greatly influence toward language learning outcome.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The logo is partially enclosed by a large, light blue circular arc that starts from the bottom left and curves towards the right. A smaller, light red circular arc is positioned above the 'iafor' text, partially overlapping the blue arc.

## References

Academic Wording (n.d.). Encyclopedia of the nations. Retrieved from <http://www.nationsencyclopedia.com/economies/Asia-and-the-Pacific/Thailand> POVERTY-AND-WEALTH.html

Academic Wording (n.d.). Toward a learning society in Thailand. Retrieved from [http://www.bic.moe.go.th/en/index.php?option=com\\_content&view=article&id=60:an-introduction-to-education-in-thailand&catid=39:2009-05-18-06-36-46](http://www.bic.moe.go.th/en/index.php?option=com_content&view=article&id=60:an-introduction-to-education-in-thailand&catid=39:2009-05-18-06-36-46)

Borg, W. R., & Gall, M. D. (1989). Educational research (5th ed.). New York: Longman.

Ferguson, H. B., Bovaird, S. & Mueller, M. P. (2007). The impact of poverty on educational outcomes for children. *Paediatr Child Health*, 12(8), 701-706.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). Educational research: An introduction. (6th ed.). White Plains, NY: Longman.

McLoyd V. C. (1998). Socioeconomic disadvantage and child development. *Am Psychol*, 1998, 53, 185-204.

Ziderman, A. (2003). Student loans in Thailand: are they effective, equitable, sustainable? Thailand, Bangkok, UNESCO Bangkok.

## Appendix One

### Questionnaire Form

Questionnaire of Poverty Effect toward English Language Learning Outcome

SECTION 1: DEMOGRAPHIC INFORMATION OF RESPONDENTS

Task: Check

- Age:  18-20  21-24
- Sex:  Male  Female
- Major:  English  Thai
- Minor:  Linguistics  Communication  Other \_\_\_\_\_ (specify)
- Obtained Student Loan:  Yes  No

*The Development of Massive Open Online Networked Learning for Thai Education*

Annop Piyasinchart, Namon Jeerungsuwan

King Mongkut's Institute of Technology North Bangkok, Thailand,

0670

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Abstract

The research study's purpose is to implement our SEED of WISDOM Agile Project Management model (SEED stands for Scheme, Execute, Evaluate, and Develop) to develop the project named Massive Open Online Networked Learning (MOO-NL) for Thai Education. We want to prove whether our model is effective enough to use as a guideline to manage any kind of projects in response to the fast changing technology. The MOO-NL system was developed according to six main SEED of WISDOM procedures. 1) what are the concepts and definitions of the project? (W), 2) iterative cycle planning (I), 3) scrum project by self-control. (S), 4) deliver final products for acceptance and rollout project. (D), 5) operate retrospectively (O), and 6) manage guidelines for continuous improvement. The MOO-NL project is the networked learning platform for all Thai teachers and students to learn, share and reflect knowledge. Its platform is easy for donors to consider the sponsorship of the project for sustainability. Key performance indicators were set up to measure the success of the MOO-NL project output and outcomes which could reflect the success of the SEED of WISDOM model. The MOO-NL output is to finish the project within the planned constraints. The MOO-NL outcomes are the 3 values for interested parties: 1) improving project development team performances 2) intrinsic quality for users 3) extrinsic quality for users. We hope that the MOO-NL system will be a successful story for Thai education in the near future.

**Keywords:** Massive Open Online Networked Learning, Agile Project Management, intrinsic and extrinsic quality

## Introduction

According to The National Institute of Educational Testing Service (NIETS) announcement in fiscal year 2012, the Ordinary National Education Testing (ONET) score in eight subjects for 3 levels of education, Pratom 6 (Grade 6), Matthayom 3 (Grade 9) and Matthayom 6 (Grade 12), were lower than 50% for all the eight subjects in every level. The students' average scores in five of eight subjects were lower than last year. Out of full scores of 100, the average score for five subjects which were lower than last year were: Thai language, our mother tongue, from 42.61 to 41.88; social studies, religions and culture from 46.51 to 33.39; science from 30.90 to 27.90; health and physical education from 62.86 to 54.61; and art from 32.62 to 28.54. Meanwhile, the average score for occupation and technology was up from 43.69 to 48.72; English language from 19.22 to 21.80; and mathematics from 14.99 to 22.73. Even for the 3 subjects which the scores were higher than the previous year, the average score were quite low especially for English. Figure 1 shows the ONET score in 2012.

### Thai student Ordinary National Education Testing (ONET) Average Score (%) in year 2012

Item	Pratom 6 (Grade 6)	Matthayom 3 (Grade 9)	Matthayom 6 (Grade 12)
Thai language	50.04	48.11	41.88 (42.61)*
Social Studies, Religions and Culture	52.22	42.73	33.39 (46.51)*
English	38.37	30.49	21.80 (19.22)*
Mathematics	52.40	32.08	22.73 (14.99)*
Science	40.82	32.19	27.90 (30.90)*
Health and Physical Education	58.87	50.87	54.61 (62.86)*
Art	46.75	43.50	28.54
Occupation and Technology	55.38	47.29	48.72
Number of Schools	31,617	11,817	3,577
Total students	805,099	804,895	351,633

Source: Ministry of Education (--) \* Previous year score

Figure 1 the ONET score in 2012

English is one of the keys of success for competitiveness of Thailand when ASEAN turns to be ASEAN 10 in 2015. The Thai government is introducing the holistic development approach to solve the problems in teachers, curriculum, ICT infrastructure and even the networking between government and private sectors. The government implemented a much-publicized One Tablet Per Child (OTPC) scheme by distributing nearly one million tablets to all Grade 1 students at the start of the 2012 semester. For the first semester in 2013, new tablet models were released, with much more capability but cheaper, so the government must review the tablets specification and costing again. The tablet is only one of many elements in a mobile learning environment which is changing fast. The tablet is a powerful “last mile” link in the m-Learning system and the m-Learning system itself is changing because of the emergence of the smart mobile environment which includes tablets, mobile phones and 3G, 4G or even 5G speed broadband internet. For success with the OTPC project, it is not enough to select a quality tablet and deliver it on time to all students in grades 1-12. The tablet does not teach by itself. We also need to prepare for students and teachers, digital content, schools’ internet and wireless environments in order for the tablets to deliver education content effectively and provide connectivity between students and teachers and online knowledge. The number of teachers in primary and secondary school should be 484,777 (Education Council, 2008), but there were actually only 426,363 teachers and as a result we lacked 58,414 teachers, especially for English, science and mathematics teachers. According to this data the main reasons for those poor ONET scores was the lack of enough quality and quantity of teachers. This problem is the main cause for the quality of education in all levels and also wider gap in education between urban and rural areas, and the rich and the poor’s opportunity to have an equally chance for education. To solve this problem is not so easy, it takes time. So we should try to introduce the quick and low investment as a supplementary tool to solve the problem. Nowadays disruptive of internet social networks technology plays an important role in our society. Why not implement this disruptive technology to education?

### **Research Objective**

The goal of our research is to develop a web based system named **Massive Open Online Networked Learning (MOO-NL)** for Thai Education, which will be implement for high school students, by SEED of WISDOM Agile Project Management (APM) model, (Annop & Namon, 2013).

### **Research Hypothesis**

“MOO-NL” could be finished and met the key performance indicators, which are one output and one outcome, according to the monitoring system of SEED of WISDOM APM model. We hope that the system could be one of the problem solvers for the lack of English, science and mathematics teachers to improve the quality of education in Thailand.

### **Theoretical Framework**

#### ***Three generations of education***

Because of the disruptive technology of social media like YouTube, Facebook, Wikipedia, SlideShare, Flickr, and Line together with the high speed broadband internet technology, people all around the world can connect seamlessly. Academia is

mentioned on education 1.0, 2.0 and 3.0. Education 3.0 is characterized by rich, cross-institutional, cross-cultural educational opportunities within which the learners themselves play a key role as creators of knowledge artifacts that are shared, and where social networking and social benefits outside the immediate scope of activities play a strong role (Keats & Schmidt, 2007). Figure 2 shows the distinguishing differences between learning 1.0, 2.0, and 3.0 (Chang, 2012)

Topics	Education 1.0	Education 2.0	Education 3.0
Meaning is...	Dictated	Socially constructed	Socially constructed and contextually reinvented
Technology is...	Confiscated at the classroom door (digital refugees)	Cautiously adopted (digital immigrants)	Everywhere (ambient, digital universe)
Teaching is done...	Teacher to student	Teacher to student and student to student (progressivism)	Teacher to student, student to student, student to teacher, people-technology-people (co-constructivism)
Schools are located...	In a building (brick)	In a building or online (brick & click)	Everywhere (thoroughly infused into society, cafes, bowling, alleys, bars, workplaces, etc.)
Parents view schools as...	Daycare	Daycare	A place for them to learn too.
Teachers are...	Licensed professionals	Licensed professionals	Everybody, everywhere
Hardware and software in schools...	Are purchased at great cost and ignored	Are open source and available at lower cost	Are available at low cost and are used purposively
Industry views graduates as...	Assembly line workers	Ill-prepared assembly line workers in a knowledge economy	Co-workers or entrepreneurs

Figure 2. Comparison between learning 1.0, 2.0, and 3.0 (Chang, 2012)

### ***Massive Open Online Courses (MOOCs)***

In 2008 the Canadian National Research Council set up the first research project for Massive Open Online Courses under the cooperation between Athabasca and Prince Edwards Island Universities in Canada under the project named “Personal Learning Environments Networks and Knowledge (PLENK)”. The project was supported by George Siemens & Stephen Downes who proposed the connectivism learning theory (Kob, 2011). They started with only 25 students who paid to enroll for the course and at the same time the course was also opened for students all around the world for free enrollment. There were almost 2,300 students enrolled for the free course at that time. Dave Cormier named this course **Massive Open Online Course, MOOC** in the same year (Wiley, 2012). In 2011 Sebastian Thrun and colleagues at Stanford University opened the Massive Open Online Course named “Introduction to Artificial Intelligence”. There were more than 160,000 students from 190 countries registered to the system. From that point MOOCs were recognized and expanded very fast all around the world (Yuan & Powell, 2013). “Massive Open Online Networked Learning” has 3 key flexible features (Kob, 2011). First, it is open for any learners to join the course (open content). Second, course participants use the social network as collaborative learning tools (networked learning). Third, the system is unlimited for the number of learners (massive).

The way that MOOCs offer massive courses has magnetized significant interest from governments, institutions and commercial organizations. MOOC platforms have been developed and offer courses independent of or in collaboration with universities for the purpose of expanding access, marketing and branding, as well as the potential of developing new revenue streams. MOOCs have now deviated from the original concept, and some universities offer a certification fee or even fee for the extra assessment result. Figure 3 shows the names and detail of their activities to date. (Yuan & Powell, 2013)

Name	URL	Institutions	Commercial Organization	Investment (Million \$)	Profit	No profit	Certification fee	Credit consideration
eDX	<a href="http://www.edX.org/">http://www.edX.org/</a>	MIT, Harvard	X	60	X	<input type="checkbox"/>	<input type="checkbox"/>	X
Coursera	<a href="http://www.coursera.org/">http://www.coursera.org/</a>	Stanford, Princeton, Michigan, Pennsylvania	New Enterprise Associates & Kleiner, Perkins, Caufield & Byers Education	22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X <input type="checkbox"/>
Udacity	<a href="http://www.udacity.com/">http://www.udacity.com/</a>	Open for some universities	Sebastian Thrun & Mike Sokolsky, Charles Pearson center, Charles River Ventures & Andressen Horowitz	21.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X <input type="checkbox"/>
Udemy 2010	<a href="http://www.udemy.com/">http://www.udemy.com/</a>	Also open for teachers	Insight Venture Partners, Lightbank, MHS Capital	16	<input type="checkbox"/>	X <input type="checkbox"/>	<input type="checkbox"/>	X <input type="checkbox"/>
P2PU 2009	<a href="http://www.p2pu.org/en/">http://www.p2pu.org/en/</a>	Open for learner and subject matter experts in the community	Hewlett Foundation & Shuttleworth Foundation	-	X	<input type="checkbox"/>	<input type="checkbox"/>	X
Khan Academy 2008	<a href="http://www.p2pu.org/en/">http://www.p2pu.org/en/</a>	Salman Khan	Bill & Melinda Gates Foundation & Google	-	X	X	X	X

Figure 3. Table of names of MOOCs providers and their activities.

### ***SEED of WISDOM Agile Project Management (APM)***

There are two types of project differentiated by their output. The first one, the project output could be described or depicted clearly at the starting period such as the construction project. The second one, the output itself is technology products or is using technology, software or high-tech tools, to develop the project such as a software development project like the MOO-NL system. For the former, after the scope is settled, a step by step activity is created as a task break down structure (TBS). When the first step is completed and approved then the next step will be followed. It is quite difficult to go backwards to the former step for improvements. The activity is traditionally one way and will go to the next step one by one the same way as with a waterfall. We named it as waterfall project management. The famous reference procedures for this style of management is the nine bodies of knowledge developed by the US project management Institute (PMI, 2004). For projects in which changing technology and environment have the potential to adversely affect the outcome of the project. We need a much more flexible methodology to manage the project. Agile Project Management (APM) has some distinguishing differences and underlying assumptions from waterfall project management. It is appropriate for the project that might be affected by the rapidly changing environment but still conforms to customer value (CCPACE, 2011). The author developed the Agile Project Management model named SEED of WISDOM APM (Annop & Namon, 2013). The model consisted of four foundations: **S**cheme, **E**xecute, **E**valuate, and **D**evelop (SEED) and six main procedures, WISDOM: 1) what are the concepts and definitions of the project? (**W**), 2) iterative cycle planning (**I**), 3) scrum project by self-control. (**S**), 4) deliver final products for acceptance & rollout project (**D**), 5) operate retrospectively (**O**), and 6) manage guidelines for continuous improvement (**M**). The MOO-NL system project, in which ICT plays a big role in the success of the system, needed an appropriate project management methodology so we implemented our SEED of WISDOM APM model as a tool to develop the MOO-NL system. SEED of WISDOM APM also has much more flexibility to maintain synchronization with the changing smart mobile learning environment.

### ***MOO-Networked Learning for Thai Education***

Most of the MOOCs implemented nowadays are for higher education in a massive way. Can MOOCs apply for other levels of education? Can massive mean massive locally for Thai students in school not university? The authors realized that English is a key to success for the word massive in MOOCs today. As we mentioned before, the English literacy of Thai students is quite poor. Actually we don't want to lose an opportunity to implement MOOCs for our Thai education in English, but we try to think globally but act locally. By reviewing the feature and platform of MOOCs, our conceptual idea was developed to implement the MOO-NL system for Thai high schools. We hope that the MOO-NL system will be one way to solve the problems of our Thai Educational system. Thai students will have an opportunity to develop self-practiced learning for lifelong learning through their local MOO-NL system without the burden of English language. It should be challenging for the authors to do the research from different points of view from the global trend. Our conceptual model and feature diagram are shown in figures 4 & 5.

# MOO-Networked Learning for Thai Education (Conceptual Diagram)

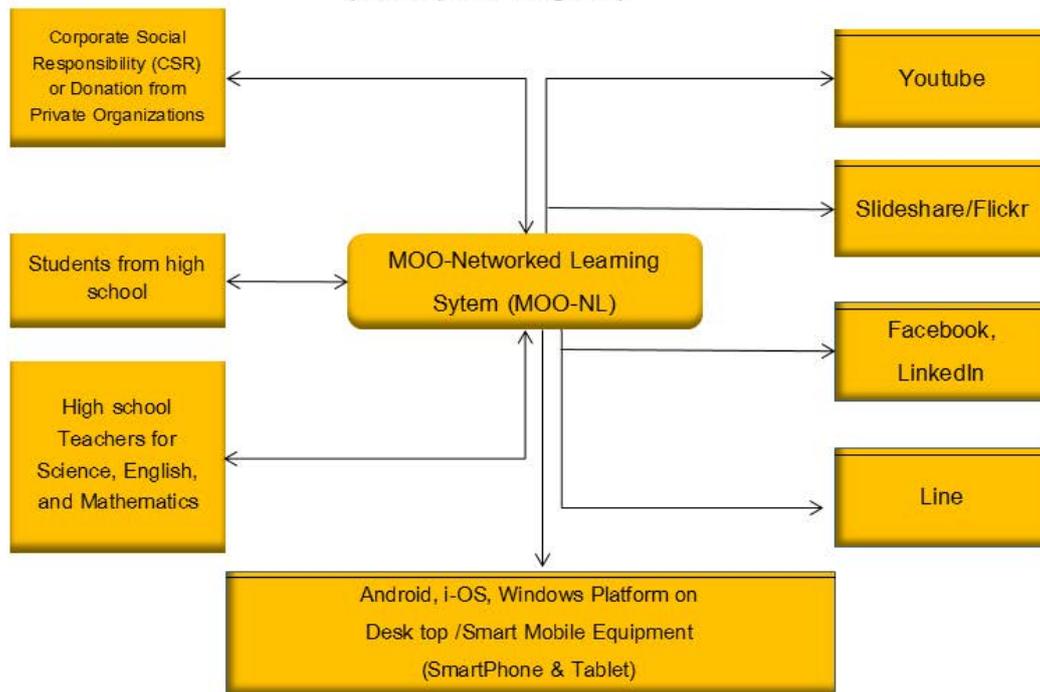


Figure 4. MOO-NL for Thai Education Conceptual Diagram

## Massive Open Online Networked Learning for Thai Education System Feature

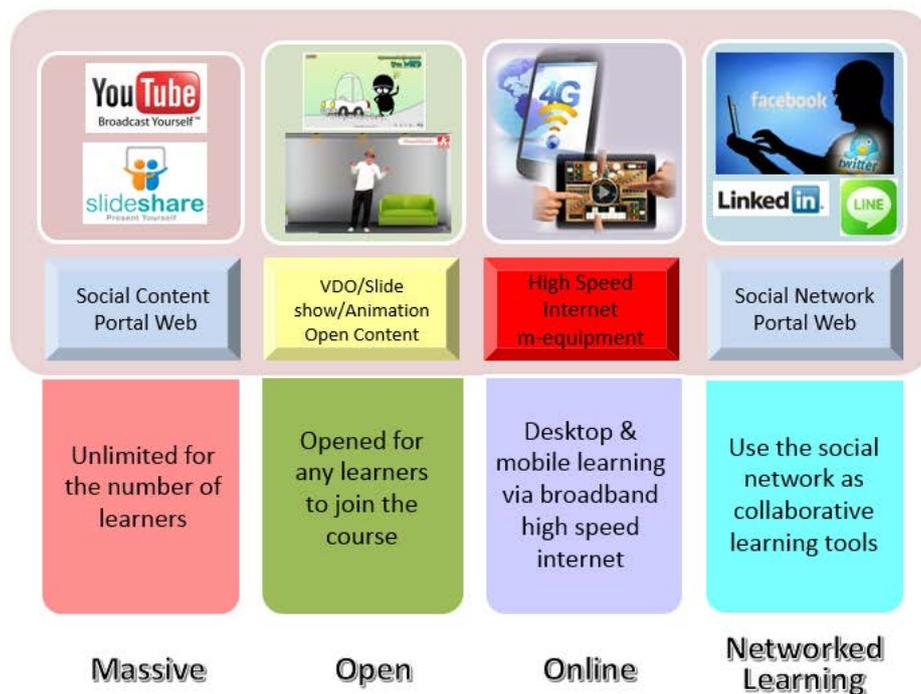


Figure 5. MOO-NL for Thai Education Feature Diagram

## Research Methodology

### Population and Representative Sample

#### Population (Interested parties)

- (1) Commercial organization (project owner / project sponsor)
- (2) Project management team leader (scrum master) who have at least five years of experience in managing the project
- (3) Web based application developers who have at least five years of experience in web based development (development team)

We selected the representative sample by purposive sampling method

One private company as a project owner and project sponsor

One quality management system manager from a private company as a scrum master

Three commercial web based developers

#### Research tool

SEED of WISDOM APM Model concept  
(<http://www.youtube.com/watch?v=uydaYaeYvgI>)

SEED of WISDOM APM Model training media and document for MOO-NL system development (<http://www.youtube.com/user/annoppiyasinchart>)

SEED of WISDOM Model Close-ended questionnaire (Five-level Likert scale) to evaluate the MOO-NL, system constraints (system output)

System scope

System schedule

System cost

Close-ended questionnaire (Five-level Likert scale) to evaluate project team performance (system outcome)

Self-control during development

Team building

Communication among team members and other interested parties

Strictly to the project objective

#### Research procedure

Training MOO-NL system interested parties by uploading the SEED of WISDOM APM content to YouTube then asking them to look through it. (<http://www.youtube.com/user/annoppiyasinchart>)

Developing the MOO-NL system step by step according to the SEED of WISDOM APM model

Evaluating step (2) one output: system constraint, and one outcomes: improving project development team performances.

## Research Output and Outcomes

### SEED of WISDOM APM training

All of the interested parties saw the SEED of WISDOM AMP training content on YouTube (<http://www.youtube.com/watch?v=uydaYaeYvGI>) and used it as a guide line to develop the MOO-NL system.

### Developing the MOO-NL system

The MOO-NL system was finished and tested by the users on time. The total cost was only 40,000 baht which is 10,000 baht lower than the target budget. This budget was subsidized by ASAHI Thai Alloy Company Limited, a Thai water meter manufacturer as a pioneer donor for the MOO-NL system. The MOO-NL interphase flow diagram and homepage are shown in figures 6 & 7.

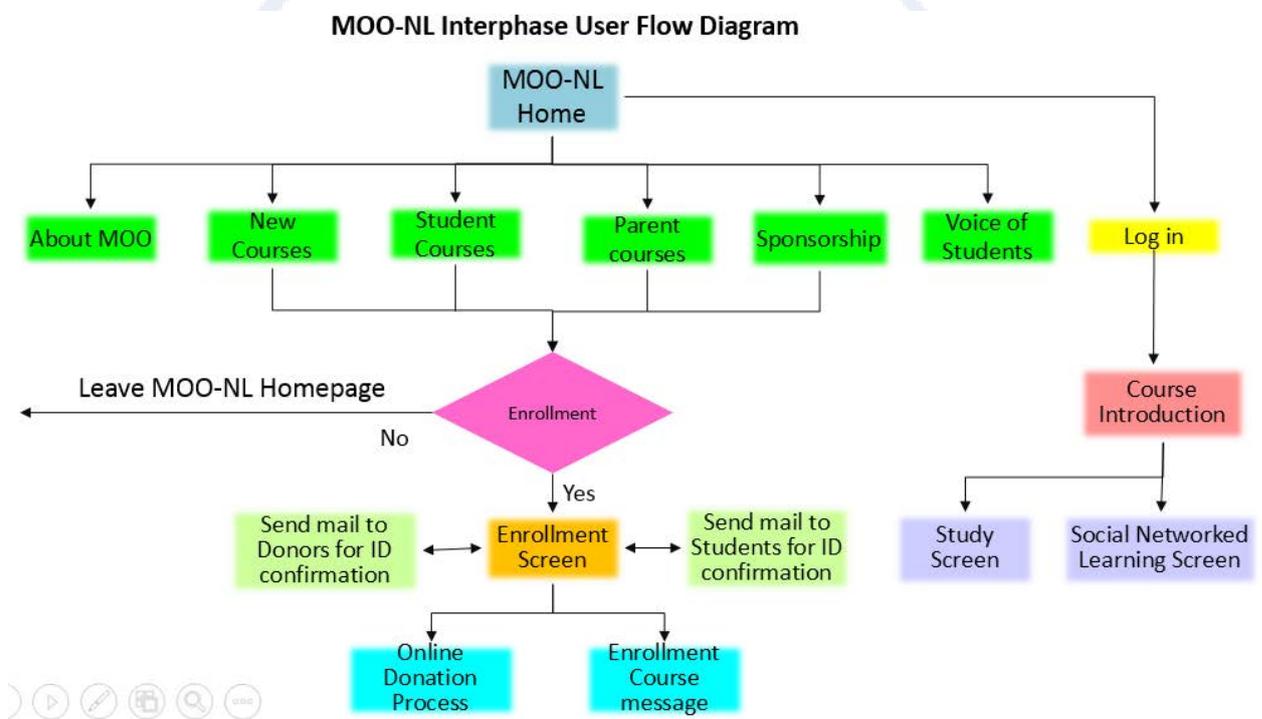


Figure 6. MOO-NL Interphase user flow diagram

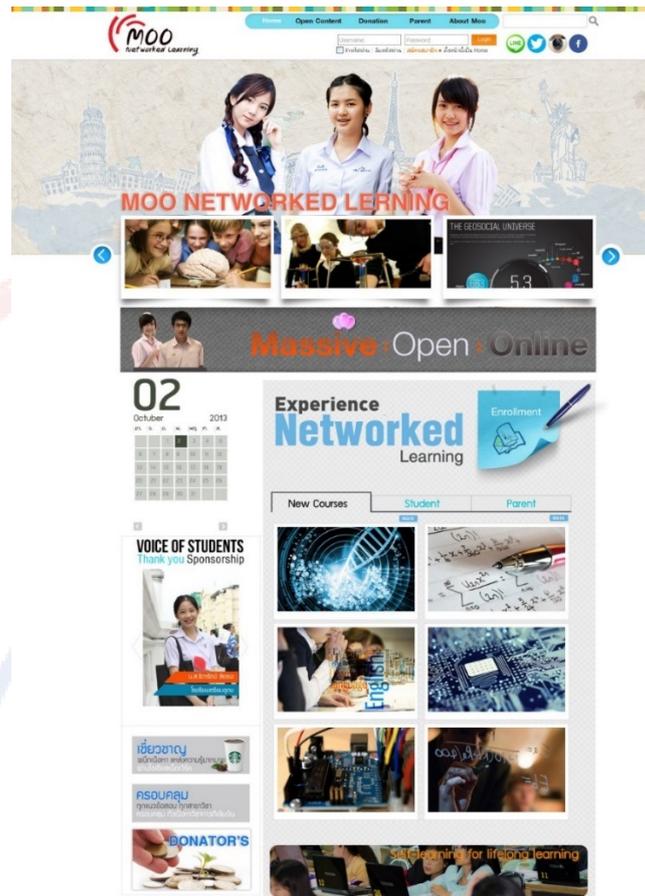


Figure 7. MOO-NL system home page (<http://www.moo-education.com>)

Output and outcome of the MOO-NL system evaluation are shown in figure 8, and 9.

- The MOO-NL system output, scope constraint, was evaluated by donator and scrum master and the results are shown in figure 8.

System constraints Key Performance Indicators, Output (Highsmith 2010)	Sponsors	Scrum master
1. Scope of work	<input type="checkbox"/>	<input type="checkbox"/>
2. MOO-NL system is Finished within 2 months	<input type="checkbox"/>	<input type="checkbox"/>
3. Budget is not more than 50,000 Baht	<input type="checkbox"/>	<input type="checkbox"/>

Figure 8. The MOO-NL system output evaluation

- The development team, web base and courseware developers totally agreed that SEED of WISDOM APM model was quite flexible and made them feel free to manage to create the system with happiness. The output for team performance evaluation has been shown in figure 9.

Team Developer Key Performance Indicators, Outcomes 1 (Highsmith, 2010).	3 Developers for web based development		
	1	2	3
1. Self-control during developing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Team building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Communication among team members and other interested parties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Strictly to the project objective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 9. The MOO-NL system first outcome evaluation

**Suggestions from the Research**

Even though the output and outcome of the MOO-NL system were quite positive for all interested parties during the development period, the next step of the research is to verify the MOO-NL system. The authors plan to implement the MOO-NL system to be used by three government and one private high schools in Bangkok. The population size selected from each school will be 40 students, so totally students will be 160 students. After that we will evaluate the two outcomes, the MOO-NL system intrinsic and extrinsic quality for users. Hopefully after the verification phase, the MOO-NL system will be good enough to be one of many engines to push up the ONET score in the near future.

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## REFERENCES

CCPACE. (2011). *Agile Project Management*. Retrieved from [www.ccpace.com](http://www.ccpace.com). Search on January 12, 2012.

Chang, Ruay-Shiung. (2012). *Learning 3.0: Connected Learning*. Retrieved from [http://elfasia.org/2012/wp-content/uploads/2011/11/Plenary-Session5-Prof\\_Ruay\\_Shiung\\_Chang.pdf](http://elfasia.org/2012/wp-content/uploads/2011/11/Plenary-Session5-Prof_Ruay_Shiung_Chang.pdf). Search on: October 2, 2013

Highsmith, Jim. (2010). *Agile Project Management*. 2<sup>nd</sup> edition, Boston: Pearson Education Inc., 2010

Keats, Derek. and Schmidt, J. Philipp. (2007). *The Genesis and Emergence of Education 3.0 in Higher Education and its Potential for Africa*. Retrieved from <http://firstmonday.org/ojs/index.php/fm/article/view/1625/1540#author>. Search on April 10, 2013.

Kob, Rita. (2011). *The Challenges to Connectivist Learning on Open Online Networks: Learning Experiences during a Massive Open Online Course*. International Review of Research in Open and Distance Learning, Vol. 12.3, March – 2011.

Retrieved from: <http://www.irrodl.org/index.php/irrodl/article/view/1041>. Search on March 15, 2012.

Piyasinchart, Annop & Jeerungsuwon, Namon, (2013). *Agile Project Management MOO Networked Learning for Thai Education*. Retrieved from <http://www.youtube.com/watch?v=sSOuJmZW24&list=PL064C67F39230A9FA&index=93>. Search on September 11, 2013

Project Management Institute. *A Guide to the Project Management Body of Knowledge*. 3<sup>rd</sup> edition. Newtown Square: Project Management Institute, 2004.

Wiley, David. (2012). *The Original MOOCs*. Retrieved from: <https://learn.canvas.net/courses/4/wiki/the-original-moocs>. Search on April 17, 2013.

Yuan, Li. & Powell, Stephen. (2013). *MOOCs and Open Education: Implications for Higher Education*. Retrieved from <http://publications.cetis.ac.uk/2013/667>. Search on September 10, 2013.

*Transnational Education as an Emerging Feature of Migration*

AnalizaLiezl Perez-Amurao

Mahidol University International College, Thailand

0675

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Abstract

This paper focuses on the current trajectories of a diasporic movement in Southeast Asia, particularly migrants' engagement in cross-border education as an emerging feature within the Thai migrant social space. This paper discusses the transnational nature of migration and how it particularly impacts on relevant teaching-learning landscape vis-à-vis the changing structures of education via technology. An emerging issue that is under-researched and under-represented in the regional and international academic discussions and the global public sphere, this paper employs qualitative research as its main design. Over-all, this study culls together data from a survey, interviews, ethnographic observations aided by a social network, Facebook, and the analysis of four Bangkok-based migrant workers' life narratives, documenting their bid to participate in cross-border education and exploring how said engagement relates to their identity formation and practice of agency.

**Keywords:** Filipino diaspora, migration, cross-border education via technology

## Introduction

The bombing incident during the Boston Marathon in April 2013 raised a number of questions that not only had to do with the Tsarnaev brothers' personal issues. The unfortunate incident also propelled many to dig into a number of factors that could have possibly led the two to commit such a crime. A good number of conjectures were looking to immigration issues for possible explanation. The Tsarnaev brothers' case, however, was not the only incident linked to mobility issues, with migrants as the main actors. In 2005, mass riots in France were considered to be closely related to the country's immigration condition with mostly second-generation migrants behind said civil unrest. To be sure, such incidents could not be claimed as the sole consequence of migration. With people constantly in search of places to move to, temporarily or permanently, their mobility results in a myriad of activities as well. These activities, it has to be further noted, do not necessarily always carry with them negative undercurrents such as the incidents cited above, if indeed they were migration-related. These activities may very well bring with them constructive qualities. In both cases, however, these activities may be linked to those that do not exclusively take place in the host-country. With the advent of technology and other transformative networks, these activities are being facilitated in two or more countries where the principal actors are found. Viewing "International migration...[as] a central dynamic within globalization" (Castles & Miller, 2009, p. 3), this phenomenon ushers in the concept of transnationalism. Transnationalism, whose first trickle of usage came about in the late 1980's, refers to the "sustained cross-border relationships, patterns of exchange, affiliations and social formations spanning nation-states" (Vertovec, 2009, p. 1-2). Simply put, transnationalism is what people engage in as they build and maintain alliances despite being separated by national borders and territories. Transnationalism has come under a prism of overlapping pursuits and is articulated in different forms and for various agenda. These agenda range from social, political, economic, cultural, and other dimensions, and may even be a combination of any of them, depending on the nature and objectives of a particular transnational engagement.

One form of transnational engagement that has relatively recently become a feature of migration is transnational education (TNE). Defined as an activity where "learners are located in a country different from the one where the awarding institution is based" (UNESCO/ Council of Europe, 2001), various studies claim that demand for TNE will increase by 2020 (McBurnie & Ziguras, 2001). Knight (2002, Cited in Huang, 2007) refers to transnational education as the act of actual and online to-ing and fro-ing of the learners, facilitators, knowledge, and academic plans involving more than one country. This is not, of course, absolutely a new phenomenon, as people are known to have traversed national borders and territories in pursuit of higher education from as early as mid-19<sup>th</sup> century (See Huang, 2007). One of the things that makes TNE an interesting field to explore at the height of globalization and in the midst of migratory movements is the fact that engagement in TNE has allowed migrants to examine their own identity (re)formation within the transnational and migratory social space and explore how their choice of cross-border pursuits impinges on their practice of their own agency. Such is the case of the four chosen Bangkok-based teachers whose demographic profiles were coded and established. Among the four, two were chosen for a life narratives analysis and ethnographic observation supplemented by their social network textual and photographic posts.

One of the emerging transnational activities that a growing number of migrants are engaged in includes enrolling in graduate school programs. At the time of writing, the actual number of overseas Filipino workers (OFWs) currently living in the Kingdom of Siam could not be used to justify a claim that they possessed a diasporic trait as opposed to the Filipino migrants' population in top work destinations such as the UAE, Qatar, Kuwait, Taiwan, Bahrain, and Canada (See Commission on Overseas Filipinos. (December 2010). Correspondingly, the number of Filipino migrant workers pursuing graduate studies could not be claimed either to be quantitatively significant so as to arrive at conclusive and determinate findings. For example, although the enrollment rate ballooned from the first time Filipino migrants were known to have enrolled, the first batch of students from a transnational program whose face-to-face sessions were held in Bangkok and whose MOODLE-supported activities were facilitated from the Philippines was only composed of ten students. This pioneering study, however, argues that despite the smallness of the actual number of Filipino migrant workers involved in TNE at the time of writing, their life stories provide a window into the world of other Bangkok-based Filipino migrants whose transnational activities create an impact on their practice of their own agency and on their identity formation/ reformation as overseas workers.

### **Methodology**

The data in this investigation were collected from a survey questionnaire, interviews and ethnographic observations of Bangkok-based migrant workers and their transnational education engagements. Aside from the survey questionnaire that allowed the author to collect demographic information from and about the respondents, the author used analysis of life narratives "in addressing questions of meaning and causality" (Hollway & Jefferson, 2000, p. 10). This qualitative dimension constituted the major design of this research as it offered "the strategic significance of context, and of particular, in the development of our understandings and explanations of the social world" and that inherent in it was the "unrivalled capacity to constitute compelling arguments about how things work in particular contexts" (Mason, 2006, p. 1). The ethnographic observation focused on two Filipino migrant workers whose life narratives offered the author sufficient data to analyze. It took six to ten months to cull the first informant's Facebook data and roughly 36 months to cull the second informant's. Over-all, the data used by the author involved a mixture of actual interactions and conversations with said migrant workers. The use of Facebook as a source of information was done to check on the informants' other relevant experiences not mentioned in the interviews and whether they were consistent with or discrepant from their interview responses. The strength of this study's ethnographic observation using Facebook lay on its ability to provide relevant information placing importance on how people's daily routines and social practices are embedded in new media, using it not as a substitute to actual events, but as a form of reinforcement (Morris, 2012).

This study highlights the case of four (4) Bangkok-based Filipino migrantworkers as their status and transnational engagements, specifically their participation in transnational education, matched the criteria set for this study. All the four informants pursued graduate studies transnationally within the last two to three years. Michael, Robert, and Joan (not their real names) all enrolled in a transnational educational program whose degree-awarding institution was based in the Philippines and had a tie-up with a local institution in Bangkok. Tony (not his real name), on the other hand,

obtained his Master of Arts degree from a Philippine-based educational institution whose program was largely facilitated by the use of the Internet. Three (3) of the respondents were male among whom the youngest was within the 26 to 30 years old age bracket and the oldest from the 41 to 45 years old age bracket. Joan, the sole female respondent fell under the 36 to 40 years old age bracket. Three of them were married, whereas Albert was single. Michael and Robert earned a monthly income ranging from THB20,001 to THB30,000 while Joan and Tony had a monthly income ranging from THB30,001 to THB40,000 each. Aside from Robert who was teaching adult learners on a freelance set-up, Michael, Joan and Tony were all teaching full-time in elementary (*prathom*) and high school (*mattayom*) levels. In addition, with Robert being the only one whose stay in Thailand ranged from one to five years as an OFW, Michael, Joan and Tony all had been in the Kingdom from six (6) to ten (10) years. At the time of the interview, Tony was enrolled in the Doctor of Education Program, Michael was still working on his MA, whereas Robert and Joan already finished their studies.

Among these four (4) migrant workers, the author elected to write vignettes on two respondents on the basis of her familiarity with them and her access to their transnational engagement-related information. The first vignette focused on Joan, a Bangkok-based mother-of-two teacher. Joan and the author first met in an evangelical church where both of them went on Sundays. Joan recently obtained her MA in Education with a major in English through a Bangkok-based educational organization with a Philippine-based partner as the award-giving institution. The second vignette concentrated on Tony. Tony was the author's children's teacher who had also previously enjoyed transnational schooling in the master's level. At the time of writing, Tony was teaching in an international school in Bangkok and was working on Educational Management as his specialization in the doctorate level. For his current transnational engagement, Tony was enrolled in the same Philippine-based educational institution he earlier went to.

As mentioned earlier, what this study highlights is not the quantitative strength based on the number of the informants, given the fact that the base number of Filipino migrants involved in the first Bangkok-based TNE program spearheaded by a Philippine university was inherently small. In addition, this paper does not aim to obtain data for a comparative study, for which a big number of participants requires. Neither does this study aim to establish frequency distribution. What this paper seeks to do is explore the range of the informants' responses and provide explanation that would have otherwise been difficult to establish quantitatively.

There were three stages of coding that were observed. Employing the recursive method of analyzing the collected data, the author first analyzed survey information that was demographic in nature. This first stage of coding involved an analysis of primary research data on the following themes: participants' identities, work monetary compensation, occupational status, professional roles, and educational background. For Stage Two coding, the author made a cross-narrative analysis of the key research themes. At this stage, the informants' responses to key-theme questions were explored, namely, how their varying transnational educational engagements synced with their identity formation as migrants and how it linked with their practice of their own agency. The third stage involved coding of two chosen informants' Facebook posts facilitated by the author's ethnographic observation. Stage Three

coding only included two (2) out of the four (4) who were interviewed because their interview responses indicated the strongest indications of the key themes underscored in this study. The last two stages involved data analysis, particularly Findings and Interpretation (Stage Four) and Conclusions and Recommendations (Stage Five).

### **Teacher Vignettes on the Migrants' Identity-Formation and Practice of Agency**

#### *Vignette 1: Transnational Education, a Source of Pride*

##### Joan's Practice of Personal Agency

Joan was a migrant worker whose OFW experience ranged from six (6) to ten (10) years. Practically, Joan could no longer be considered an inexperienced overseas employee. This could be attested not only by her number of years of stay outside her homeland, but also by her monthly income. Earning a monthly salary from a range of THB30,001 to THB40,000, Joan could easily pass as a senior teacher. An interview with a Foreign Department Officer personally handling the hiring of foreign teachers in Thai private school revealed that at the time of writing, the standard entry salary rate given to Filipino teachers in a typical private Thai school could go as low as THB10,000 per month to a relatively higher rate of THB15,000 as opposed to the standard entry salary rate of THB30,000 per month given to any Caucasian teacher regardless of the latter's educational attainment (Coronica, S., 24 September 2013; See also [www.ajarn.com](http://www.ajarn.com)). With this current salary-giving practice in Thailand, Joan's income can be said to be better off than others. What made Joan stand out among those who participated in this study was her characteristic views impacting on her practice of her own agency and correlating to her own identity formation as a migrant worker.

When asked to describe how her own control of things around her influenced her to pursue graduate studies via transnational education, Joan revealed, *It gave me confidence to teach as I knew that the course would equip me. It assured me of the possibility of obtaining a teaching license....I did expect to gain promotion and [salary] increment plus more knowledge in teaching strategies and proven classroom management techniques from well-experienced professors. (14 September 2013)*

As a self-governing social actor within the migrant social space, Joan ultimately bolstered her understanding and conduct of her own decisions. Although she cited the promise of a Thai teaching license, promotion and salary increase as her instrumental motivation, it did not eclipse the fact that her autonomy was at work, making her become a better worker, knowledgeable of teaching strategies and other pedagogic techniques. Clearly, Joan's decision demonstrated how her personal agency moved her to go beyond the financial and employment-related returns which the structure/society she was in had a control over. By having done so, Joan did not just comply with both her work and immigration requirements to secure her migration status, but she also saw transnational education as a means not only to address mobility issues, but more importantly to benefit from them instead.

##### Joan's Identity Formation vis-à-vis Transplantation of Nationalism

It has to be noted further that Joan's active use of her own agency did not stop there. Having recognized the power of her own choices, Joan also saw the importance of her transnational education as an instrument leading to the formation and reformation of

her identity as a migrant worker. When asked how finishing her transnationally obtained degree would affect her identity as an OFW, Joan confirmed:

*Finishing another degree has positive effects on me. Working with a sense of accomplishment improved my work attitudes (sic) and habits which were noticed by my employer. Being regularly commended for excellent performance made a good impression on Filipinos in general, which is why my employer prefers hiring Filipino teachers....*

*Being a transnational student is a mixture of advantages and disadvantages. Tuition fees are four times the fees in the Philippines. However, once finished, [it] brings sense of pride and another milestone in my career. (14 September 2013)*

Using her ability to steer the situation to her advantage reflected how engaging in transnational education could be a way for Joan to construct and reconstruct her habits and work practices that eventually helped enhance her image as a migrant worker. Joan not only saw how transnational education could become her conduit to making personal and professional progress, but also how it could be a channel through which Filipino migrant work could help in bringing honor to her country by virtue of one's commendable work performance. This study then argues that Joan's engagement in transnational education did not only have an effect on her full practice of her own agency and identity formation within the migrant workspace. This study asserts that transnational education can, at the same time, be a medium through which a migrant worker can transplant her own sense of nationalism and see it work even within the host-country setting. With Joan's assertion that through her own example her employers were convinced to hire other Filipino teachers, she exemplified how cross-education could also indirectly facilitate migrants' modernist perspective of nationalism expressed within the structural conditions of modern transnational society which, in this case, was within the complex organizational contexts of 21<sup>st</sup> century migrant life.

### *Vignette 2: The Future Migrant-Returnee*

#### Practice of Personal Agency towards a Long-term Goal

Single and in his late thirties, Tony taught in an international school where the author's children studied. In fact, he became their teacher at some point. That was how this author met and knew about him. They had also previously worked together for a charity concert the author organized. As a subject coordinator, Tony was earning a monthly income that ranged between THB30, 001 to THB40, 000. He had been away from the Philippines for six (6) to ten (10) years, enough to say that he was not a novice in the migrant workforce at the time of the interview. Unlike the other informants in this study, Tony's engagement in transnational education started from the master's and continued on to the doctorate level. Although Tony's study set-up was a bit similar to Joan's—that is, Tony also had a combination of online and face-to-face sessions—he had to go back home to the Philippines to meet his teachers/advisers personally. This was because Tony's degree-awarding institution never had a local partner in Bangkok, Thailand.

Questions about Tony's practice of his own agency revealed that, unlike Joan, his decision to pursue his studies was mainly driven by his own plan to go back home for good. Knowing that employment in the homeland would necessitate higher educational attainment, should a teacher apply for managerial or supervisory positions, Tony took it upon himself to engage in cross-border education. In this

regard, Tony's motivation was different from Joan's as reflected in his statement below:

*I decided to continue my studies because I am planning to go back to the Philippines and I wanted to be in the managerial or supervisory position. Having the Ed. D. [Doctor in Education] is a plus factor in applying for that position. (18 September 2013)*

Additionally, because of Tony's bachelor's degree in education, he was not exactly required by his employer to take up graduate studies in said field if only to comply with the Thai Ministry of Education's mandatory qualifications in order to be given the Thai teaching license. This was also one of the marked differences between him and the other informants in this study. Having said this, Tony's decision to study transnationally was not, in any way, determined by his host-country's structural conditions but by his own country. Although this initially came out as the main difference between him and Joan, in a sense, it was also what made their conditions the same. Both working within a state's complex organizational directives which compelled them to act upon the situation, Tony, just like Joan, regarded education as an "internationally tradeable service" (McBurnie & Ziguras, 2001, p. 86) specifically treating it "As a private good... [that] provides economic benefits and personal satisfaction for the student/ graduate" (p. 86). It can be learned that Tony's participation in transnational education, from the master's to the doctorate levels, had been recorded via his Facebook status updates and other posts from middle of October 2010 up to this writing.

When asked about how his own control of things helped him in his decision to study transnationally, Tony further demonstrated his capacity to act freely within the migrant work sphere:

*With my present earning/ income, I can afford to send myself to school. Also, in the online program, the school gives me the tasks which I need to complete in a given time frame. With this set-up, it allows me to work at the same time do my studies. (18 September 2013)*

Tony's concept of his own agency was driven by his financial freedom. He utilized this to enable him to make a directed action of not only securing his employment—seeing to it that his monetary needs were addressed, but also of managing his transnational education which, in the first place, was sustained by his own job. As a migrant worker, Tony recognized his power over his present migrant condition and believed that he could change his future by making decisions and enacting on them.

Like Joan, Tony saw his image and the formation of his OFW identity to have been positively influenced by his transnational education. When asked how finishing a degree obtained through cross-border learning would possibly alter his image as a migrant worker, Tony replied:

*I can use my knowledge to further improve my performance at work. It does change my understanding of myself. I gain more respect and get promoted. Along with the promotion is a bigger responsibility.*

*This online education really helps those like me who want to pursue higher studies without leaving our work. In terms of financial [needs] such as tuition fee and other fees we need for the completion of the course, we could manage it because we still have work and earn at the same. Even the completion of the requirements is easier because I can complete the tasks assigned during my free time using all the available resources I have. (18 September 2013)*

Tony realized, just like Joan, that transnational education was a significant medium giving him the opportunity to become a better employee. He also thought that becoming a better employee meant not only gaining respect from others around him, but also getting financially rewarded in the form of a job promotion. It has to be noted that at the time of the interview, Tony held the position of a subject coordinator. Apart from Tony's changing migrant-to-entrepreneur-identity mentioned earlier, he also acknowledged that gaining respect and being promoted inevitably came with a growing responsibility. In this vein, Tony's identity formation can be said to have become more complex as initially imagined.

### **Conclusion**

With the growing interconnection between migration and education, it is not surprising to learn about the forecasts made by different studies claiming the increase in demand for transnational education in 2020. Given these projections, it is crucial that all stakeholders look into the many areas in anticipation of possible consequences such development may bring. While this study does not claim to posit conclusive findings linked to TNE-related issues, it hopes to offer the following observations in an effort to add to the growing body of relevant literature:

That engaging in TNE among migrant workers may not be limited to pure representations of personal and professional relationships, but one that may possibly determine economic growth;

That a migrant's agency within the transnational context allows him/ her not only to comply with employment and immigrations requirements, but more importantly to advance one's self;

That TNE can be a channel through which a migrant worker can construct/ reconstruct his/ her identity within the transnational social space;

That by banking on the benefits TNE offers, a migrant can transplant his/ her own sense of nationalism even within the host-country employment sphere;

That articulation of a migrant's religious faith can blend well with expressions of his/ her TNE activities;

That a migrant's online activities supplement rather than replace offline tasks, and;

That TNE can facilitate raising a migrant's level of awareness on how he/she can regulate the opportunities around him, both within the receiving-country setting and the homeland.

## References

- Castles, S. & Miller, M. (2009). *The age of migration: International popular movements in the modern world*. NY/ London: The Guilford Press.
- Hollway, W. & Jefferson, T. (2000). *Doing qualitative research differently: Free association, narrative and the interview method*. Great Britain: SAGE Publications Ltd.
- McBurnie, G. & Ziguras, C. (2001). The regulation of transnational higher education in Southeast Asia: Case studies of Hong Kong, Malaysia and Australia. *Higher Education*, 42, 85-105.
- Mason, J. (2006). *Qualitative researching* (2<sup>nd</sup> ed.). Great Britain: SAGE Publications Ltd.
- Morris, J. (2012). Learning How to Shoot Fish on the Internet: New Media in the Russian Margins as Facilitating Immediate and Parochial Social Needs. *Europe-Asia Studies*, 64( 8), 1546-1564.
- Commission on Overseas Filipinos. (December 2010). *Stock estimate of overseas Filipinos*. Philippines.
- UNESCO & Council of Europe. (2001). *The UNESCO-CEPES/ Council of Europe code of good practice for the provision of transnational education*. Paris: Europe.
- Vertovec, S. (2009). *Transnationalism*. London/ NY: Routledge.

*Tracing the Impact of Foreign Influences on Irish Playwrights: Wilde and Yeats*

Wiriya Dankamphaengkaew

Srinakharinwirot University, Thailand

0685

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## **Introduction**

During the late nineteenth century, many Irish playwrights searched for a new form of drama as realistic drama was increasingly felt to be outmoded. The new ideals or methods in drama stem from the development in French Symbolist Movement, begun during 1880 – 1895, which would expand into what might be called anti-realistic theatre. These ideas inflect Symbolist dramatic thinking and show a marked desire for new paradigms of performance drawn from outside conventional theatre. In search for new forms and new themes for theatre, playwrights had looked outside mainstream theatre for models of acting, declamation, movement and staging. As Oscar Wilde (1845 – 1900) and William Butler Yeats (1865 – 1939) recognized the limitations of the conventional stage, together with the problematic issues about realistic play, they turned their mind toward the outside sources to generate new concept for the theatre. Maurice Maeterlinck and the French symbolism led by Stephane Mallarmé are among those who are to shape the dramatic background of their drama.

This research is based on the concept that new technique or form of drama emerges very largely from the realizations of forerunners and contemporaries. The aim of this research is to portray the trace of foreign influences in the works of later playwrights as part of the integration between the old and the new: playwrights inherited the knowledge from their ancestor, assimilated it with their own ideas, and finally supersede it. This research will examine how foreign influences such as Maeterlinckian and French Symbolism could be detected in the plays and were used to generate an experimental drama. Thus, this research will show how those playwrights make use of foreign influences to create or evolve a modern technique of total theatre and discuss their use of it to construct their ideals form of drama. In this research, Mallarmé's and Maeterlinck's dramatic theories will be used as ground theories, and discusses ways in which Maeterlinckian and the French Symbolism are considered the core force for the Symbolist drama through comparative and contrastive readings of Symbolist dramatic theories.

## **Stephane Mallarmé and the French Symbolist Movement**

Although his writings are few in number, Stephane Mallarmé, a French symbolist poet, was a driving force for the Symbolist Movement throughout the 1890s, providing a model for other poets and a springboard for new ideas. In J.C. Ireson's essay, 'Towards A Theory of The Symbolist Theatre', he choose to analyze the notion of a Symbolist theory of the drama in which critics claimed to be formulated by Mallarmé. Ireson explains that 'Mallarmé's theories provided the greatest single impetus towards the formation of the experimental forms of Symbolist drama' (1986: 150). Arthur Symons wrote a chapter on Mallarmé, in *The Symbolist Movement in Literature*, analyzing Mallarmé's idea which could be claimed as the principal theory of Symbolism. He said that art must always be suggestion and evocation, never direct statement. The texts must carry symbolic imageries which are not easily interpreted but rather they were suggestive. 'Remember his (Mallarmé) principle' he wrote, 'that to name is to destroy, to suggest is to create' (2007: 196). Haskell M. Block asserted the similar analysis in his summary of the characteristics of symbolist drama that emerge from Mallarmé's theory of aesthetic: 'The language of drama is poetry rather than prose, evocative rather than descriptive, and relying upon suggestion as oppose to statement' (1963: 102). Furthermore, Block (1963: 102-103) also listed out other characteristics of Symbolist drama that could be looked upon as the principal theory

of Symbolist drama in which later Symbolist playwrights were premised on: drama is the expression of inner life and of mystery; the stage should be 'detheatricalized' by focusing on a spirituality that was to come from the text and the acting.

### **Maurice Maeterlinck and His Static Theatre**

Maurice Maeterlinck was the leader of the European Symbolist Movement who created a new form of drama called 'the static theatre'. Maeterlinck claimed in 'The Modern Drama' that the development of modern drama in his time was in a decline: 'The first thing that strikes us in the drama of the day is the decay, one might almost say the creeping paralysis, of external action' (1904: 153). Therefore, Maeterlinck sought to find a new theory of drama that suggests the notion of a drama outside the known confines of the stage. Maeterlinck wrote a series of symbolist plays characterized by fatalism and mysticism: *La Princesse Maleine* (1889), *Intruder* (1890), *The Blind* (1890), *Pelleas and Melisande* (1892) and *The Blue Bird* (1909). Maeterlinck's dramas, known more for their styles than for their plots, emphasized a universal mystery and a sense of impending doom, as well as an awareness of the transitory nature of reality and existence. The general mood of his plays is slow and dream-like. The intention is to evoke an unconscious response rather than an intellectual one and to depict the non-rational aspects of characters and events.

Maeterlinck explained his ideas on the static theatre in his essay 'The Tragic in Daily Life' (1905) that in drama, as he conceived it, it was the words that were not said which mattered. Furthermore, not only just the unsaid words, but also the little action in drama could present effective and intensive picture of inner life. From this notion, he invented a new breakthrough type of theatre that went opposite to the conventional theatre as he aimed to 'replacing action with inaction, events with eventlessness, and dialogue with a semantics of silence as expressive as any of Symbolism's most sophisticated poetic constructions' (McGuinness, 2000: 1). His theory of static theatre stems from his belief that man is powerless against the forces of fate. Combined with his fascination in puppets, androids, and shadow theatre, Maeterlinck found that the marionette is an excellent example for representing the powerless of man against the higher force as the marionette is guided by strings and operated by a puppeteer which represents fate. They were not to allow the stress of their inner emotions to compel their movements. His new discovery was the beginning of the new era for the theatre. The mystic atmosphere and the childish, simplistic, almost absurd language of his play truly challenge the existence of the realistic theatre. Symons wrote that 'Maeterlinck's theatre of marionettes [...] is the reaction of the imagination against the wholly prose theatre of Ibsen, into which life comes nakedly, cruelly, subtly, but without distinction, without poetry' (1909: 77).

### **Wilde's *Salomé***

This one act play is based on a Biblical episode of Princess Salomé, a stepdaughter of Herod, who falls in love with a prophet, Jokanaan, and utters her uncontrollable desire to kiss him, which the prophet rejects. Herod begs Salomé to entertain him by dancing and offers her anything she might wish in return. After she has finished the Dance of the Seven Veils, she requests the head of Jokanaan on a silver platter as a reward which Herod first refuses, but then reluctantly grants. Salomé seizes the head passionately, addressing Jokanaan as if he lived and triumphantly kissing his lip. Overcome with revulsion, Herod orders the soldiers to kill Salomé.

'French airs play all round *Salomé*' Worth wrote, 'Flaubert's *Hérodiade* was an inspiration [...] so too Moreau's painting' (1986: 99). We could not be altogether sure of the source in which Wilde conceived of as *Salomé*; however, many critics believe Wilde's inspiration for his version of *Salomé* may have been Mallarmé's *Hérodiade* (1869) and Maeterlinck's play *La Princesse Maleine* (1889). Sammells wrote that 'Wilde draws on [...] Maeterlinck's *La Princesse Maleine* in deploying the atmosphere and devices of an emergent Symbolist drama' (2000: 72). With his association with Mallarmé's theories on poetry and literature, the notions that Wilde learned from Mallarmé were to shape Wilde's outlook. It is thus no surprise to find that there is a shade of Mallarmé's *Hérodiade*, an unfinished lyrical drama telling the tale of *Hérodiade*'s marriage to Herod, in Wilde's *Salomé*. Many elements in *Salomé* show its closeness to *Hérodiade*: Jokanaan's refusal to be touched by Salomé is reminiscent of *Hérodiade*'s refusal to the touch of the nurse in Mallarmé's poem, the similar characteristics and appearances of Mallarmé's *Hérodiade* and Wilde's *Salomé*. Furthermore, both characters are portrayed as supremely beautiful, akin to the goddess, proud and unsympathetic.

While the influence from Mallarmé in *Salomé* shows in the closeness of the overall plot story and the characteristics of the leading character, the influence from Maeterlinck laid in the theatrical style, technique and the context. *Salomé* stands out from Wilde's other dramas and has a strong connection to Maeterlinck's *La Princesse Maleine*, most obviously in its mood and atmosphere. Raby has emphasized the influence on Wilde of Maeterlinck's *La Princesse Maleine* in his book, *Oscar Wilde*: 'Maeterlinck's insistent use of color, sound, dance, visual description and visual effect offered Wilde a theatrical vocabulary more complete and more innovative than anything the London stage could demonstrate' (1988: 105).

As for the style of writing, the repetition of simple phrases in Wilde's play may have had its origin in Maeterlinck's play. This concept was mentioned by many critics. Bird claimed that Wilde's style of writing 'have been influenced by the repetitive incantations adopted by Maurice Maeterlinck' (1977: 81). Nevertheless, there are some elements in their intentions that marked the differences. While 'Maeterlinck makes extensive use of the repetition of simple phrases, which lends a dream-like quality to the verbal texture' (Raby, 1988: 105), Wilde employs the repetition technique in order to lay out many of central ideas, symbols, motifs and the characteristics of each characters: the beauty of Princess Salomé and her admirers, the symbolic meaning of the moon and its color; the child-like characteristic of Salomé and her desire to kiss Jokanaan. In *Salomé*, the mode of repetition is established during the introduction, in the scene which the Young Syrian and the soldiers introduce the key motif of Herod's and his obsession with Salomé, along with the

introduction of the main symbol, the moon. The play begins with the repeated phrases from the Young Syrian:

FIRST SOLDIER: The Tetrarch has a somber look.

SECOND SOLDIER: Yes; he has a somber look.

FIRST SOLDIER: he is looking at something.

SECOND SOLDIER: he is looking at someone. (1940: 10)

In Salomé's scene after she encountered with Jokanaan, the several repetitions of the phrase 'I will kiss thy mouth, Jokanaan' marks the state of mind of Salomé, showing her childish, obsessive desire, as though in a trance, to kiss Jokanaan's red mouth. Thus, the use of repetition sometimes foreshadows the outcome of the play as well as creating the intensity, which marked the contrast between Maeterlinck's *La Princesse Maleine* and *Salomé*. The Page of Herodias repeats his warning many times to the Young Syrian about the terrible outcome of being possessed by the beauty of princess Salomé, which echoed Herodias's warning to Herod: 'You must not look at her'.

### **Yeats's *A Full Moon in March***

Yeats's *A Full Moon in March* is profoundly influenced by Maeterlinck and Wilde. The barely conscious characters along with the tragic plot of passion and death in *A Full Moon in March* recall the tragic fate of Maeterlinck's Princess Maleine and Wilde's Princess Salomé. Even though Yeats stated his dislike of Wilde's *Salomé*, claiming that the play lacked tension in action, and the dialogue was 'empty, sluggish, and pretentious' (Ellmann, 1967: 23), he eventually went to see the performance in 1905. Despite his dislike, the play surely occupied his thought as a drama with similar plot was written around forty years later. In his letter to Dorothy Wellesley, he stated his discontent with his new play and described it as 'a fragment of the past I had to get rid of' (1954: 843). *A Full Moon in March* was a revised version of *The King of the Great Clock Tower* (1934) as Yeats was not satisfied with the number of character in the first version, claiming that the play has an unnecessary character: 'there are three characters, King, Queen and Stroller, and that is a character too many' (1966: 1311). Thus, he redesigned the play, giving the Queen a speaking role, eliminating the character of the King in order to gain the greater intensity by keeping only the essential characters, which are the Queen and the Swineherd.

*A Full Moon in March* tells a story of the Swineherd who has come through 'dust and mire' at full moon to sing so well as to win the kingdom and the Queen's heart. Yeats always rejected the influences from the French and Wildean version, claiming that his version was drawn from the old Gaelic legend. At first, there is a faint notion of this legend in *The King of the Great Clock Tower*; however, the later version very much leans on Mallarmé's *Herodiade* and Wilde's *Salomé* than on the Irish myth. Bradford pointed out in *Yeats at Work* that 'this Irishizing almost disappeared' (1965: 291). Even Yeats himself admitted that the process of combining the Gaelic legend into a dance play had brought his Queen closer to Wilde's Salomé: 'In attempting to put this story into a dance play I found that I had gone close to Salomé's dance in Wilde's play' (1966: 1311).

Worth (1986) emphasized that Yeats's play has the same French background as Wilde's play in term of inspiration. She referred to Mallarmé's unfinished poem, *Hérodiane*, as one of the source of Yeats's inspiration, and pointed out the closeness

of the cruel 'winter of virginity' in Yeats's *Queen* and Mallarmé's *Hérodiade*. Worth (1986) also found, in both *Salomé* and *A Full Moon in March*, dramatic devices that anticipated with the total theatre. The dramatic devices that Worth referred to are music, light, movement, costumes, speech, and dance which should be mixed, blended and perfectly collided in order to establish a whole and indivisible staged entity or in other word, the total theatre.

### **The Similarities and the Differences**

*Salomé* and *A Full Moon in March* inhabit the strange world, at once naïve yet emotionally intricate, of fairy-tale or folklore. However, at a deeper thematic level, the differences are marked. Despite many similarities from their forerunners in term of form and technique, Wilde and Yeats built a lot of their own symbolic events in the plays. For instance, there are two major devices in both plays that help establishing the symbolic action, which are the domination of the moon and its color and the dance of sexual adoration. In analyzing those devices and those symbolic moments, we should be able to clarify the similarities and the differences between *Salomé* and *A Full Moon in March*. Thus, the process of analysis will identify their affinities with the French and Belgian Symbolist dramatic theories, and demonstrate the notion of how Wilde and Yeats assimilate those theories into their plays.

In *Salomé* and *A Full Moon in March*, there is a symbolic function in the moon and its color which is to make the characters who are so obsessed by it seems like puppets moved by some forces outside themselves. This notion seems to connect and stem from Maeterlinck's theory of 'static drama'. He believed that men are completely powerless against a higher force, which exercised its will upon the world. Therefore, in his drama, the actors are to speak and move as if they are controlled by an external force, having fate as puppeteer. Thus, the characters are dominated by their surroundings and are unable to control the events in their own lives. There are plenty of examples in both plays in the fate of each character. One of the characters in Maeterlinck's *Princesses Maleine*, Princess Uglyane, is a suitable example as she is completely dominated by her mother, and barely has a voice in the play at all. In Wilde's version, *Salomé* begins as the cool, chaste, aloof figure. But when she lays eyes on Jokanaan, his appearance ends her cold virginity, a chastity that she celebrated in the moon. She completely surrenders to the powerful feeling of passion and desire, letting herself be engulfed by sexual desire which has a supreme power over her. Similar to the Young Syrian, he also falls under the spell of *Salomé*'s beauty. He is aflame with passionate love which claimed him the ability to control his emotion. In the anguish of his despairing love for *Salomé*, he finally stabs himself and dies at her feet.

In *Salomé*, there are some mystic forces and fatal connection between what happen to the characters and the moon which constantly changes from brilliant silver to 'red as blood' (1940: 37) and then to black when it is blocked out by 'a great black cloud' (1940: 47). All the metaphorical descriptions of the moon, described by each character, serve to move on the drama, to suggest, in images as well as words, the emotional state of each character, increasing the tension, and foreshadowing the outcome of the play. The moon is described as blood red by Herod before the dance of the seven veils, which reveals his fear for the evil omens and the tragic incident that Jokanaan had prophesied. Thus, the red moon also foretells the bloodshed incident of Jokanaan which will take place after *Salomé* finishes her dance.

In the play, Salomé is attracted to the qualities of the moon which are ‘cold and chaste’. She also associates herself with the moon and refers to it as a virgin: ‘I am sure she is a virgin, she has a virgin’s beauty. [...] She has never abandoned herself to men, like the other goddesses’ (1940: 14). Therefore, when Salomé surrenders to her own passion and does whatever it takes to get a kiss from Jokanaan, she is no longer ‘cold and chaste’, but becomes “a mad woman who is seeking everywhere for lovers’ (1940: 24). While Salomé is brooding over the severed head, the black cloud is passing in front of the moon and completely hiding its light, foreshadowing the tragic end of Salomé. Her death is literally brought about by the moon. In the final scene, the moonbeam shines onto Salomé one last time, revealing the terrible kiss which provokes Herod to order his soldiers to kill Salomé.

Even though the moon in Yeats’s play does not have the same function as in *Salomé*, it has a symbolic meaning which partly closes to the moon in *Salomé*. The full moon stands for perfect beauty and unmixed spirituality, represented by the Queen. Thus, the image of the Queen laughing her crazy laughter and of her shivering after kissing the severed head under the full moon in *March* recalls the moon-mad woman Herod imagines: ‘like a mad woman who is seeking everywhere for lovers [...] she reels through the clouds like a drunken woman’ (1940: 24). Furthermore, Maeterlinck’s concept of the puppet or being control by the more powerful force is still visible in Yeats’s play. In *A Full Moon in March*, Yeats transferred the domineering power of the moon to the voice of two attendants and to the sound of the drum-taps. The attendants oblige to supply all voices and are responsible to reveal and conceal the Queen by opening and closing the inner curtains. Thus, they settle the action in the play through their songs, dialogues, and the sound of the drum-taps.

The dance scene is always regarded as the most important part in both plays. The function of the dance carries symbolic meaning. Wilde did not provide any details of how the dance scene should be. In the text, he simply stated ‘Salomé dances the dance of the seven veils’ (1997: 38). It is then left to readers to imagine what the dance should be. Nevertheless, the form of her dance should go along with the context of that scene in which her dance is supposed to please Herod, so that he will grant her the reward. Sammells argued that Salomé dances for herself, not for any other characters. She is ‘a distinctive, unsettling version of the assertive New Woman whose cause we have seen him championing elsewhere’ (2000: 75). To some extent, she might dance for both herself and Herod. Salomé dances in order to expose the other part of herself; to strip off the virgin version of herself, and to embrace the real Salomé whose heart is full of passion and desire. And at the same time, she dances for Herod as to fulfill both herself and Herod’s wish. From this notion, her dance should be something directly sensual and erotic on view in the dance in order to capture the gaze of Herod and to reveal her inner passion.

On the contrary, Yeats’s play provided a suitable amount of description for the dance scene. Yeats’s stage direction describes the dancing part that: ‘Queen takes up the head and lays it upon the ground. She dances before it – a dance of adoration. She takes the head up and dances with it to drum-taps, which grow quicker and quicker. As the drum-taps approach their climax, she presses her lips to the lips of the head. Her body shivers to very rapid drum-taps. The drum-taps cease. She sinks slowly down, holding the head to her breast’ (1997: 629). The image of the Queen and her

dance suggest the supernatural powers of a woman poised between the two dimensions which are the living and the dead. Despite Yeats's rejection of the similarity, Raby commented that 'Yeats's use of the dancer suggests a process of refining through successive experiments, until he reaches the purity of his last definition. It does not seem far from the kind of theatre Wilde was intuitively making' (1988: 116).

Nevertheless, there are significant points that mark the differences of the two dance scenes. Yeats claimed in a letter to Olivia Shakespear that 'it is more original than I thought it, for when I looked up *Salomé* I found that Wilde's dancer never danced with the head in her hands' (1954: 826). 'But in his (Wilde) play the dance is before the head is cut off' (1966: 1311), Yeats explained in the preface to his play. So, the timing of the dance scene certainly affects the symbolic meaning of the dance. Yeats's Queen did not dance in order to seduce her admirer and lure him to grant her wish like Salomé, that why Yeats commented on Salomé's dance as 'a mere uncovering of nakedness' (1954: 827). The Queen's dance, according to Yeats, was 'a long expression of horror and fascination' (1954: 827).

In Yeats's play, there are three episodes of the dance: the first is right after the beheading scene, the second part of the dance is after the severed head sings, and the final part is after the Queen laughs her crazy laugh. Yeats explained in his letter about the dancing part that 'she first bows before the head (it is on a seat,) then in her dance lays it on the ground and dances before it, then holds it in her hands' (1954: 827). Each episodes of the dance holds different meanings due to the symbolic moments that are worked through the Queen and the Swineherd. Before the dance scene, she drops her veil, which is the symbol of her virginity. The act of dropping the veil represents her sexual surrender which is similar to the act of stripping veil after veil during the dance of the seven veils and kissing in the final scene of *Salomé* which indicates the end of her virginity. Yet, the Queen's act of dropping the veil is accompanied by a sense of shame, symbolized by her standing with her back to the audience. While she holds the severed head in her hand, the Queen declares her love for the Swineherd through her song.

The bowing before the dance and her action of placing the severed on the throne shows her acceptance of the Swineherd as the new King. The second part of the dance is associated with the Queen's feeling which contains a mixture feeling of, as Yeats claimed, 'horror and fascination'. She might be fascinated by the severed head's song, and, at the same time, be horrified either by the fact that the severed head can sing or she has killed the only man whose song is able to stir her heart: 'The Queen in her dance moves away from the head, alluring and refusing' (1997: 629). While dancing, she laughs her crazy laugh for the absurdity of her situation. The final part of the dance represents the sexual union of the Queen and the Swineherd, which also synchronizes with the increasing rhythm of the drum-taps. She takes the severed in her hands, dances with it, and makes love to it. The dance scene end with the image of the Queen holds the severed head close to her breast and, as the Swineherd predicted, sinks 'in bridal sleep' (1997: 627).

## Conclusion

Despite the similarities and the closeness in term of form and technique, both Wilde's *Salomé* and Yeats's *A Full Moon in March* have their own originalities. Tydeman distinguished the originality of *Salomé* from Maeterlinck's play in his book, *Wilde: Salomé*. He explained that 'whatever his Maeterlinck affiliations in terms of verbal structures and textures, Wilde rarely resorts to the slow trance-like vagueness of the Belgian. Much in *Salome* is dynamic, clear-cut, hard-edged, brilliant' (1996: 8). Both Wilde and Yeats had simply taken the symbolist techniques outlined by Mallarmé, Maeterlinck, or Wilde in Yeats's case, to its furthest reach. They did not imitate their forerunners or each other's works: they absorb those techniques, adjust them, and apply them into the plays.

Yeats believed that the beauty of drama lay in its stylization, its unity of images, and in its concentratedness. Therefore, in *A Full Moon in March*, he tried to capture that beauty by presenting a unified image in which all scattered emotions were heightened and then collected in the kissing scene. Serpillo in his review on two plays asserted similar idea. In *A Full Moon in March*, he concluded that 'discord has become identity, thought and will are indistinguishable, and emotional and spiritual wholeness are finally achieved' (2009: 240-242). *Salomé* is also presented as an image, but with scattered emotions. *Salomé* could not create a unified image like Yeats's play since its feeling spills out on all sides as each characters have their stories and their climaxes moments: the Young Syrian commit suicide after ignored by Salomé; the Page of Herodias's reaction in the suicide scene of the Young Syrian; Salomé in the kiss scene; and Herod in the last scene when he overcomes his own passion and orders to kill Salomé. Nevertheless, the mixture of feeling and the recklessness with which it turns against itself are such a powerful, memorable force.

Yeats's *A Full Moon in March* could be seen as a new version of Wilde's *Salomé*. It focuses on the same major theme which is the passionate love relationship between the sexes, and uses the similar plot. However, Yeats's version shows his attempt to simplify the theme of both plays, which is about love and sin. Yeats uses only two mains characters, apart from the musicians. The Queen stands for the eternal feminine and a pure soul that needs to complete her being by uniting with her opposite, while the Swineherd is the male principle and a pure body that needs to be sacrificed, so that the body and soul will finally reunite through the kiss. The simplicity and the less character help Yeats to strip bare their relationship during the confrontation of the two sexes. Thus, painted scenery is substituted by speech and music and much of the effect depends upon the dance of the Queen carrying the severed head.

In term of their dramatic theories, the difference between Wilde and Yeats's theatre might be the fact that each took the role of playwright differently. Pease's essay 'Aestheticism and Aesthetic Theory' suggested that 'Wilde consistently stressed that it was the critic's job to find social and political meaning in art' (2004: 100). Thus, while Wilde wrote drama because of the artist's obligation to expand the knowledge of self-conscious or the art of expression, Yeats wrote drama to fulfill his own desire. While Wilde's technique was to use the old forms made familiar and agreeable to the audience through fine acting, Yeats attempts to invent a new form by reducing the role of acting in order to have audience focus only on the context of his drama.

Yeats was always considered the spiritually coherent as the most significant part in his drama. He explained in his letter to Edmund Dulac about his reason for wanting to re-write *The King of the Great Clock Tower* that 'I don't like *The Clock Tower* which is theatrically coherent, spiritually incoherent' (1954: 830). However, theatrical coherence should be a prime consideration in composing a play. The greater complexity in spiritual theme or in symbolic meaning is possible to pursue such intellectual constructs in a reading of the text, but difficult for the acting or to comprehend by looking. Thus, his method or his type of aristocratic drama requires a higher knowledge and intense concentration from audiences in order to fully experience and understand the language of Yeats's theatre which heavily relies on the prime medium of communication as dance, song and mine. Those points might be the reasons why Yeats's dramatic style did not receive much popularity like his poetry or become a great impact onto later generation as his style seemed to fade away during the late twentieth century.

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## References

- Bird, Alan. (1977) *The Plays of Oscar Wilde*, London: Vision Press.
- Block, Haskell M. (1963) *Mallarmé and The Symbolist Drama*, Detroit: Wayne State University Press.
- Bradford, Curtis. (1965) *Yeats at Work*, Carbondale, Ill: Southern Illinois University Press.
- Ellmann, Richard. (1967) *Eminent Domain: Yeats among Wilde, Joyce, Pound, Eliot and Auden*, New York: O.U.P.
- Ireson, J.C. (1988) 'Towards a Theory of the Symbolist Theatre', in J.C.Ireson, I.D. McFarlane and Garnet Rees (ed.) *Studies in French Literature Presented to H.W.Lawton*, Manchester: Manchester University Press.
- Maeterlinck, Maurice. (1889) *La Princesse Maleine*, [Online], Available: <http://www.archive.org/details/theplaysofmauric00maetrich> [01 August 2009].
- Maeterlinck, Maurice. (1904) 'The Modern Drama', *The Routledge Drama Anthology and Sourcebook: From Modernism to Contemporary Performance*, Routledge: Reprint edition.
- Maeterlinck, Maurice. (1905) 'The Tragic in Daily Life', *The Treasure of Humble*, [Online], Available: [http://www.archive.org/stream/treasureofhumble00maetuoft/treasureofhumble00maetuoft\\_djvu.txt](http://www.archive.org/stream/treasureofhumble00maetuoft/treasureofhumble00maetuoft_djvu.txt) [02 August 2009].
- McGuinness, Patrick. (2000) *Maurice Maeterlinck and the Making of Modern Theatre*. Oxford University Press, USA.
- Pease, Allison. (2004) 'Aestheticism and Aesthetic Theory', in Frederick S. Roden (ed.) *Palgrave Advances in Oscar Wilde Studies*, Basingstoke: Palgrave Macmillan, pp. 96-118.
- Raby, Peter. (1988) *Oscar Wilde*, Cambridge: Cambridge University Press.
- Sammells, Neil. (2000) *Wilde Style: the plays and prose of Oscar Wilde*, Harlow: Longman.
- Serpillo, Giuseppe. (2009) 'The King of the Great Clock Tower and A Full Moon in March: *Manuscript Materials by W.B. Yeats* (review)', *Modern Drama*. vol.52, no.2, Project Muse, pp. 240-242.
- Symons, Arthur. (1909) *Plays Acting and Music: A Book of Theory*, London: Constable & Company Ltd.
- Symons, Arthur. (2007) *The Symbolist Movement in Literature*, revised and enlarged edition. Standard Publications.

Tydeman, William. (1996) *Wilde: Salome*, Cambridge: Cambridge University Press.

Wilde, Oscar. (1940) *Salomé and Other Plays*, West Drayton: Penguin.

Worth, Katharine. (1983) *Oscar Wilde*, London: Macmillan.

Worth, Katharine. (1986) *The Irish Drama of Europe from Yeats to Beckett*, London: Athlone Press.

Yeats, William Butler. (1954) *Letters*, Allan Wade (ed.), London: Hart-Davis.

Yeats, William Butler. (1966) *The Variorum Edition of the Plays of W.B. Yeats*, Russell King Alspach (ed.), London: Macmillan.

Yeats, William Butler. (1997) *Selected Plays*, Richard Allen Cave (ed.), Penguin Books.

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*An Exploration of the Graduate Students' Writing Competencies in Educational Research*

Marilou L. Villas

Ubon Ratchathani University, Thailand

0688

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## **Introduction**

Writing is often perceived as one of the most challenging aspects of second language learning and difficulties in writing different types of texts may come from the fact that writers have to understand the linguistic features of these different text types (Hyland, 2003b). In addition, being able to write cohesively according to the conventions of a specific academic context is even harder for second language learners to accomplish (Flowerdew, 2002).

In his 2006 study, Lin explained that among the many areas of knowledge and skills in writing, these two emerged known as the textual and contextual exploration served as text models in communication. These are always evident and observable at all communicative processes such as making reports and presentation for business purposes and making poems, essays, reports and the like for academic purposes. In the area of academic writing for example, students use elements of the writing processes such as planning, drafting, revising, editing and publishing to compose a text. Through these processes, students' cognitive knowledge and skills are utilized and reinforced in completing a writing task. Moreover, this not only evaluating student's cognitive abilities but also stimulating them to incorporate past experiences to express their feelings and ideas about real or imagined people, events and ideas through writing.

In writing tasks, one of the necessary requirements in any graduate program is the writing of a thesis. This is a degree requirement student should comply to qualify as graduate. The written output is presented before a panel which compose of the Academic Program Director, professors and dean of the graduate program. In this writing requirement, it is presumed for those who are enrolled in this program to be readily equipped with the writing skills to cope with its writing demands.

According to Mullen (2006), in graduate circles, academic writing is expected to be a solitary activity for which students already are prepared. Yet, the reality is that students tend to find academic writing difficult and stressful, and they often look to university faculty members for guidance. This is evident from the feedbacks of the students enrolled in research subjects specifically on thesis writing. With the desire to address the prevailing writing problems of the students, the study of their research competencies was conceived.

This study attempted to find out the graduate students' research writing competencies. Specifically, it will seek answers to the following questions:

What are the writing competencies of graduate students in the following areas:

- Outlining;
- Summarizing;
- Synthesizing;
- Paraphrasing and;
- Developing paragraph?

What is the academic performance of the graduate students in the subject Methods of Research?

Is there a significant relationship on the writing competencies of the graduate students and their academic performance in research subject?

### **Scope and Delimitation**

This study was conducted to determine the research writing competencies of Ramon Magsaysay Memorial Colleges Masters in Education students. The respondents of this study were the 59 graduate students of Ramon Magsaysay Memorial Colleges enrolled in Methods of Research subject in the first semester of the school year 2012-2013. These students were enrolled from the three major courses namely: Educational Management, Teaching English as Second Language and Guidance and Counselling. As stated on the curriculum, Methods of Research subject is required for graduate students with its aim to prepare them for an in-depth writing requisite that demands their skills and experience in order to pass the partial requirement for graduate student specifically Thesis I (Thesis Proposal) and Thesis II (Thesis Final Defence).

The study was delimited to the writing competencies of graduate students and their academic performance in the Methods of Research subject. The material employed in this study was delimited to outlining, summarizing, synthesizing, paraphrasing and developing paragraph.

### **RELATED LITERATURE AND STUDIES**

Writing skills involve a combination of cognitive ability, solid foundation of relevant experiences and constant significant practice. Every time a writer is exposed to writing task, he uses his intellectual capacity and critical thinking to produce ingenious written output. This mental activity is highly influenced by motivation and intensive learning. Students develop interest when motivated, thus the chance to enhance their creativity and word exploration is high. Meanwhile, it is necessary that the students should focus on their weaknesses to keep at pace on the areas they need to improve more which subsequently result to advancing from low level to high level of writing skill. This is why Habulembe (2007) emphasizes the role of teachers in writing class to supply relevant topics that build their grammatical skills and explore on rhetorical skills for students. They should develop strategies to support students' growth as students begin developing in the first –year composition courses. Schilb (2011) also suggests that teachers should give feedbacks to students to give them idea on how to write clear and logical prose and integrate writing in other courses.

The success in writing is relatively constituted on the view that writing involves processes. When these processes are ignored, difficulties in writing occur. Individual writer needs to follow certain basic steps to consider in the process. First, initial brainstorming process, secondly, drafting process, thirdly, revision process and the final process is editing. This means that the processes are the writing skills to evolve for better research writing results Nordquist (2004). For students to do these processes, they must first acquire the basic competencies needed in any writing task. Therefore, they should be taught how to outline, summarize, synthesize, paraphrase, develop a paragraph etc. to produce a good output.

Mastering the basic skills in writing is a fundamental tool for the students to succeed in writing. Outlining presents a picture of the main ideas and the supporting ideas of a paragraph. It is writing information in an order from the most important to the least important. Outlining will help you learn how to take notes and remember the main ideas of what you've read. Secondly, summarizing is where writer distils only the most essential points of someone else's work. It moves much farther than paraphrase and away from point-by-point translation. Thirdly, synthesizing involves combining

two or more summaries. Next, paraphrasing is where writer expresses someone else's work in one's own language. It is a tool in essay writing in allowing other people's ideas included without cluttering up the essay with quotation. Finally, developing paragraph where writer make sentences consists of a words or a group of words, a group of closely related sentences. In developing a paragraph, it has observed good qualities: unity, coherence and emphasis.

Knowing all the importance of writing competencies for students, certain studies related to it were investigated. There are findings which show that college students need to improve on the areas of grammar, content, organization, vocabulary and mechanics Salinas (2005). So, he suggests that teachers need to provide more writing opportunities. On the other hand, Alamagort and Chanquoy (2001) discovered that there was a cognitive basis for writing. The basis is shown to be closely related to working memory, maturity and practice. Meanwhile, Genuino (2002) examined the interplay between the language and the culture. The study revealed the rhetorical patterns of the three speech communities where cohesive devices occupied three positions in discourse: within the sentence, between sentences and between paragraphs. In relation to this, Ellis et. Al (2005) pointed out the fragmented and cohesive subscale approach to writing present in writing processes. The findings showed that both fragmented and cohesive approaches had an impact to the students' skills in writing.

Every second language learners possesses strengths and weaknesses in language acquisition either oral or written tasks. It is likely for student to earn high academic performance when the skills are continually developed throughout the academic years. Since, all educational programs demands writing competencies in some other fields/subjects not only English class, those students who can execute good written output achieve high academic performance compared to those who cannot based on the findings of Shaw et.al (2007).

To sum up, writing is a significant key for a student to succeed in a competent world of academe. It is a combined effort between the teacher and the student to learn and master the art of writing in a constant and relevant experience.

### Research Design and Methodology

This study utilized descriptive-correlational design in which two variables will be measured. Its purpose according to Aquino (1992) is to investigate relationships between variables and extent to which variations in one factor correlate with variations in one or more other factors based on correlation coefficient. The two variables of this study are the writing competencies and the academic performances that were measured whether variables show cause and effect relationship respectively. In this study, the writing competencies of the first year students enrolled in research subject specifically Methods of Research was measured in terms of strength and relationship to determine the result of this study.

In determining the numerical values of the variables in this study, a competency test was used. The test includes five writing competencies: (1) outlining; (2) summarizing; (3) synthesizing; (4) paraphrasing; and (5) developing a paragraph. Each writing competency was rated according to specific criteria with 5-point rated value. Each value has an equivalent description applied in all competencies from which raters can evaluate the test objectively. This method used is called rating scale that requires raters to assign a value sometimes numeric to the rated object as a measure of some rated attribute (en.wikipedia.org). The test was evaluated by separate raters who are Master Degree holders in the field of English. Mean was utilized for problems 1 and 2. To determine whether the presence of relationship exists between the two variables, chi square was employed for problem number 3 as well as frequency and percentage to show the respondents' level of academic performance. Additionally, it utilized ranking to show the result of the level of writing competencies. To interpret the scores from the writing competency test, the modified Likert rating scale, with its quantitative descriptions and interpretation were used. It is a pre-arranged system, one dimensional scale from which the interviewee will be choosing one option that reflects to their opinion. There are classically five options to be offered as shown in Table 1.

**Table 1**  
**Likert Rating Scale (Adapted from Sauro & Dumas, 2009)**

Scale	Interval Range	Description	Interpretation
5	4.21-5.00	Excellent	The Writing Competency of the student is very highly achieved.
4	3.41- 4.20	Very Good	The Writing Competency of the student is highly achieved.
3	2.61- 3.40	Good	The Writing Competency of the student is fairly achieved.
2	1.81- 2.60	Satisfactory	The Writing Competency of the student is satisfactorily achieved.
1	1.00-1.81	Poor	The Writing Competency of the student is not achieved.

## **Results**

### **Outlining**

The result of these data reflects that in the area of outlining, the item on showing writer's or speaker's plan had a mean equalled to 3.45 with a descriptive rating of very good. It ranked second among the four items. On the criteria of presenting order of topics, the respondents showed that they are also very good with a mean of 3.47. It was the top criterion among the four presented under outlining. Rank third was on the presentation of relationship between the various parts of the topic (mean= 3.07) and finally, the presentation of relative importance of each topic (mean= 3.01) which also reflected that graduate students were good at. The total mean equivalent for outlining was 3.25 with a descriptive rating of very good. This value meant that there were two out of the four criteria of the research writing in the use of outlining were missing or were not observed by the graduate students. The importance of observing the outlining was in the study of Lynch (2001) who said that students can be helped in improving their critical thinking and solving problems by improving their writing abilities. Thus, outlining is very basic.

### **Summarizing**

Data revealed that the item on discussing the over-all problem had mean value equalled to 3.20 with a descriptive rating of good. It ranked first among the seven criteria on Summarizing. On the criteria of shortening and expressing the author's ideas, the respondents showed that they are also good with a mean value of 2.68. It ranked sixth among the seven criteria presented under Summarizing. Rank four was on the use of topic sentence and arrangement of paragraph from general idea to conclusion (mean= 2.80). Rank five was on the recasting ideas using own words (mean =2. 78). The criterion on absorbing the meaning of the passage ranked second with mean value of 3.0, while observing correct grammar on presentation of ideas had mean value of 2.83 and finally, the organization of thoughts and utilizing topic sentences and coordinating sequence of sentence got a mean value of 2.46 which ranked first among the seven criteria under Summarizing. The mean value reflected that most of the respondents were satisfactory in this criterion. The total mean equivalent for Summarizing was 2.46. It reflects a descriptive rating of satisfactory. This value meant that they were four to five out of the seven criteria of the research writing in the use of summarizing were missing or were not observed by the graduate students.

### **Synthesizing**

In terms of the use of Synthesizing, the result reflects that the item on presenting tied ideas from the different sources had mean value equalled to 1.63 with a descriptive rating of poor. It tied with the observation of the graduate students on the presenting a holistic body of context at 3.5 with a mean value equalled to 1.72. Presenting linked ideas from one sources to another ranked second among the five items with a mean value equalled to 1.72 and descriptive rating of poor. On the criteria of observing correct grammar in presentation of ideas, the respondents showed that they are also good with a mean of 3.05. It was the top criterion among the five presented under Synthesizing with its mean value. Lastly, with a mean value equalled to 1.34 reflected that graduate students were poor at the organization of thoughts in utilizing topic sentence and coordinating sequence of sentence. The total mean value 2.19 in Synthesizing had a descriptive rating of poor. This value meant that they were four

out of the five criteria of the research writing in the use of Synthesizing were missing or were not observed by the graduate students.

### **Paraphrasing**

With the use of five criteria, data showed that the graduate students were good in using appropriate words and grammar (mean= 2.97) which ranked first among the five presented criteria under Paraphrasing. The evidence of an expanding vocabulary got a mean value equalled to 2.64 which reflected a good descriptive rating. The respondents were also good in stating ideas in their own words (mean= 2.56) which ranked third. The observation of correct grammar in the representation of ideas also got a good rating with a mean value of 2.75. Data finally revealed that the graduate students were satisfactory in the organization of thoughts in utilizing topic sentences and coordinating sequence of sentence. Upon looking the total mean value in Paraphrasing which was 2.68 with descriptive rating of good, this value meant that they were three out of five criteria of the research writing in the use of paraphrasing were missing or were not observed by the graduate students. These results showed that the students must heed what was stated by Plotnick (2008). He said that those who are writing must follow sequences that are advisable, must use references and not just merely following his own mere substituting of phrases. Writers, he said must learn to convert ideas from quoted sources into full sentences.

### **Developing Paragraph**

Finally, to find out the writing competencies on the use of developing paragraph, data showed that the respondents showed satisfactory observation on presenting unity in showing coordinate or subordinate relationships between major or minor ideas about the topic (mean= 2.66) which ranked third among the five criteria presented under developing paragraph. In presenting of coherence in orderly arrangement or organization of sentences and proper use of connectives or transitional devices, the mean value of 3.41 showed that the graduate students were very good at it. They were also very good in presenting emphasis in giving more space or sentences to more important ideas (mean= 3.54) which was ranked one among the five criteria. Tied in rank 4.5 were the students' observation of correct grammar in presentation of ideas (mean= 2.98) and on the organization of thoughts in utilizing topic sentences and coordinating sequence of sentence (mean= 2.98)

The total mean equivalent for developing paragraph was the highest among the other writing competencies. It garnered a mean value of 3.22. It reflects a descriptive rating of very good. This value meant that there were two out of the five criteria of the research writing in developing paragraph were missing or were not observed by the graduate students.

### **The Academic Performance of Graduate Students in Methods of Research Subject**

This sub-problem intended to show the academic performances of graduate students in Methods of Research subject.

There were indicators given to determine the academic performances of graduate students in Methods of Research subject using the frequency and percentage to treat the data gathered as these were presented in Table 2.

As shown in the data, there were 59 respondents whose academic performances were rated as excellent, very good and good. Of the 59 respondents, 15 or 25 percent had a level of academic performance described as excellent 34 or 53 percent were very good and 10 or 17 percent had an academic performance labelled as good.

**Table 2**  
**Academic Performance of Graduate Students in Methods of Research**

<b>Level of Academic Performance</b>	<b>Frequency</b>	<b>Percentage</b>
Excellent	15	25%
Very Good	24	58%
Good	10	17%
<b>TOTAL</b>	<b>59</b>	<b>100%</b>

### **The writing competencies of graduate students and their academic performance in research subject**

Table 3 presented the writing competencies of graduate students and their academic performance in research subject. Chi-square test was employed to treat the data gathered.

Data were tested at a level 0.05 with the df equals 10. The computed value of 14.84 was greater than the tabular value which was 9.488. This result led to reject the null hypothesis formulated. It implied that the writing competencies of graduate students could affect their academic performance in research subject.

It means that the writing competencies of the graduate students could mean the same or congruent to their academic performance as reflected in their research subject. These two variables might affect each other. Thus, the writing competencies may reflect or may become one of the bases for the students' performance in research subject.

**Table 3**  
**Writing Competencies and Academic Performance**

Writing Competencies	Excellent			Very Good			Good			Total	X	14.84 > 9.488
	O	E	X	O	E	X	O	E	X			
Excellent	5	2.28	3.24	3	3.19	0.92	1	1.53	0.18	9	4.34	
Very Good	6	8.90	0.94	26	20.02	1.79	3	5.93	1.45	35	4.18	
Good	4	3.82	0.08	5	8.64	1.53	6	2.54	4.71	15	6.32	
<b>Total</b>	<b>15</b>			<b>34</b>			<b>10</b>			<b>39</b>	<b>14.84</b>	

**Conclusions**

The graduate students were good in outlining, paraphrasing and developing paragraph. They were satisfactory on summarizing and synthesizing. Most of the graduate students had very good academic performance followed by students whose academic performance was excellent and the last number of the respondents had good performance in research subject. The writing competencies mastered by the graduate students could affect their academic performance in research subject.

**Recommendations**

Graduate students must learn more about summarizing and synthesizing and to write more in order to develop their skills in paraphrasing, outlining and developing paragraphs. Students must consider their skills in writing to be the basis improving their academic performance. Professors and Teachers in Research subjects must provide more avenues for the graduate students to develop their writing competencies in order to help students improve their academic performance.

## **BIBLIOGRAPHY**

### **A. Books**

Aquino, F. O. Ph. D. and Nocon F. (2001). **English for College Learners**. Katha Publishing Co., Inc.

Aquino, F. (2002).. **Communicative English Plus**. Katha Publishing Co, Inc.

Baceros, E. (2000).. **Communication Skills II: Developing Basic Research and Writing Skills**. Rex Printing Company, Inc: Quezon City.

Buel, D. (2001). **Classroom Strategies for Interactive Learning**. USA: nternational Reading Association.

Bloomer, A, Patric, G. and Andrew J. (2005). **Introducing language in Use: A Course Book**. Routlege:New York, USA.

Nachmias, C. F., Machmias, D. (2000). *Research Methods in the Social Sciences*. New York: Worth Publishers.

Saymo, A (2004). **Effective Writing**. Trinitas Publishing Inc. Bulacan Philippines.

Nunan, D. (2001). **The English Center**, University of Hong Kong.

Zulueta, F. and Nestor E. Costales, B. Jr. (2003) **Methods of Research. Thesis-Writing and Applied Statistics**. National Book Store, Inc.

Plotnick, J. (2008). **University College Writing Centre**, University of Toronto. Copyright 2008. All rights reserved.

### **B. Unpublished Materials**

Bolleser, J. (2009). Health Services of Birthing Centers in Gen. Santos City. **Unpublished Master Thesis. NDMC**

Salinas, E.(2005). Writing Competence in English of the NDDC Feeder School's Students: Basis for a Writing Course Evaluation. **Unpublished Master thesis, NDDC.**

### **C. Journal**

Alamargot, D. and Chanquoy L. (2001). **Through the Models of Writing**. Norwell, MA: Kluwer Academic Publishers, Vol. 9 of Studies in Writing. Ed. Gert Rijlaarsdam. 13 vols.

Aquino-Alaman N.N. (2002) **The Teaching of Pronunciation**, The Modern Teacher, Vol. L, No. 8, 2002

Barlett, T. (2003). **“Why Johnny Can’t Write, Even Though He Went to Princeton.”** *Chronicle of Higher Education*, 49 (17) ”

Bettinger, E. and Long B.(2009). **Addressing the Needs of Underprepared Students in higher Education: Does College Remediation Work?** *The Journal of Human Resources*. Madison: Summer 2009. Vol. 44, Iss. 3;pg.736

Bier, D., Conrad S. (2001). **Quantitative corpus-based research: Much more than bean counting.** *TESOL Quarterly* 35(2), 331-340.

Callahan, K. M. and Chumney, D. (2009). **“Write Like College”:** **How Remedial Writing Courses at a Community College and a Research University Position “At-Risk” Students in the Field of Higher Education.** *Teachers College Record* Volume 111 Number 7, 2009, p.1619-1664

Dick, R. and Wills, K. (2001) **From the Nursing Classroom to the Health-Related Workplace: Writing Skills Are Critical.** Volume 7 Number 1, October 2001 *Write Away!* The University of Louisville.

Ellis., Charlotte T., and Drury H.. (2005). **“Evaluating Writing Instruction Through an Investigation of Students’ Experiences of Learning Through Writing.”** *Instructional Science*. Spring 33 : 49-71

Farris, P., Farris J. (2010). **Writing Workshop: Creating a Launch Pad for Beginning Writers** *Today’s Catholic Teacher*. Dayton: Jan/ Feb 2010. Vol. 43, Iss. 4; pg. 15

Green, J. M. (2000). **Student attitudes toward communicative and non-communicative activities:** Do enjoyment and effectiveness go together? *Modern Language Journal*

Genuino, C.F. (2002). **Cognitive Structuring of Criminal Appeal Cases in Philippine and American English.** *Philippine journal of Linguistics*, Vol.33 (2), 1-17

Glenn, D. (2005) **Remedial Courses Help College Students Complete Degrees, Study Finds.** *The Chronicle of Higher Education* Washington: Jul 1, 2005. Vol. 51, Iss. 43; pg. A.31

Gordon, B. (2008). **Requiring First-Year Writing Classes To Visit the English in the Writing Center: Bad Attitudes or Positive Results?** *Teaching in English in the Two Year College*. Urbana: Dec 2008. Vol. 36, Iss. 2; pg. 154, 10 pgs.

Habulembe, A. (2007). **A Classroom Response to HIV/AIDS-Project Proposal Writing.** *English Teaching Forum*. United States Department of State. Vol. 45, No. 1, 2007.

Hirvela, A. (2004). **Connecting Reading and Writing in Second Language Writing Instruction.** Ann Arbor, MI: University of Michigan Press.

Howard, M. W., Kahana, M. J., & Wingfield, A. (2006). **Aging and contextual binding: Modeling recency and lag-recency effects with the temporal context model.** *Psychonomic Bulletin & Preview*, 13,439-445.

Huang, J. (2009). **Factors Affecting the Assessment of ESL Students' Writing.** *International Journal of Applied Educational Studies*. AI-Yarmouk: Aug 2009. Vol. 5, Iss. 1; pg.1, 17 pgs

Jesness, J. (2004). *Teaching English Language learners K-12: A quick-start guide for the new teacher.* Thousand Oaks, CA: Corwin Press.

Jones, C. (2001). The relationship between writing centers and improvement in writing ability: An assessment of the literature Education. Chula Vista: Fall 2001. Vol. 122, Iss. 1; pg. 3, 18 pgs

Leki, L. (2003). **Living through college literacy: Nursing in a second language.** *Written Communication*. Beverly Hills: Jan 2003. Vol. 20, Iss. 1; pg. 81, 18pgs

Lundstrom, K., & Baker, W. (2009). **To give is better than to receive: The benefits of peer review to the reviewer's own writing.** *Journal of Second Language Writing*, 18(1), 30-43.

Maelzer, D. (2009). **Writing Assignments Across the Curriculum: A National Study of College of Writing.** *College Composition and Communication*. Urbana: Dec 2009. Vol. 61, Iss. 2; pg. W240, 22 pgs

Rowel Otero, MAED (2010) **Research Writing Competencies. Published Master thesis, NDMU**

Rolfe, G. (2009). **Writing-up and writing-as: Rediscovering nursing scholarship.** *Nurse Education Today*. Edinburgh: Nov 2009. Vol. 29, Iss. 8; pg 816.

Sagarra, N., & Alba, M. (2006). **The Key Is in the Keyword: L2 Vocabulary Learning Methods with Beginning Learners of Spanish.** *The Modern Language Journal*, 90, ii. P. 228-243.

*Bulgarian Kindergartens on the Way to Change*

Rumyana Papancheva, Krasimira Dimitrova

University "Prof. Dr Asen Zlatarov", Bulgaria

0689

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Abstract

Described is a model of cooperation between a team of scientists, publishing house and a nonprofit organization, taking into account the specific conditions in Bulgaria. The existing system for preschool education of the publisher is upgraded through contemporary technologies integration and interactive way of work. The product developed is approved and implemented in real practice.

**Keywords:** Technologies integrated teaching and learning, ICT in Kindergarten, Interactive way of work, Educational resources

Technologies in education are quite modern and still very important thematic. New digital generation requires new environment, new methods of work and this leads to serious challenge in front of the contemporary pedagogy. From the other hand publishing houses, committed with educational process need to expand their traditional paper-based work with development of e-books, educational software and variety of e-resources for students and teachers.

Following the main goal – more motivating and effective learning process for 3 to 6 years old children – a cooperation between a team of scientists, publishing house and a nonprofit organization was realized.

The publishing house “Izkustva” is one of the leading publishers in Bulgaria in the field of preschool education and its system of work is one of the most popular in the country. The fundamental principles of the system are:

- An integrated approach to knowledge building (Bulgarian language and literature, mathematics, natural and social studies, art and music are thought in unity);
- Complete system for child’s knowledge and skills diagnostics;
- A rich set of didactic exercises and teachers’ resources such as worksheets for individual work, portfolio of the child, posters, music CDs, holiday calendars and more.

The nongovernment organization Education and Technologies Assoc. works in the field of education in direction of contemporary technologies integration and qualification of teachers on national level. The team of the organization is constantly looking for and offering technology solutions tailored to the real budget options in the country.

The Bulgarian system of preschool education has 130 years of history. Nowadays, the kindergarten is obligatory for all 5 years old children. There are two preparatory classes for 5 and 6 years old children – third and fourth grade in national Bulgarian Kindergarten system. Going to kindergarten in the first three grades is not compulsory – it is a question of parents’ decision and choice. The two compulsory grades aim in to ensure that all children will have an even start at the beginning of the first grade at school. In Bulgaria there are people from different ethnic groups, speaking different languages and having different cultural traditions.

We could outline the problem caused by discrepancy between parents’ expectations and real conditions at Bulgarian kindergartens. On one hand there is the new generation of parents and their children, expecting technologies-rich environment and an interactive approach of work. On the other hand we have a quite conservative and unchanging system in the kindergartens – old facilities, lack of interactive games, unwillingness in teachers and principals to introduce new technologies, lack of budget funds for major investments in modern equipment, low digital skills level, and routine way of work.

Taking into account the specific conditions in Bulgaria – from economic and traditional point of view – an educational product was developed by the authors. It is

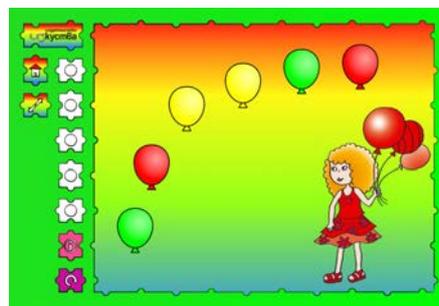
implemented into practice in partnership with the organizations mentioned above. The product is an educational package provided with necessary software, hardware and methodological guidelines for application.

The educational software upgrades the existing methodological system of work, developed and imposed into practice. It includes:

- Educational computer games;
- Multimedia situations on selected topics;
- Extensive collection of interesting interactive exercises;
- Detailed methodological guidelines for the educator.

The leading principles are:

- Interdisciplinary approach;
- Systematic work for developing critical and creative thinking in children;
- Developing skills for knowledge transfer;
- Balanced use of technology and matched by work with variety of teaching materials on paper, didactic games, and creative activities.



*Figure 1. Game “Balloons” – a color game for 3 to 5 years old children*

The computer games are in consistent with the educational content and are developed in an attractive way. The only skill required by the children is to click, using mouse or an interactive pen. On Figure 1 a print screen of the game “Balloons” is presented. The child has to click on the balloon with the same color as the girl’s balloons. It is a color game for 3 to 5 years old kids. Some medals, sound indication and applauses motivate the children to keep playing. On Figure 2 a screen of “Who is living here?” game is presented. Children have to identify which of the animals belongs to the given environment.



Figure 2. Game “Who is living here?”

Multimedia learning situations include animations, sounds, videos and variety of teaching and learning resources with high visibility and attractive design for the young pupils. On Figure 3 four print-screens from different learning activities are presented: natural life, mathematics, social life and Bulgarian language.



Figure 3. Examples from four multimedia situations

Essentially new level of interactivity could be obtained by including work with interactive whiteboard into teaching and learning process. The hardware solution proposed by the NGO’s team is based on the use of mobile interactive whiteboard – configuration of mobile devices and free license software that transforms an ordinary surface into an interactive one. Concerning technologies equipment, in the best case, one Bulgarian kindergarten would have a laptop and a projector for the learning activities. Kindergartens with modern equipment are an exception and the investment funds in general are very limited.

Interactive learning situation based on the usage of the whiteboard are developed. Children work with interactive IR pen. They use the most common instruments to draw on the board or to move some object in accordance the task given. On Figure 4 some examples are presented. The first task for the children is to identify the view point of each of the cats. The second assignment is to find out the route between the

ant and its home, and the third task before the children is to circle the cars, parked in left in accordance with the boy's point of view. The main skills required by the kids are to move different object on the board and to use the marker and the pen for drawing.



Figure 4. Examples from some interactive situations

A new extension to the model is the development of a methodological system for integrating programmable toys in school activities. The Interactive whiteboard offers an interactive frontal work with children, while the programmable toys provide rich opportunities for team working and put the children in an active position. Working with programmable toys leads to formation of algorithmic thinking in children in early age. On Figure 5 children play with Bee Bot toys, solving mathematics problems concerning spatial orientation in a grid. The toys allow variety of tasks, and could be used in creative way by the teacher. The children like this kind of toys very much, as the Bee bot react to their acts by sound and lights.



*Figure 5. Children playing with Bee Bot within Math work*

The model described here is good to present practice from Bulgaria, as in the country there is no final and complete educational politics, concerning ICT. There is only a strategy for ICT integration into the teaching and learning process, which is not realized and not applicable in full. Through the cooperation between science and business a new working environment in more than 100 kindergartens in Bulgaria was created. More than 500 preschool teachers are covered by teacher trainings conducted by NGO's team aiming in developing higher digital literacy and methodology competency for technologies based teaching and learning. Upgraded version of the educational software after correction and extension is developed.

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*A Construction and Evaluation of the Electronics Slides on Supplementary  
Grammar Through E- Learning on English II Course (999042)*

Supannikar Kamlangharn

Burapha University, Thailand

0727

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Abstract

English is not an official language in Thailand, it is taught as a foreign language. Most Thai undergraduate students who have studied English as a foreign language for more than ten years are at the low level of English proficiency. To be available in English, students must have comprehension of the language, especially English grammar in order to raise their English proficiency and to survive in a strong competition for any employment opportunities after they graduate.

Therefore, the purposes of this research were to construct and find out an efficiency of the electronics slides on supplementary grammar through e- learning on English II course as the standardized efficiency criterion, to compare the students' learning achievement before and after learning the electronics slides, and to find out the students' satisfaction toward studying the electronics slides. The sample of this research consisted of 96 first-year undergraduate students of Burapha University who were enrolling the course of 999042 (English II) in the second semester of the academic year 2011. The instruments employed for this research were seven electronics slides lessons, exercises aiming at assessing the students' learning performance, the achievement tests as a pre- and post-test, and a rating-scale questionnaire, a five-level Likert scale, with 43 items evaluated by the experts was used for investigating the students' satisfaction toward the lessons.

Data were analyzed by descriptive statistical analysis through Average Number and Standard Deviation.

The findings of this research revealed that the efficiency of the lessons was 98.70/90.45, the students' learning achievement after learning the lessons was significantly greater than before learning the lessons at the 0.05 significant level, and the students' satisfaction toward the lessons was found at a high level.

**Key words:** electronics slides, supplementary grammar, learning achievement, first-year students, efficiency of lessons

## **Introduction**

The 21<sup>st</sup> century, the information age, almost educational institutions are turning to technology to enhance their programs and to expand their knowledge. Through the use of IT to deliver courses facilitate students instant access to information. The capabilities of technology have advanced significantly in recent years. Therefore, both students and educators view IT as an effective medium and increasingly get a number of benefits to the use of it.

The PowerPoint software is a powerful presentation tool and nowadays, it has replaced the traditionally used color slides and overheads at important conferences. It also has quickly penetrated the educational circles as well. According to Holzl (1997) PowerPoint is a user-friendly package that can be used for the creation of visually clear, dynamic and attention capturing presentations. PowerPoint, and IT in general, for the enrichment of students' learning. Its use in education has been already pioneered at many universities and colleges around the world. (A. Szabo and N. Hastings. 2000)

Burapha undergraduate students facing the difficulties and obstacles to use English, a common cross-border language, on communication. Their lack of English language proficiency in the classroom and getting accustomed with teacher-centered atmosphere make the class like passive learning. Having been teaching English more than eight years at Burapha University, the researcher found that many first-year undergraduate students get quite low grade from the English foundation courses they enrolled. Success in language acquisition is influenced by a number of interrelated factors and for EFL students, incorrect usage of grammatical structure causes obstacles to communicate in English. Therefore, this study aimed to construct the supplementary grammatical lessons on English II compulsory 3-credit-hour course, via the PowerPoint, to help the students strengthen and develop the understanding and knowledge of grammatical structure after learning through the lesson which could also help them learn more effectively, enhance their good attitudes toward grammatical structure, and eventually this may help them increase a level of proficiency in English.

## **OBJECTIVE OF THE STUDY**

The purposes of this research were three-fold: (1) to determine the efficiency of the electronics slides on supplementary grammar through E- Learning on English II course (999042) on the 80/80 standardized criterion, (2) to compare the students' learning achievement before and after learning the electronics slides, and (3) to find out the satisfaction of students toward the study of the electronics slides.

## Literature Review

### **Grammar : English language problems of Thai students**

English and Thai are different in pronunciation, word, grammar and text (Thep-Ackrapong, 2005) those typological differences of the two languages indicate that for Thai students, English grammar is the most difficult part for them. In addition; obviously the two languages are very different between linguistic family. (Thai is in the Thai Kadai linguistic family, but English is in the Germanic family). Apart from that, there are some major grammar conceptual differences between both languages such as subject-verb agreement, topic-comment structure, passive voice, relative clause, participial phrase, and subordination. All of these grammatical differences are difficult for Thai students even for those who have studied English for more than ten years.

### **Effective use of PowerPoint in education**

Studies have demonstrated that students prefer PowerPoint and respond positively to classes when it was used. Most students prefer the use of pictures and graphs, slides to be built line by line, sounds from popular media or that support the pictures or graphics on the slide, and background colors. (Apperson et al., 2006). Colleges and universities are now embracing the use of graphical presentation such as PowerPoint in the classroom. Surveys have presented consistently that students generally believed that the use of PowerPoint enables their learning develops the class organized, clear and interesting. (Apperson, Laws, and Scepansky, 2006; Atkins-Sayre, Hopkins, Mohundro, & Sayre, 1998; Beets & Lobingier, 2001; Mantei, 2000; Rankin & Hoas, 2001; Szabo & Hastings, 2000).

Apperson et al. (2006) concluded that the use of PowerPoint will benefit greatly to the education: students like the courses better, have a more positive impression of the instructor, and therefore, have a more positive attitude toward their education.

Making delightful and effective PowerPoint presentations is an issue instructors should be concerned. Several authors establish the most effective aspects for presentation graphics slides for classrooms. Font size must be appropriate (Rickman and Grudzinski, 2000). Holzl (1997) specifies the use of a 32 point font for headings and a 24 point font for the text in classrooms with fewer than 50 seats; and a 36 point font for headings and a 28 point font for text in classrooms between 50 and 200 seats. For maximum legibility, Holzl (1997) recommends the use of the sans serif fonts (such as Arial) because their uniform line thickness makes them easier to read. He also suggests not using more than two different fonts per presentation (one for headings and one for text).

Holzl (1997) also suggests that the text should be in all lower-case letters or a combination of upper and lower-case letters, which may be easier to read. Color can also serve to organize material (Seaman, 1998). Color selection should be consistent throughout the slide presentation and the color used for text must be clearly distinguishable from the background (Seaman, 1998).

In general, the slides should be simple and also contain only one concept per display. The text in each slide should be short (Gotsick and Gotsick, 1996; Seaman, 1998). As students indicated some preference for graphics (pictures, charts, graphs) over text (Frey and Birnbaum, 2002), graphics used should be relevant to the text and contain

the meaning of the text (Bartsch and Cobern, 2003; Holzl, 1997; Mayer, 2001; Seaman, 1998). Examples should be used after concepts presented to help students remember and to tie the new knowledge to the old one (Seaman, 1998).

Some students may have a problem by copying material from the screen while trying to listen to the teacher explaining the material presented on the slide. The advantages of providing students with a copy of the slides is that it reduces the time students spend on material copying from the slides and it increases the amount of time focusing on the content of the slides, all of the benefits help them understand the material, and motivate them to pay more attention to the teacher's explanation. (Frey & Birnbaum, 2002; Mantei, 2000; Quible, 2002; Rickman & Grudzinski, 2000; Seaman, 1998).

Seaman (1998) also states that students may deeply understand the content in the slides when they focus on the teacher's elaborations. The copies of the slides serve as the initial step in improving an intensive class notes for self review (Seaman, 1998). A study revealed that 80% of students said that slide handouts helped them take notes and 91% reported the slide handouts benefit them when studying for an exam. They also pointed out that the handouts did not reduce their possibility of attending class (Frey and Birnbaum, 2002).

### **Participants**

The sample of this research selected by using purposive sampling approach consisted of 96 first-year undergraduate students of Burapha University who were enrolling the course of 999042 (English II) in the second semester of the academic year 2011.

### **Methodology**

This study is a quasi-experiment design (One-Group Pre- and Post- test Design) which attempted to create the electronics slides on supplementary grammar through E- Learning for English II course.

### **Instruments**

#### **1. The electronics slides on supplementary grammar lessons.**

To create the electronics slides on supplementary grammar lessons, the researcher had studied a curriculum for university level of English II course and then reviewed related literature on the course to create the appropriate content for all lessons. After that, the researcher studied on how to create the lessons by using PowerPoint program and developed the design, explanation, and illustrations corresponding to the lesson content. The lessons were then examined by the experts. Finally, the lessons were revised by the researcher before being used in the try-out steps.

The purpose of each trial was to improve the lessons. To evaluate the efficiency of the lessons, the examination was done in three steps of trials. The subjects for the trials studied the lessons, did the exercises, and took the tests. The subjects' achievement scores from both exercises and the tests were calculated for the efficiency of the lessons. The three steps of trials are as follows;

### **An Individual Test**

The first step was an individual test. Three students with different levels of English proficiency, which represented able, moderate, and less able students, participated in this step. All of them were asked to do a pre-test. After studying the electronics slides on supplementary grammar lessons and completing all exercises, the students did a post-test. The researcher asked the participants' feedback and opinions about the lessons and finally, the data from the exercises and test scores were analyzed.

### **A Small Group Test**

The following trial was a small group test, consisting of nine students with different levels of English proficiency. There were three able, three moderate, and three less able students. The same procedures were done with this group.

### **A Field Study Test**

The last step was a field study test. This step included 30 students with different levels of English proficiency. There were ten able, ten moderate, and ten less able students. The same procedures were done with this group.

Students' achievement scores of the exercises and the test scores from the three trials were determined for the efficiency of the lessons based on criteria of the 80/80 standard level.

## **2. Pre-test and Post-test**

Tests constructed by the researcher were employed as a pre-test and post-test to assess students' learning achievement. Through students' learning achievement score of tests, the researcher could see whether students improve their learning. The researcher conducted the test by studying a curriculum and related literature of the course and setting the objectives of the test corresponding to the learning objectives in the lessons. Next, the researcher studied about the testing principles and procedures of test construction. The researcher wrote a multiple-choice test with four alternatives for 118 items. Then, the tests were sent to the experts who were academically qualified for content validity check. The content of the tests was then adjusted to their advice. And a pilot study was conducted with 90 first-year students at Burapha University who were not the samples in the study. Based on the data obtained from the pilot study, an item analysis was carried out. Each question was analyzed for the level of difficulty ( $d$ ) and discrimination index ( $r$ ). The criteria used to select the test items were  $p = 0.20-0.80$  and  $r \geq 0.2$ . Finally, 70 test items were selected as a pre-test and post-test.

## **3. Questionnaire**

To explore the students' attitudes toward learning on the electronics slides on supplementary grammar, a questionnaire was used to collect the data. The researcher designed a rating-scale questionnaire, a five-level Likert scale, with 43 items which were divided into three parts: personal information of participants was the first part, the second part of the questionnaire was a five-level of satisfaction statements in five categories, and the third part was opened for any opinions and suggestions toward the lessons. The researcher conducted the questionnaire by studying academic methods used to design the questionnaire and then constructed statements in the questionnaire.

All of these statements were examined by the experts for content validity check. Finally, 43 items were chosen to be the questionnaire.

## Findings

### 1. The results of an efficiency of the electronics slides on supplementary grammar through e- learning on English II course (999042)

The participants did the exercises after finishing all lessons and the average point from the correct answer from each items of the exercises presented in term of percentage. The participants took a post-test to determine the average point from the correct answer of all post- test items, presented in term of percentage. The results in Table 1 showed that the efficiency of the electronics slides on supplementary grammar on English II course (999042) were high.

#### Tables

**Table 1. Efficiency of the electronics slides on supplementary grammar on English II course**

Tests	N	Score	Mean	(SD)	The efficiency value
Process effectiveness (E1)	96	72	71.06	0.880	98.70
Performance effectiveness (E2)	96	70	63.31	1.276	90.45

Table 1 shows that the efficiency value (E1/E2) of the electronics slides on supplementary grammar on English II course (999042) was 98.70 / 90.45 which was higher than the given criterion of 80/80.

### 2. The results of participants' learning achievement

The participants took the pre-test before studying the lessons and the post-test after studying the lessons to determine their learning achievement. The results showed that the learning achievement of the participants increased. The comparison of data on the pre-test and the post-test mean of the experimental group were presented in Table 2

**Table 2. The participants' learning Achievement for Experimental group**

Test	N	Mean	(SD)	Sig.	Remarks
Pre-test	96	16.13	4.587		
Post-test	96	63.31	1.276	0.05	Significant

Table 2 shows the comparison of data on the pre-test and the post-test mean of the participant group. In a 70-item test, the participants got a pre-test mean score of 16.13. The result revealed that the participants did poorly on the test. This was because they had not previously studied any lessons. After administering the post-test, the group increased their mean score to 63.31. This result showed that the participants, after learning the lessons improved their grammatical performance.

### 3. The results of participants' satisfaction toward learning the lesson

To find out the participants' satisfaction toward learning the lesson, the researcher collected all data by using a five-rating scale questionnaire. The results of the analysis were presented in Table 3 below.

**Table 3. Total average satisfaction of five areas**

Statement	()	SD	Interpretation
1. The lesson content	4.47	0.59	Very satisfied
2. Techniques for presentation of the lesson	4.37	0.62	Very satisfied
3. The exercises provided after learning the lessons	4.37	0.64	Very satisfied
4. Achievement test	4.42	0.57	Very satisfied
5. Effectiveness of the lessons toward English II course	4.48	0.56	Very satisfied
Total average of five areas	4.42	0.60	Very satisfied

Table 3 showed that the participants had the very high satisfaction toward learning through the electronics slides on supplementary grammar on English II course ( $\bar{X}$  =4.42). Considering for each area, it was demonstrated that the participants were very satisfied respectively on the effectiveness of the lessons toward English II course ( $\bar{X}$  =4.48), the lesson content ( $\bar{X}$ =4.47), achievement test ( $\bar{X}$ =4.42), Techniques for presentation of the lesson ( $\bar{X}$ =4.37), and the exercises provided after learning the lessons ( $\bar{X}$ =4.37).

## Discussion

The results of the research presented above showed that the research itself achieved its objectives.

The efficiency value (E1/E2) of the electronics slides met 80/80 standardized efficiency criteria, as the 1<sup>st</sup> 80 criterion reached an average value of 98.70 % while the 2<sup>nd</sup> 80 criterion reached an average value of 90.45 % which was significantly greater than the 80/80 standardized efficiency criteria. The three try-outs: an individual, a small group, and a field study trial experiment were used to test the basic quality of the lessons and to find out the defects of each lesson, all of these helped develop the lessons. This high efficiency value reflected the progress of the participants through the understanding in the content of the lessons which helped them get good scores in the exercises. A combination of the lessons and the exercises might motivate and encourage the participants to do the achievement test well.

The results of learning achievement demonstrated that after learning through the lessons, the participants had an average post-test score of 63.31 while the mean score in the pre-test was 16.13. It was concluded that the participants' mean scores after studying the lessons have risen and shown improvement and achievement in the course.

The participants' satisfaction toward learning through the lessons was generally high. It can be concluded that the clarity and effectiveness of the lesson content facilitated and developed independent learning atmosphere.

## CONCLUSION

After the participants studying through the electronics slides on supplementary grammar for English II course, the process effectiveness represented 98.70 % and the effective performance represented 90.45% which shows that the lessons are effective (E1/E2) and also reports an academic improvement and achievement as stated in the results of learning achievement. According to the efficiency and the effectiveness in the lessons, learners were very satisfied with the lessons and this helps them gain a higher knowledge and the understanding in grammar usage. Therefore, it can be said that this tool could effectively be used to help students to achieve their goals in any English courses.

## References

- Apperson, J. M., Laws, E. L., & Scepansky, J. A. (2006). The impact of presentation graphics on students' experience in the classroom. *Computers and Education*, 47(1), pp.116–126.
- Atkins-Sayre, W., Hopkins, S., Mohundro, and Sayre, W. (1998). *Rewards and liabilities of presentation software as an ancillary tool: Prison or paradise?* Paper presented at the National Communication Association Eighty Fourth Annual Convention, New York, NY.
- Bartsch, R. A. and Cobern, K. M. (2003). Effectiveness of PowerPoint presentations in lectures. *Computers and Education*, 41(1), pp.77–86.
- Beets, S. D. and Lobingier, P. G. (2001). Pedagogical techniques: student performance and preferences. *Journal of Education for Business*, 76, pp.231–235.
- Frey, B.A. and Birnbaum, D.J. (2002). *Learners' perceptions on the value of PowerPoint in lectures*. ERIC Document Reproduction Service: ED 467192.
- Gotsick, J. E. and Gotsick, P. S. (1996). Multimedia in the classroom. *Behavior Research Methods, Instruments, and Computers*, 28(2), pp.291–294.
- Holzl, J. (1997). Twelve tips for effective PowerPoint presentations for the technologically challenged. *Medical Teacher*, 19, pp.175-179.
- Mantei, E. J. (2000). Using internet class notes and PowerPoint in the physical geology lecture. *Journal of College Science Teaching*, 29, pp.301–305.
- Mayer, R. E. (2001). *Multimedia learning*. New York: Cambridge University Press.
- Rankin, E. L. and Hoas, D. J. (2001). The use of PowerPoint and student performance. *Atlantic Economic Journal*, 29, p.113.
- Rickman, J., & Grudzinski, M. (2000). Student expectations of information technology use in the classroom. *Educause Quarterly*, 1, pp. 24–30.
- Seaman, M. A. (1998). Developing visual displays for lecture-based courses. *Teaching of Psychology*, 25(2), pp.141–145.
- Szabo, A., & Hastings, N. (2000). Using IT in the undergraduate classroom: should we replace the blackboard with PowerPoint?. *Computers and Education*, 35, pp.175–187.
- Thep-Ackrapong T. (2005). Teaching English in Thailand: An Uphill Battle. *Journal of Humanities Parithat, Srinakharinwirot University*, 27, pp.51-62.

*Language Contact: Challenging in Diversity*

Chommanad Intajamornrak

Naresuan University, Thailand

0734

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Abstract

The aim of this study is to analyze and compare tonal systems and acoustic characteristics of tones in four Tai dialects of Phrae Province, Thailand which are Tai Yuan, Lue, Phuan, and Tai Yai as spoken by three groups of speakers grouped by age; over 60 years old, 35-50 years old, and under 25 years old. Three female speakers of each group were asked to pronounce each wordlist. The data were recorded directly to the computer with the use of Adobe Audition version 2 and then were acoustically analyzed by using Praat version 5.1.43. The graphs were drawn by using Microsoft Excel 2007. The results show that tonal systems and acoustic characteristics of tones spoken by the three groups of speakers of the four Tai dialects have varied between generations and changed over time. Tai Yuan tones do not show much variation and change. Some tones of Phuan and Tai Yai have changed in terms of acoustic characteristics, while the Lue tones changed their merger and split pattern and also their acoustic characteristics. Considering the acoustic characteristics, it can be said that Tai dialects spoken in Phrae are influenced by Tai Yuan, the majority language and Standard Thai, the official language. Therefore, we can say that language contact is a very important factor of tonal language variation and change and it is called change in progress which can be seen from the difference of tonal systems and acoustic characteristics as spoken by the three groups of speakers. This linguistic phenomenon is challenging in a diverse community.

### 1. Introduction

Phrae Province, Thailand, is a highly diverse speech community. There are 10 languages from 4 language families namely; Tai Yuan, Lue, Phuan, and Tai Yai (Tai language family), Karen, Lisu, Akha, and Mpi (Tibeto-Burman language family), Hmong (Hmong-Mien language family), and Mlabri (Mon-Khmer language family). Four Tai dialects, Tai Yuan, Lue, Phuan, and Tai Yai, are the languages with the greatest number of speakers, having Tai Yuan as the majority language of the province.

Tai language speakers are bilingual in their native language and Tai Yuan. Moreover many of them, especially the younger generation can also speak Standard Thai very well. Language contact is a natural linguistic phenomenon occurring in a setting of multilingual speakers. When they speak, their languages tend to be influenced by each other. This language contact situation leads into language variation and change. Tone is one of marked features of Tai languages. There are a lot of studies concerning variation and change of tone both in terms of acoustic characteristics, and mergers and splits, for example Arunruang (1989) Teeranon (2002) Akharawatthanakun (2002, 2003, 2009) L-Thoongkum and Intajamornrak (2009) and Intajamornrak (2011, 2012). These studies found that the acoustic characteristics of some tones have changed because of both internal factors and external factors.

The aim of this study is to analyze and compare tonal systems and acoustic characteristics of tones in four Tai dialects of Phrae Province which are Tai Yuan, Lue, Phuan, and Tai Yai as spoken by three groups of speakers; over 60 years old, 35-50 years old, and under 25 years old.

### 2. Methodology

A wordlist of Tai Yuan, Lue, Phuan, and Tai Yai tones was recorded directly on computer with the use of Adobe Audition version 2. The informants were divided into the three groups; the older group (over 60 years old), the middle group (35-50 years old), and the younger group (under 25 years old). Forty-five female informants (three females for each group) were asked to pronounce each test-word three times randomly, with a three-to-five second break between each word. The total number of test tokens was 2,700 (45 speakers x 20 words x 3 times).

*Table 1* Wordlist for determining Tai Yuan and Lue tones<sup>1</sup>

A	B	C	DL	DS
khǎ: 'leg'	khà: 'galangal'	khâ: 'slave'	khà:t 'to tear'	khàt 'to rub'
pa: 'to throw'	pà: 'forest'	pâ: 'aunt'	pà:k 'mouth'	pàk 'to stick on'
ba:n 'to bloom'	bà: 'shoulder'	bâ: 'insane'	bà:t 'to cut'	bàt 'card'
kha: 'be stuck'	khâ: 'valuable'	khá: 'merchandise'	khâ:p 'to hold between lips'	kháp 'tight'

<sup>1</sup> The tone marking appeared in the wordlists is Standard Thai tones.

Table 2 Wordlist for determining Phuan tones

A	B	C	DL	DS
khǎ: 'leg'	khà: 'galangal'	phâ: 'cloth'	khà:t 'to tear'	khàt 'to rub'
ta: 'eye'	pà: 'forest'	pâ: 'aunt'	pà:k 'mouth'	pàk 'to stick on'
ʔa: 'uncle'	bà: 'shoulder'	ʔâ: 'to open'	dà:p 'sword'	dàp 'to extinguish'
kha:ŋ 'chin'	khâ: 'valuable'	khâ: 'merchandise'	khâ:t 'to fasten'	khât 'to select'

Table 3 Wordlist for determining Tai Yai tones

A	B	C	DL	DS
khǎ: 'leg'	phà: 'to cut'	khâw: 'rice'	khà:t 'to tear'	khàk 'vegetable'
ta: 'eye'	pà: 'forest'	pâ: 'aunt'	pà:k 'mouth'	tàp 'liver'
ba:n 'to bloom'	bà:w 'servant'	ʔâ: 'to open'	bà:t 'to cut'	bàt 'card'
na: 'rice field'	nâ: 'should'	nâ: 'aunt'	khâ:p 'to hold between lips'	kháp 'tight'

The fundamental frequencies were measured at every 10% of normalized duration using Praat version 5.1.43. The measured fundamental frequencies in Hertz were converted into semitones values. The formula was  $\text{semitones} = 3.32 \times 12 \times \text{Log}(\text{Hz to be translated} / \text{Hz reference level})$ . This is to help minimize the variation among the pronunciation of the three female speakers. Microsoft Excel 2007 was used to analyze and plot graphs of the semitones values.

### 3. Results

#### 3.1 Tai Yuan

Tai Yuan has six tones namely 1) the low-rising tone, 2) the mid-rising tone, 3) the mid-level tone, 4) the mid-falling tone, 5) the high-level tone, and 6) the high-falling tone.

The semitones converted from the fundamental frequencies of each tone as spoken by three speakers of each group were plotted using Microsoft Excel 2007 as shown in Figure 1, 2, and 3.

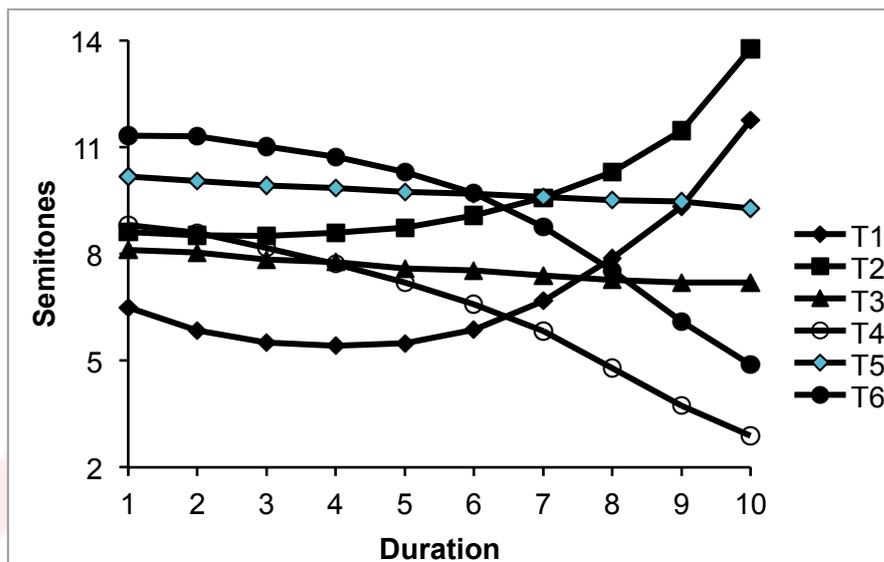


Figure 1 Semitones of Tai Yuan tones as spoken by the older group

Figure 1 shows that in the older group, the low-rising tone (T1) starts at a mid pitch and then rises sharply to a high pitch. The mid-rising tone (T2) has a contour similar to the low-rising. It starts from a mid/high<sup>2</sup> pitch and then rises to the high pitch. The mid-level tone (T3) begins at a mid/high pitch and stays level to the end of the scale. The mid-falling tone (T4) also begins at a mid/high pitch and then falls to a low pitch. The high-level tone (T5) has the same contour as the mid-level tone, but it starts at a higher pitch. The high-falling tone (T6) starts at a high pitch and then stays level before falling sharply to the end.

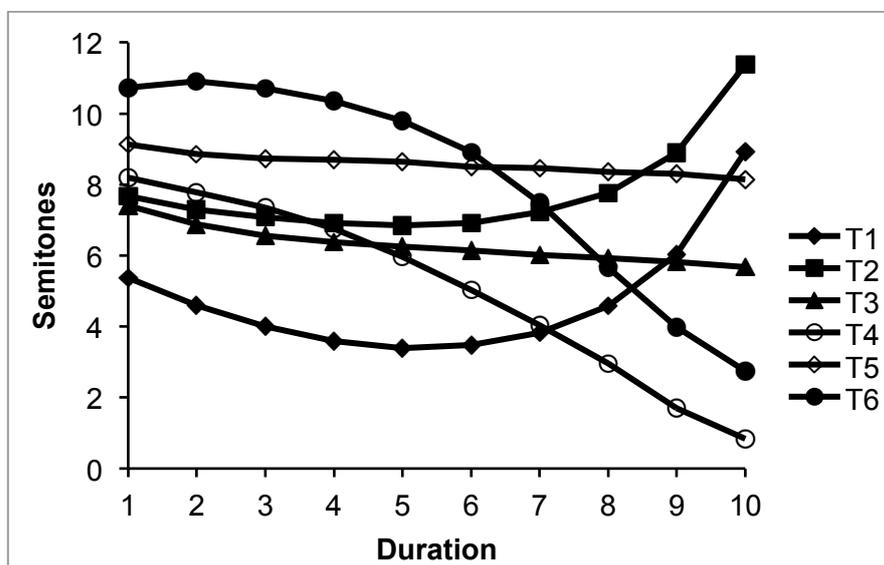


Figure 2 Semitones of Tai Yuan tones as spoken by the middle group

From Figure 2, the low-rising tone (T1) of the middle group begins at a mid pitch and then slightly falls before rising sharply to a high pitch. The mid-rising tone (T2) starts from a mid/high pitch and then rises to the high pitch. The mid-level tone (T3) begins

<sup>2</sup> The mid/high pitch means a mid pitch which gets close to the high pitch

at a mid/high pitch and stays level to the end of the scale. The mid-falling tone (T4) begins at a mid/high pitch and then falls sharply to a low pitch. The high-level tone (T5) starts at a high pitch and stays level. The high-falling tone (T6) starts at a high pitch and falls sharply to the end.

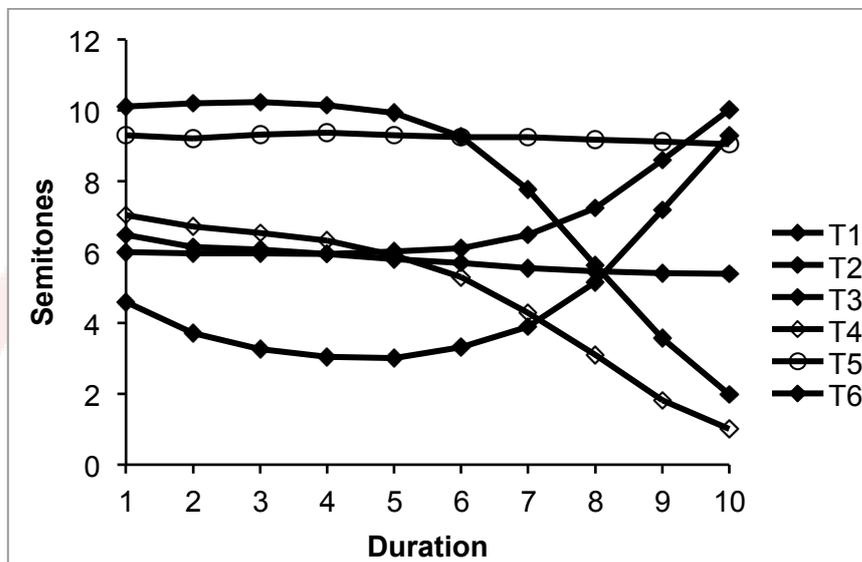


Figure 3 Semitones of Tai Yuan tones as spoken by the younger group

Figure 3 shows that in the younger group, the low-rising tone (T1) begins at a mid/low<sup>3</sup> pitch and then rises sharply to a high pitch. The mid-rising tone (T2) has a contour similar to the low-rising. It starts from a mid pitch and then rises to the high pitch. The mid-level tone (T3) begins at a mid pitch and stays level to the end of the scale. The mid-falling tone (T4) begins at a mid pitch as well and then falls to a low pitch. The high-level tone (T5) has the same contour as the mid-level tone, but it starts at a higher pitch. The high-falling tone (T6) starts at a high pitch and then stays level before falling sharply to the end.

### 3.2 Lue

#### 3.2.1 Lue Ban Thin

There are five tones in the Lue Ban Thin dialect namely 1) the low-rising tone, 2) the high tone, 3) the low tone, 4) the mid tone, and 5) the high-falling tone.

The semitones converted from the fundamental frequencies of each tone as spoken by three speakers of each group were plotted using Microsoft Excel 2007 as shown in Figure 4, 5, and 6.

<sup>3</sup> The mid/low pitch means a mid pitch which gets close to the low pitch.

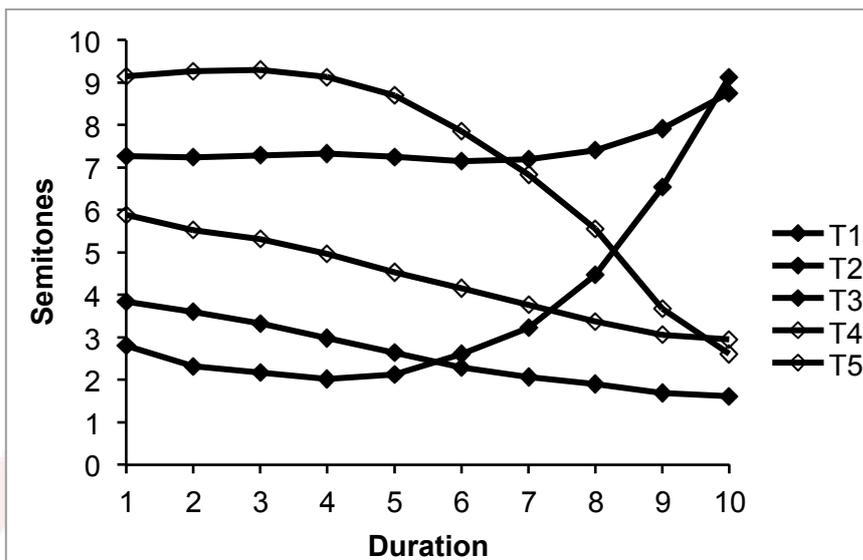


Figure 4 Semitones of Lue Ban Thin tones as spoken by the older group

Figure 4 shows that in the older group, the low-rising tone (T1) begins at a low pitch and continually rises to a high pitch. The high tone (T2) starts at a high pitch and stays level before rising slightly at the end. The low tone (T3) begins at a low pitch and falls slightly to the end. The mid tone (T4) has a contour similar to the low tone, but it starts at a higher pitch. Lastly, the high-falling tone (T5) starts at a high pitch and falls sharply to a low pitch.

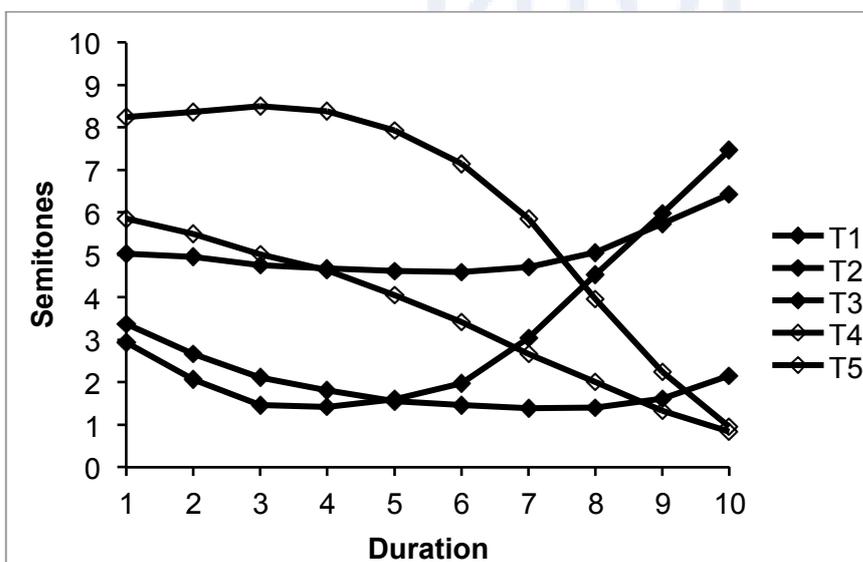


Figure 5 Semitones of Lue Ban Thin tones as spoken by the middle group

In Figure 5, the middle group, the low-rising tone (T1) begins at a low pitch and continually rises to a high pitch. The high tone (T2) starts at a mid pitch and rises slightly at the 50% of the duration to the end. The low tone (T3) begins at a low pitch and falls slightly before rising at the end. The mid tone (T4) starts at a mid pitch and then falls to a low pitch. The high-falling tone (T5) starts at a high pitch and falls sharply to a low pitch. It is noticeable that the contour of the low tone is not similar to those of the mid tone as appeared in the older group, but it has the same contour as the high tone.

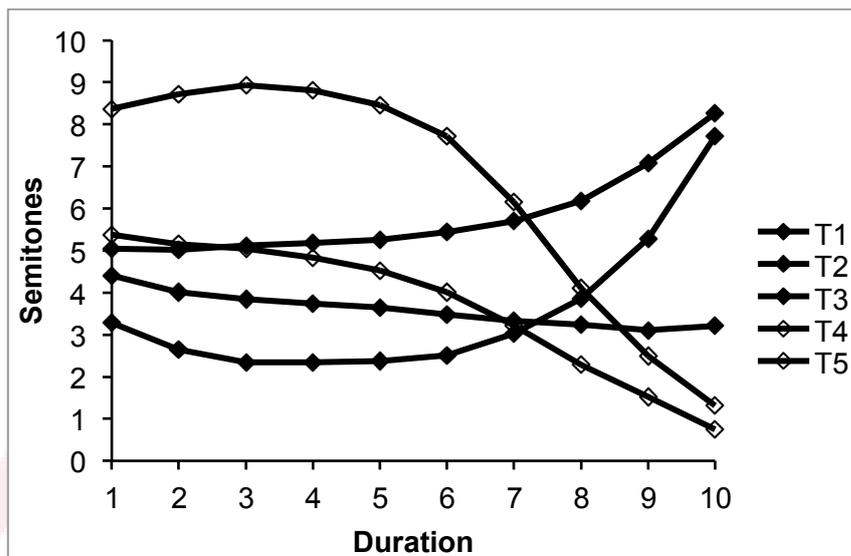


Figure 6 Semitones of Lue Ban Thin tones as spoken by the younger group

Figure 6 shows that in the younger group, the low-rising tone (T1) begins at a low pitch and continually rises to a high pitch. The high tone (T2) starts at a mid pitch and rises to a high pitch with similar contour to the low-rising tone. The low tone (T3) begins at a mid pitch and falls slightly to the end. The mid tone (T4) starts at a mid pitch and then falls sharply to a low pitch. The high-falling tone (T5) starts at a high pitch and falls sharply to a low pitch. Considering the contour, it seems like the mid tone has a contour similar to the high-falling tone.

### 3.2.2 Lue Ban Phra Luang

There are six tones in the Lue Ban Phra Luang dialect namely 1) the low-rising tone, 2) the high tone, 3) the low tone, 4) the mid-falling tone, 5) the mid tone, and 6) the high-falling tone.

The semitones converted from the fundamental frequencies of each tone as spoken by three speakers of each group were plotted using Microsoft Excel 2007 as shown in Figure 7, 8, and 9.

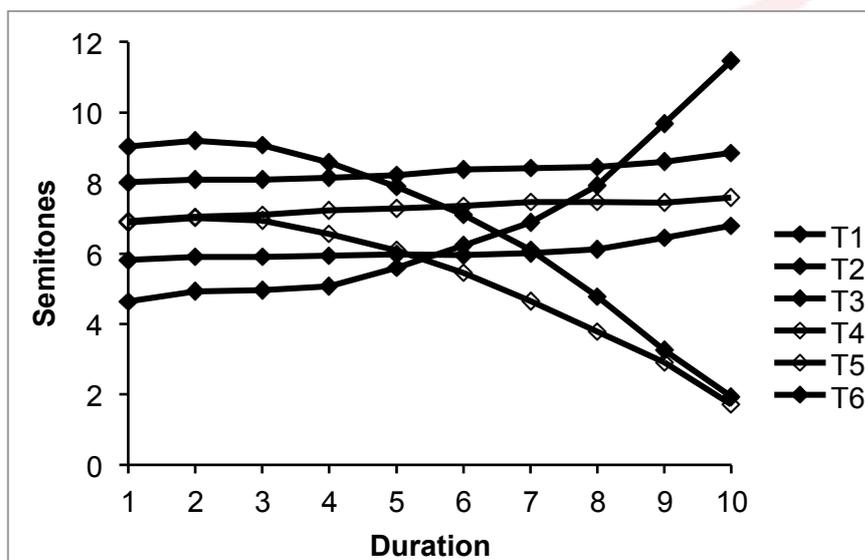


Figure 7 Semitones of Lue Ban Phra Luang tones as spoken by the older group

Figure 7 shows that the low-rising tone (T1) begins at a mid/low pitch and continually rises to a high pitch. The high tone (T2) starts at a high pitch and stays level to the end of the duration. The low tone (T3) starts at a mid pitch and stays level to the end. The mid-falling tone (T4) begins at a mid/high pitch and falls sharply to a low pitch. The mid tone (T5) starts at a mid/high pitch and stays level to the end. The high-falling tone (T6) starts at a high pitch and falls sharply to a low pitch.

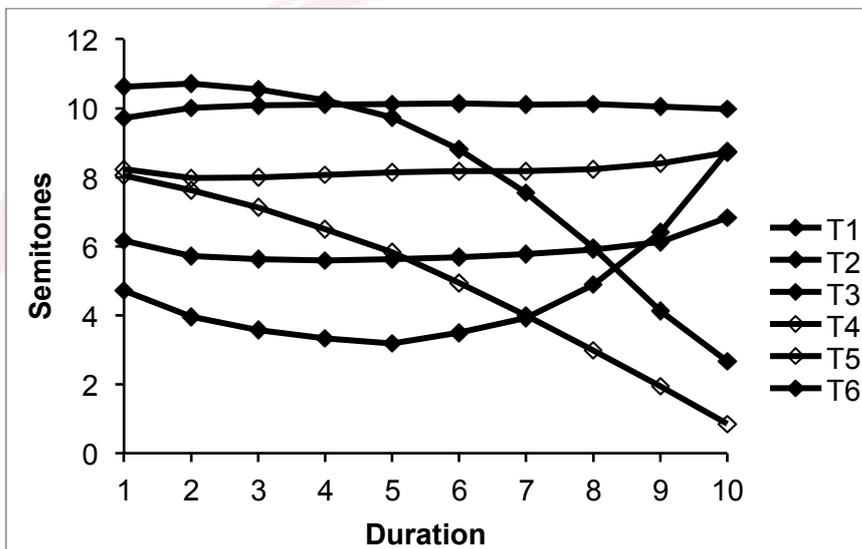


Figure 8 Semitones of Lue Ban Phra Luang tones as spoken by the middle group

In Figure 8, the middle group, the low-rising tone (T1) begins at a mid pitch and continually rises to a high pitch. The high tone (T2) starts at a high pitch and stays level to the end of the duration. The low tone (T3) has the same contour as the high tone but starts at the lower pitch. The mid-falling tone (T4) begins at a mid/high pitch and falls sharply to a low pitch. The mid tone (T5) starts at a mid/high pitch and stays level to the end. The high-falling tone (T6) starts at a high pitch and falls sharply to a low pitch.

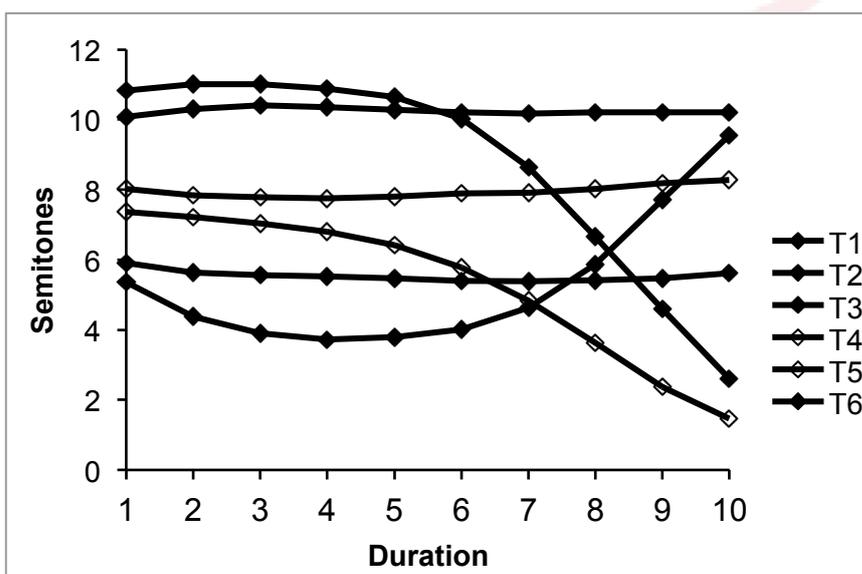


Figure 9 Semitones of Lue Ban Phra Luang tones as spoken by the younger group

For the younger group as shown in Figure 9, the acoustic characteristics of the 6 tones are similar to that of the middle group. The low-rising tone (T1) begins at a mid pitch and continually rises to a high pitch. The high tone (T2) starts at a high pitch and stays level to the end of the duration. The low tone (T3) has the same contour as the high tone but starts at the lower pitch. The mid-falling tone (T4) begins at a mid/high pitch and falls sharply to a low pitch. The mid tone (T5) starts at a mid/high pitch and stays level to the end. The high-falling tone (T6) starts at a high pitch and falls sharply to a low pitch.

It should be noted that in the older group, the tonal space between each tone seems to be close to each other, especially the level tones. It means that the tonal onset is wider in the middle and younger groups.

### 3.3 Phuan

Phuan has six tones namely 1) the low-falling tone, 2) the mid-rising tone, 3) the mid tone, 4) the mid-falling tone, 5) the high tone, and 6) the high-falling tone.

The semitones converted from the fundamental frequencies of each tone as spoken by three speakers of each group were plotted using Microsoft Excel 2007 as shown in Figure 10, 11, and 12.

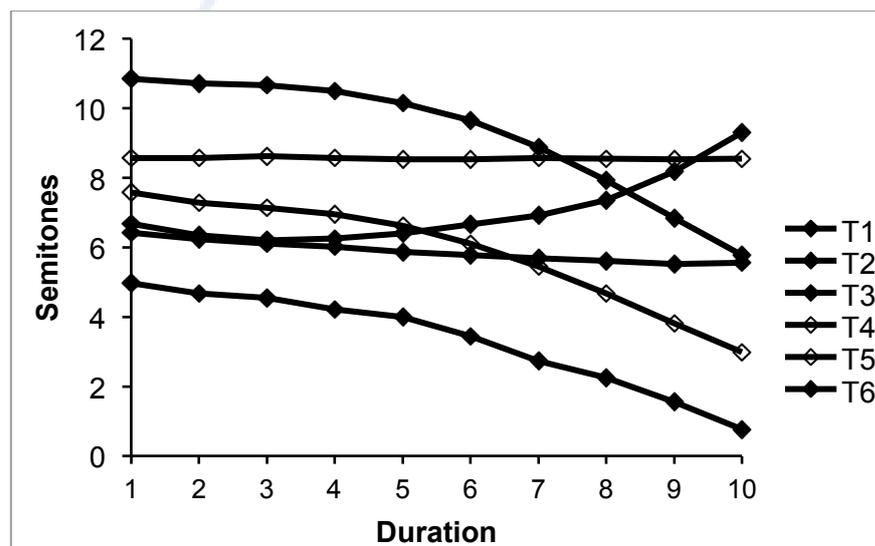


Figure 10 Semitones of Phuan tones as spoken by the older group

Figure 10 shows that in the older group, the low-falling tone (T1) starts at a mid/low pitch and continually falls to a low pitch. The mid-rising tone (T2) begins at a mid pitch and slightly rises to a mid/high pitch. The mid tone (T3) starts at a mid pitch and stays level to the end of duration. The mid-falling tone (T4) has the same contour as the low-falling pitch, but it starts at a higher pitch. The high tone (T5) starts at a mid/high pitch and stays level to the end. The high-falling tone (T6) begins at a high pitch and continually falls to a mid pitch.

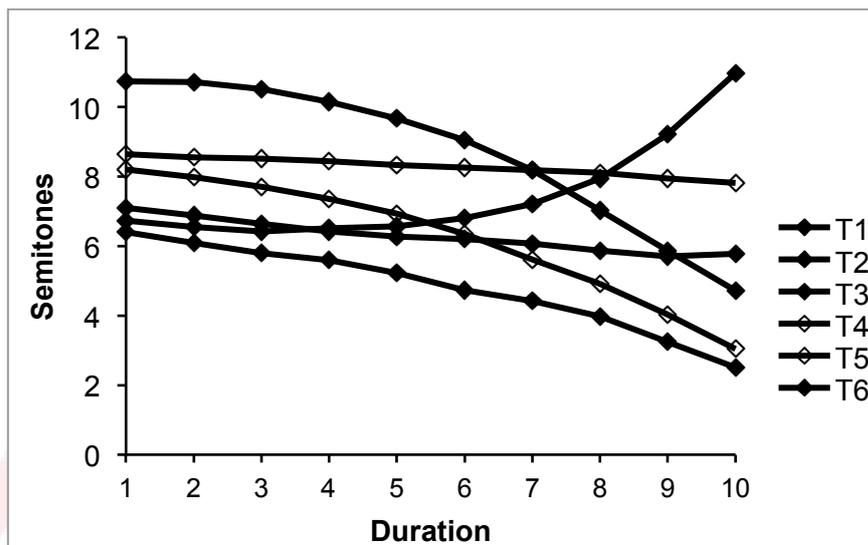


Figure 11 Semitones of Phuan tones as spoken by the middle group

From Figure 11, the low-falling tone (T1) of the middle group starts at a mid pitch and continually falls to a low pitch. The mid-rising tone (T2) begins at a mid pitch and rises to a high pitch. The mid tone (T3) starts at a mid pitch and stays level to the end of duration. The mid-falling tone (T4) starts at a mid/high pitch and continually falls to a low pitch. The high tone (T5) has the same contour as the mid tone but starts at a mid/high pitch. The high-falling tone (T6) begins at a high pitch and continually falls to a mid pitch.

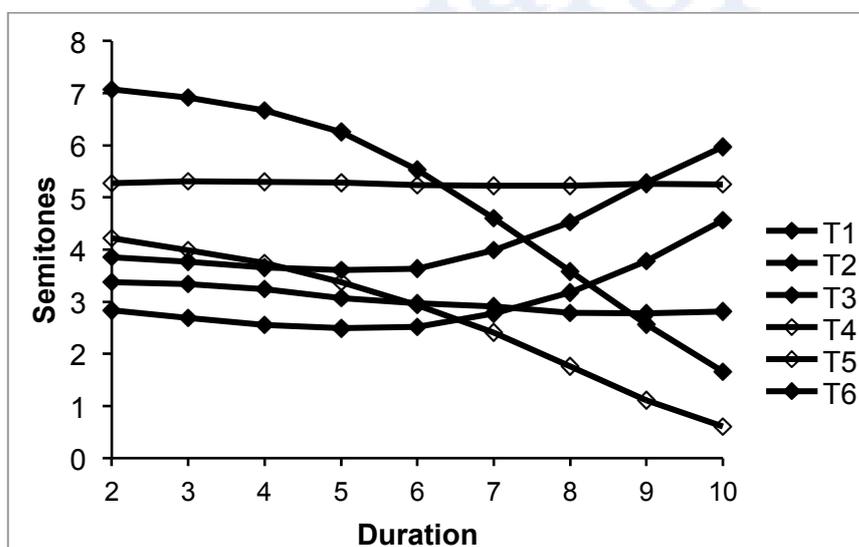


Figure 12 Semitones of Phuan tones as spoken by the younger group

Figure 12, the younger group, the low-falling tone (T1) of the middle group starts at a mid pitch and continually falls to a low pitch. The mid-rising tone (T2) begins at a mid pitch and rises to a high pitch. The mid tone starts (T3) at a mid pitch and stays level to the end of duration. The mid-falling tone (T4) starts at a mid/high pitch and continually falls to a low pitch. The high tone (T5) has the same contour as the mid tone but starts at a mid/high pitch. The high-falling tone (T6) begins at a high pitch and continually falls to a mid pitch.

### 3.4 Tai Yai

Tai Yai has five tones namely 1) the low-rising tone, 2) the high tone, 3) the low tone, 4) the mid-falling tone, and 5) the high-falling tone.

Again, the semitones converted from the fundamental frequencies of each tone as spoken by three speakers of each group were plotted using Microsoft Excel 2007 as shown in Figure 13, 14, and 15.

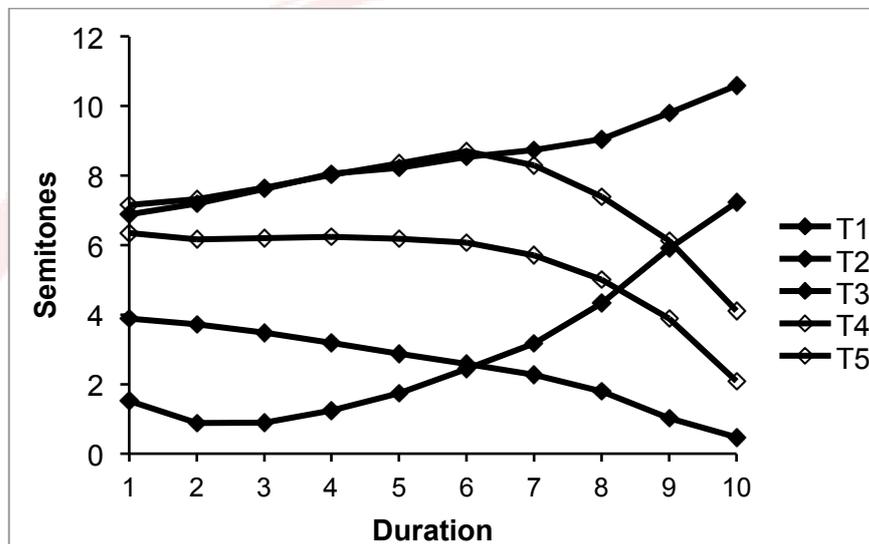


Figure 13 Semitones of Tai Yai tones as spoken by the older group

Figure 13 shows that in the older group, the low-rising tone (T1) starts at a low pitch and slightly falls before continually rising to a mid/high pitch. The high tone (T2) starts at a mid/high pitch and rises to a high pitch. The low tone (T3) begins at a mid/low pitch and falls to a low pitch. The mid-falling tone (T4) starts at a mid pitch and stays level before falling to a low pitch at the 50% of the duration. The high-falling tone (T5) starts at a mid/high pitch and slightly rises before sharply falling at the 50% of the duration.

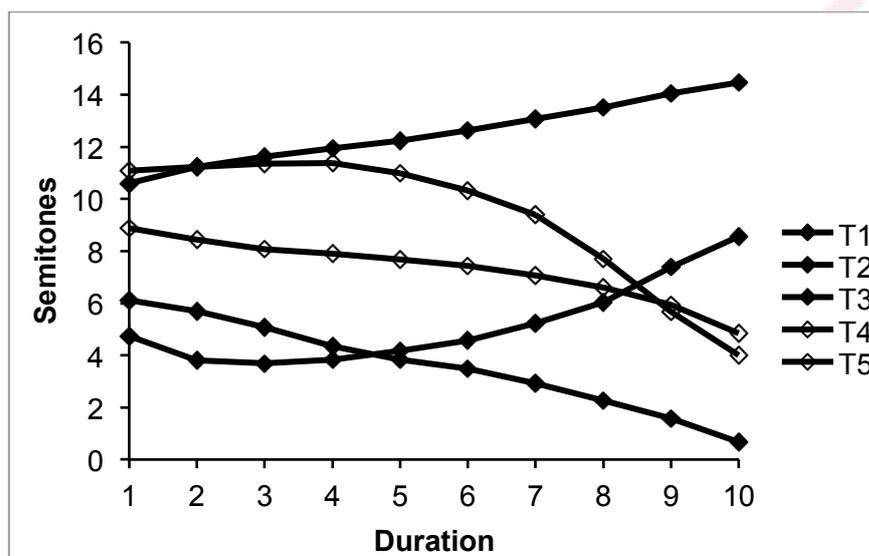


Figure 14 Semitones of Tai Yai tones as spoken by the middle group

In Figure 14, the middle group, the low-rising tone (T1) starts at a low pitch and slightly falls before continually rising to a mid pitch. The high tone (T2) starts at a mid/high pitch and slightly rises to a high pitch. The low tone (T3) begins at a mid/low pitch and falls to a low pitch. The mid-falling tone (T4) starts at a mid pitch and falls to a low pitch. The high-falling tone (T5) starts at a mid/high pitch and stays level before sharply falling at the 40% of the duration.

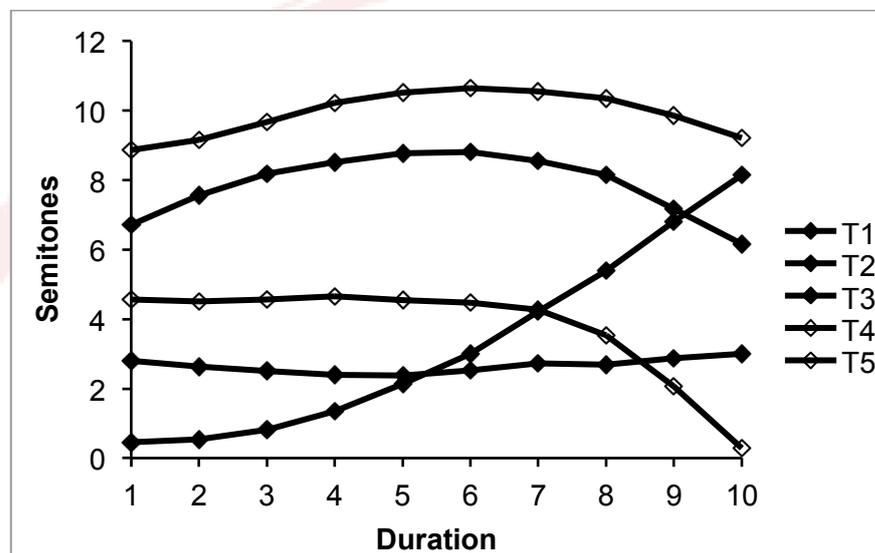


Figure 15 Semitones of Tai Yai tones as spoken by the younger group

In Figure 15, the low-rising tone (T1) of the younger group starts at a low pitch and sharply rises to a mid/high pitch. The high tone (T2) starts at a mid pitch and slightly rises before falling at the 70% of the duration. The low tone (T3) begins at a low pitch and stays level to the end of the duration. The mid-falling tone (T4) starts at a mid pitch and stays level before falling to a low pitch at the 70% of the duration. The high-falling tone (T5) has similar contour to the high tone. It starts at a high pitch and slightly rises before falls again at the 70% of the duration.

#### 4. Conclusion and discussion

The acoustic characteristics of tones in four Tai dialects of Phrae Province which are Tai Yuan, Lue, Phuan, and Tai Yai as spoken by three groups of speakers; over 60 years old, 35-50 years old, and under 25 years old are as follow:

Tai Yuan has 6 tones which are the low-rising tone, the mid-rising tone, the mid-level tone, the mid-falling tone, the high-level tone, and the high-falling tone.

Lue Ban Thin has 5 tones which are the low-rising tone, the high tone, the low tone, the mid tone and the high-falling tone.

Lue Ban Phra Luang has 6 tones which are the low-rising tone, the high tone, the low tone, the mid-falling tone, the mid tone and the high-falling tone.

Phuan has 6 tones which are the low-falling tone, the mid-rising tone, the mid tone, the mid-falling tone, the high tone and the high-falling tone.

Tai Yai has 5 tones which are the low-rising tone, the high tone, the low tone, the mid-falling tone, and the high-falling tone.

Moreover, the acoustic characteristics show tonal variation in Lue Ban Thin, Phuan, and Tai Yai as shown in Table 4.

Table 4 Number of Tones, The tone mergers and splits in Column A and Tonal variation

	Number of tones	The tone mergers and splits in Column A	Tonal variation
Tai Yuan	6	A12-34	-
Lue Ban Thin	5	A12-34, A123-4	T2, T4
Lue Ban Phra Luang	6	A12-34	-
Phuan	6	A1-234	T1
Tai Yai	5	A123-4	T2, T5

The four Tai dialects spoken in Phrae Province; Tai Yuan, Lue, Phuan, and Tai Yai, have Tai Yuan as a *lingua franca*. The variation and change occurring in each language is not necessarily the same.

**Tai Yuan**

Tai Yuan is the majority language of Phrae Province and is accepted to be prestigious among the speakers of the other ethnicities. The six tones of Tai Yuan as spoken by three groups of speakers are very similar as seen in Table 5.

Table 5 Acoustic characteristics of Tai Yuan tones as spoken by three groups of speakers

Tone	Older	Middle	Younger
1 (low-rising)			
2 (mid-rising)			
3 (mid)			
4 (mid-falling)			
5 (high)			
6 (high-falling)			

The acoustic characteristics of Tai Yuan tones as spoken by the three groups of speakers indicate that prestige and identity are very important factors which make Tai Yuan speakers keep their language unchanged. From the interviewing, it is apparently

that the younger generations speak Tai Yuan even though they also frequently use Standard Thai in daily life.

### **Lue Ban Thin**

In the Lue Ban Thin dialect, the variation and change has begun in the middle group as shown in Table 6.

*Table 6* Acoustic characteristics of Lue Ban Thin tones as spoken by three groups of speakers

Tone	Older	Middle	Younger
1 (low-rising)			
2 (high)			
3 (low)			
4 (mid)			
5 (high-falling)			

Table 6 shows that Tone 2, the high tone, which has level contour in the older group, has become a mid pitch with slightly rising at the end in the middle group, and clearly changes to a mid-rising pitch in the younger group. This can be explained by the influence from Tai Yuan, the majority language of Phrae because Tai Yuan tone 2 is mid-rising and Tai Yuan tone 4 is mid-falling.

This change agrees with Akharawatthanakun (2003) that the minority languages are easily influenced from the majority languages surrounding them. Moreover, the young generations are the leaders of the change as found in L-Thongkum (1994).

### **Lue Ban Phra Luang**

The tonal systems of Lue Ban Thin and Lue Ban Phra Luang is different. Lue Ban Phra Luang has 6 tones whereas Lue Ban Thin has 5 tones. The acoustic characteristics of the 6 tones in the Ban Phra Luang dialect as spoken by the three generations are quite similar especially the middle and younger groups.

*Table 7* Acoustic characteristics of Lue Ban Phra Luang tones as spoken by three groups of speakers

Tone	Older	Middle	Younger
1 (low-rising)			
2 (high)			
3 (low)			
4 (mid-falling)			
5 (mid)			
6 (high-falling)			

Even though the acoustic characteristics of the six tones look very similar, it should be noted that the onset of the tones has changed. The difference of tonal space between each tone is wider. In the older group, the starting point of each tone begins more closely. However, the acoustic characteristics of tones are kept from generation to generation. From the interview with the older generation, it is interesting that the Ban Phra Luang dialect is unique. They have a very strong attitude towards their language. Everyone in the village speaks their mother tongue in all situations. They are so proud of their language that the younger generation still keeps all features of tones as shown below.

**Phuan**

The acoustic characteristics of Phuan tones show that the low-falling tone has changed in the younger group as shown in Table 8.

*Table 8* Acoustic characteristics of Phuan tones as spoken by three groups of speakers

Tone	Older	Middle	Younger
1 (low-falling)			
2 (mid-rising)			
3 (mid)			
4 (mid-falling)			

Tone	Older	Middle	Younger
5 (high)			
6 (high-falling)			

It can be seen that the acoustic characteristics of Phuan is quite similar to that of Tai Yuan. The difference of these two Tai languages is the mergers and splits of tones. From Table 8, the Phuan tone 1, the low-falling tone has changed to low-rising which is the tone 1 of Tai Yuan. It might be assumed that the younger group speakers were influenced by Tai Yuan since they usually speak Tai Yuan with their friends at school.

**Tai Yai**

Tai Yai has 5 tones and there are 2 tones which have undergone changes in the younger group speakers as shown in Table 9.

*Table 9* Acoustic characteristics of Tai Yai tones as spoken by three groups of speakers

Tone	Older	Middle	Younger
1 (low-rising)			
2 (high)			
3 (low)			
4 (mid-falling)			
5 (high-falling)			

From Table 9, it can be noticeable that the high tone and the high-falling tone of the younger group have changed. It can be said that Standard Thai influence on Tai Yai as shown in Figure 16.

Figure 16 shows that the acoustic characteristics of the Tai Yai high tone change to mid-rising with slightly falling at the end which is similar to the Standard Thai mid tone. The Tai Yai high-falling tone which changes to high-rising is similar to the Standard Thai high tone.

A	B	C	DL	DS
1	3	4	3	1
2	4	5	4	4

Tai Yai

A	B	C	DL	DS
1	3	4	3	3
2				
	4	5	4	5

Standard Thai

Figure 16 Tone boxes of Tai Yai and Standard Thai

Considering the acoustic characteristics, it can be said that Tai languages spoken in Phrae are influenced by Tai Yuan, the majority language and Standard Thai, the official language. Intajamornrak (2012) also found that vowels and tones of the Pwo Karen language spoken in Phrae Province have changed because of influence from Tai Yuan and Standard Thai.

Thomason (2001: 60) explains that contact-induced change is varied in the kind and degree of change by two predictors, social factors and linguistic factors. Social factors include intensity of contact, presence vs. absence of imperfect learning and speakers' attitude. Linguistic factors include universal markedness, degree to which features are integrated into the linguistic system, and typological distance between source and recipient languages. Moreover, Weinreich (1968: 3) says that extra-linguistic factors must be considered in language contact situation. Among these factors, some are inherent in the bilingual speaker's relationship to the languages with which they come to contact.

Therefore, we might say that language contact is a very important factor of tonal language variation and change and it is called change in progress which can be seen from the difference of tonal systems and acoustic characteristics as spoken by three groups of speakers. This linguistic phenomenon is challenging in a diverse community.

## References

- Akharawatthanakun, P. (2002) Tonal variations and changes in a language mixture area: a case study of northeastern Thailand. *Manusya* 5.2: 30-51.
- Akharawatthanakun, P. (2003) *Tone Change: A Case Study of the Lao Language*. Ph.D. dissertation. Chulalongkorn University, Bangkok: Thailand. (In Thai) (Unpublished)
- Akharawatthanakun, P. (2009) Linguistic hybridization: a case study of Khun spoken in Nan Province, a language mixture area in northern Thailand. *Paper presented in the 42nd International Conference on Sino-Tibetan Language and Linguistics*, Payap University, 2-4 November 2009.
- Arunruang, A. (1989) *Variation of the falling tone by age of speakers of Bangkok Thai*. M.A. Thesis. Chulalongkorn University, Bangkok: Thailand. (In Thai) (Unpublished)
- Intajamornrak, C. (2011) Tonal variation and change in Tai Lue spoken in Phrae Province. In Seino van Breugel (ed), *Proceedings of the Thammasat International Symposium on Language and Linguistics (ISLL 2011)*, Department of Linguistics, Faculty of Liberal Arts, Thammasat University, Bangkok, Thailand, pp. 4-22.
- Intajamornrak, C. (2012) Variation and change of the Phrae Pwo Karen vowels and tones induced by language contact with the Tai languages. *Manusya* 15 No. 2: 1-20.
- L-Thongkum, T. (1994) Phonological variation and phonological change in Mien-Yao: A result of language contact with Thai. In Hajime Kitamura, ed., *Current Issues in Sino-Tibetan Linguistics*, pp. 915-927.
- L-Thongkum, T. and Intajamornrak, C. (2009) Tonal variation induced by language contact: A case study of the T'in (Lua') language of Nan Province, Northern Thailand. *Mon-Khmer Studies* 38: 56-67.
- Li, F. K. (1977) Laryngeal features and tone development. *University of Hawaii Working Papers in Linguistics* 7.3: 17-27.
- Sarawit, M. E. S. (1973) *The Proto Tai Vowel System*. Ph.D. Dissertation. University of Michigan.
- Teeranon, P. 2002. Changes in phonetic characteristics of Thai Tone 4. *Warasarn Aksonrasat, Silpakorn University* 24 (1-2): 188-209 (in Thai)
- Thomason, S. G. (2001) *Language Contact*. Washington: Georgetown University Press.
- Weinreich, U. (1968). *Languages in Contact*, 3<sup>rd</sup> edition. New York: Linguistic Circle of New York.

*Japanese Undergraduates' Reticence toward Dialectic Pedagogy:  
Reasons and Remedies*

Keiko Khoo\*<sup>1</sup>, Yoshinori Koide\*<sup>2</sup>, Yuki Tsubai\*<sup>2</sup>

\*<sup>1</sup>Loma Linda University, USA, \*<sup>2</sup> Humanitec Medical & Welfare College, Japan

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Abstract

This study examined why Japanese students are so reticent to ask questions or make comments in classes. The subjects of the study were three groups of Japanese undergraduates who had various lengths of exposure to American instruction. Most American instructors expressed their concerns regarding the lack of responses from these students. Surveys and focus groups were conducted to probe students' views. Qualitative method was used to uncover if the students were aware of instructors' expectations, if the students were cognizant of the reasons that kept them quiet, and if there were any solutions.

Most students said they knew they were expected to speak up. The excuses for not doing so were: not having enough courage; being too embarrassed to speak publicly; being too nervous to raise their hands; not knowing what, how, or when to ask questions; not having good or well stated questions; anxiety about individualized exchanges; perceived demand for reflective or evaluative answers; preference for consulting the instructor privately; and fear of being disrespectful of the instructor or the older students.

Students said the instructors' smiles, friendliness, collegial attitude and handouts made classes conducive for discussions. The instructors' seriousness in addressing every student question, not criticizing what the students said but praising and welcoming their contributions, and having interpreters available encouraged them to speak up. Requiring each student to ask a question each session worked well for one instructor when she combined it with preparatory pre-sessions. Seeing how the shared comments and questions aid the learning of others is potentially a powerful motivator. Another easy remedy is to provide orientations to the instructors who use interpreters for the first time making them aware that the time to solicit participation is when the interpreter completes each segment.

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## INTRODUCTION

Pedagogy based on questions and answers has been a mainstay in Western cultures since Socrates, although the one of the most significant teachings in Eastern cultures, Confucian Analects, are known to contain dialogue-based instructions (Soothill, WE, 1999.) In recent decades, dialectic approach has been adapted to follow the logical processes of antithesis and synthesis (Hegel, GWF, 1975) or to emphasize collaborative, argumentative, and reflective discourses (Vygotsky, L, 1978). Many educators today, however, adopt a less formalized dialogic (Bakhtin, M, 1986) aspect of this approach to incorporate perspectives of the learners.

A wide use of dialectic pedagogy in American classrooms is probably due to the educational research that comes out of such institute as the Center for Postsecondary Research which has years of cumulative national data collected with the College Student Experience Questionnaire (CSEQ). Kuh, GD, as the director of the center, summed up the research findings in 2005 in his address titled *Taking Stock of What Matters to Student Success*. He identified six key factors that contributed to student success: student-faculty contact, active learning, prompt feedback, high expectations, respect for diverse learning styles, and time on task. These characteristics find their way to the ideal pedagogies college faculty try to emulate.

The dialectic approach often causes confusion and distress for the Japanese students who come to study in American institutions. Takeya, K (2000) in "Culture shock: Schools in the US and Japan" < <http://leo.stcloudstate.edu/kaleidoscope/volume3/cultureshock.html> > said that American teachers value participation and expect students to give their opinions or ask questions but teachers in Japan expect students to be quiet in class and listen to their lectures and copy what they write on blackboards. There is a movement among some Japanese teachers, however, to adapt a dialectic method to Japanese culture. Isoda, M et al. (2009, 2011) has been writing about the problem solving activities, such as group investigation, presentation, and discussion as a way to create classroom dialectic.

This study investigated why Japanese undergraduates are so reticent to participate in American style dialectic classes and if any remedies can be found. The students in this study experienced their eye-opening encounters with dialectic method when they were taught by American faculty, although earlier exposures to similar methods used by their Japanese instructors were reported by some. The cross-cultural communication context heightened the students' anxiety and frustration. In each case, however, potential cross-language barrier was addressed by employing an interpreter.

## METHOD

Qualitative method of investigation was used by collecting data through open-ended questions in surveys and focus groups. The subjects of this study were occupational therapy (OT) and physical therapy (PT) students of traditional college age in a post secondary technical school in Japan. They experienced varying lengths of exposure to American instructors' dialectic pedagogy, ranging from one workshop to two years of course work:

- **Group 1: Workshop Attendees**  
37 OT and PT students (23 males 14 females) between their junior and senior years traveled to the US to attend a three-day non-credit workshop. This group participated in a survey.
- **Group 2: the Juniors**  
10 junior OT and PT students (4 males and 6 females) were cross-enrolled in an affiliate university in the US and were taking the first several courses of a degree program in Japan taught by the visiting American faculty. This group participated in the survey questionnaire and a focus group discussion.
- **Group 3: the Seniors**  
19 senior OT and PT students (10 males and 9 females) who had just attained or about to attain a Bachelors' degree from the affiliate US university by completing the last several courses on the US campus participated in the survey. Only the last five seniors were able to participate in a focus group.

Written statements and spoken comments were collected, transcribed or keyed, and translated into English. The word data were analyzed to uncover recurring themes in order to answer three questions:

- **Question 1:** what understanding did the students have regarding the instructors' expectation for their participation in class
- **Question 2:** What caused these Japanese undergraduates to be so reticent when instructors invited them to comment or ask questions?
- **Question 3:** What factors contributed to overcoming their reticence as some students were able to participate with modest success?

## RESULTS

*Re: Question 1, What Understanding Did the Students Have Regarding the Instructors' Expectation for Their Participation in Class?*

About 40% of the workshop attendees were aware that participation was expected. They further said this was not a new experience because some Japanese teachers encourage them to ask questions. Japanese instructors, however, do not keep asking or do not show high expectations for the students to respond. One student explained the reason for this difference as "because few Japanese ask questions and they typically are poor at making comments."

The juniors, during their first courses realized they must express their own thoughts. The juniors began to identify speaking up in classes with independent thinking. For example, they said that "the atmosphere these teachers bring is that we think together, we own the fun, shaping it by thinking together," "[these] classes, compared to Japanese ones, often require us to think on our own and answer individually addressed questions," "[American] teachers often ask individually what we are thinking," and "we now have to be active on our own."

The seniors became very cognizant of the instructor expectations for participation. One female student said “for American teachers, it would be rather rude to just do that [sit quietly].” In fact an OT student described how an instructor made it a requirement for the Japanese students to speak up at least once each session. This may be because she had both American and Japanese students in the same class and wanted to balance the contributions from both groups in discussions. The instructor said that she had learned, over the few years of teaching Japanese students, that there was no other way to make them speak up. She, however, offered a preview session each week just for the Japanese students which according to this student, was simplified enough so that she did not need an interpreter, “when we met for the very first preview session before the class, he [the interpreter] determined ... how much I understood, so the second and the third time he did not offer much interpretations, not very much...”

The seniors understood how questions can benefit the whole class. “Classes here take up individuals’ questions and let the whole class discuss them together making them into positive learning experiences,” or “in Japan, talking is one sided and teachers do all the talking but if classes are carried forward by conversations, that will leave stronger impressions to remain in our heads.”

*Re: Question 2, What Caused These Japanese Undergraduates to be So Reticent When Instructors Invited Them to Comment or Ask Questions?*

The workshop attendees said they could not say anything or ask questions, except seven students out of 37 who said they were able to ask simple questions seeking additional information. None were to challenge the instructor’s position because as one student said they “do not like to argue.” Those who spoke up were admired and appreciated because their questions helped others learn more and made them recognize diverse perspectives, as one student said, “I learned something I did not know and different ways of thinking,” and another also said, “I felt that other people have different perspectives.” Those who could not speak up wished they did because that would have “increased their confidence” and “expressive ability”.

The workshop attendees gave the following excuses for not participating: The most common excuses that were cited by at least six respondents included:

- Could not think of a question or did not know what or how to ask questions. A variation of this theme was expressed as “I did not fully understand the lecture so did not know what I did not know,” or “there were some unclear things but did not know how to ask questions.” Some were concerned about the quality of their questions saying “I was afraid my questions were not good,” “I could not think of a good question,” and “I thought my question may not be culturally appropriate.” One student shared an insight related to lack of questions saying “this has to do with us needing to get in a habit of having own thoughts and expressing them in everyday life.”
- Did not have enough courage or confidence and felt shy or passive. This excuse is seen in the statements such as “not confident if my self-expression is adequate for questioning, because it was a group learning and not one on one,” “I felt embarrassed and felt the pressure from the gazes of other students,” and “even if I dared to ask a questions, I was

afraid I would lose my confidence when I cannot get my question across.”

- Was too nervous or tense to raise hand or ask questions
- Not good at or not used to speaking in public as one student stated “I usually do not ask questions.”

Less common excuses cited by only a couple students included:

- Could not figure the timing
- Asked or talked with other students and expected someone else to raise the question. One student said “I thought I should ask other students my questions,” others said “we discussed our questions among the students around me,” and “I was hoping someone else would ask my question.”

The juniors expressed the desperate feelings of insecurity they initially experienced: “Japanese classes are passive but [these] classes make us all think together and I could not cope with that in the beginning,” “I was surprised at first,” “I did not do well. I could not speak up partly because I lacked self-confidence,” “I was nervous,” “I was at a loss,” “I cowered,” and “I could not respond and stayed silent. That was painful.”

The juniors also described how they overcame their reticence later: They concluded that “it [participating in classes] was positive,” “it was beneficial,” and “it was enjoyable but unusual and strange.” The juniors quickly gained confidence, which they expressed as “I find it not too difficult to speak up” or “it is easier to express my opinions.”

The seniors were struggling with their internal pressure to perform at a higher level. They expressed this dilemma as “I do feel, perhaps too strongly, that I need to ask well stated questions,” “I am conscious about making mistakes in asking questions,” and “I do have that intention [to speak up]...ever since I started taking this program, but I often end up saying nothing...”

The seniors became aware that they need to offer reflective and evaluative comments unlike the short and factual answers they used to give in Japan. “In math, one plus one is two: Two is the only answer you can give, so when it was not that way I was nervous.” “He [one of the instructors] expects our reflections...our evaluation of what was important and what I thought about it, something I never experienced in Japan: I never met any teachers in Japan who asked that kind of questions. I now feel that may be essential.”

The seniors were weighing the new challenge against the old comfortable passive style saying “I was really rooted in the Japanese tradition of cramming education and was feeling comfortable, because I never was good at speaking,” “I used to think, in the beginning, that all I needed to do was to listen for the important points and summarize the gist, but that just prepares me to pass the test ...the greatest way for me to apply what I learn is for the lectures to create interests in me: Teaching method that stimulates my interests, or creates an active learning attitude, these things can make my learning real. That’s how I started to think after I came to this program,”

and another senior agreed “I used to think, before, that teachers should just explain things in a way that is easy to understand and students should just listen. That was my idea of good teachers. I still want the same things, but in addition, I begun to think that it may be necessary for them [teachers] to have some sort of relationships with students.”

The seniors were trying to reconcile their respect for the instructors and interrupting them, saying “generally [in Japan] students are expected to sit quietly and listen to lectures,” “Most Japanese students think if they ask questions, they might interfere with the progression of the class: It is bad. So the typical thing for the students to do is to individually go to their teachers after the class and ask questions about what they did not understand: They don’t speak up during the class to say ‘I don’t understand this,’” and another one added “because of my old habits it is not easy to ask questions.” The respect for the instructors’ planned flow of lectures was aptly exemplified by a female student who expressed her displeasure with American peers’ interruptions, “It seems common here for the students to eat or drink during classes, but in Japan that kind of behaviors are considered very rude and show a lack of respect for the teacher: something we never do, but when they [American students] are eating... they feel so free to just get up and go to get water, or walk around and when they do this too frequently, that can interfere with the effectiveness of the class.”

The seniors described an incident when the traditional power relations became an issue. It exposed an unexpected aspect of vertical relationship that exists even between junior and senior level statuses. The incident involved a seemingly good classroom activity one American instructor employed where students were divided up in several groups for discussions. The instructor did not realize he mixed some seniors and juniors together in these groups. The students in the focus group were recalling this incident that happened when they were juniors. They felt they could not speak up because they had to show some respect for the seniors’ status difference even though the instructor repeatedly encouraged them to participate. He never suspected such an internal power differential was operating in a group of students who did not look very different.

The seniors saw how interpretations can work for or against their attempts to speak up. Students often felt a greater need for the interpreters’ help when they had comments and questions, as one senior described, “when I try to say something without an interpreter, I am left with a problem of how to say it.” Often, however, the instructors forgot to pause for the students to ask questions or comment and proceed as soon as the interpreters stopped speaking. The alternating turns between the instructors and the interpreters escalated the pace of the lectures so that the students had difficulty seizing the opportunity for questions or comments. One student said “topics seemed to develop quickly, probably because we had a translator, and I missed the chance to ask questions.” They described one class by saying “when the interpreter hesitated a moment midway...teacher started again, ‘Oh, not yet!’ I was thinking.” ” “Stopping seems to signal the end and teacher does not wait for our reactions”: “I think the teacher expected our reactions when she finished talking in English, and thought it was time to move on when the interpreter finished.”

*Re: Question 3, What Factors Contributed to Overcoming Their Reticence as Some Students Were Able to Participate with Modest Success?*

The workshop attendees felt the instructor created a conducive atmosphere by:

- Smiling
- Being humorous
- Being cheerful
- Being friendly
- Engaging eye contact or
- Engaging in conversations during the break

The workshop attendees felt the instructor encouraged the students to ask questions by:

- Setting the time aside for questions
- Checking if every sentence was understood
- Not waiting till the discussion got difficult
- Urging the students to ask questions
- Asking the students many questions
- Taking every question student asked seriously

The workshop attendees felt the organizer and advisors contributed by providing:

- Interpreter
- Advice to think of questions before the workshop
- Handout for preview and review
- Snacks and drinks for relaxation

The Juniors attributed their success to instructors' verbal encouragement:

- *Calling me by name*: "I find it not too difficult to speak up because teachers ask for my opinions by name."
- *Expressed inclusiveness without the air of power differentials*: "Teachers were in the same circle with the students," "teachers were so friendly and drew students closer," "often asked us to express ourselves," and "they welcomed our opinions."

The Juniors sensed the instructors' openness in their nonverbal behaviors:

- "They [facial expressions] made us feel that the teachers were very close to us."
- "She [an instructor] always looked at the person, me, in the eyes which made me nervous sometimes. But she tried very hard to understand what I was trying to say which made me very happy."

The Juniors were heartened by a lack of certain negative instructor behaviors:

- *Did not criticize*: "I found out that they will hear me out and will not flatly reject [what I say]" and "always listened to what the students said without interrupting or judging."

The seniors also credited the instructors' verbal behaviors as motivating factors:

- Conversations with students in and out of classes: "She often initiated conversations with me. When I struggled to understand what she said she would

rephrase and explain what she said,” “she invited individual students to her office

to provide us a chance to have a discussion with other faculty.”

- Attending to students’ questions: “During the class, if we had questions, he [an instructor] took time to deal with them and responded properly,” “I asked a question once and he gave it a serious thought even though there seemed to be no time left,” “the course was successful because the teacher ... allowed us to ask questions anytime we could not understand,” or “she [another instructor] often entertained students’ comments and questions so I had a chance to participate.”
- Commending students when they speak up: A student remarked that “teachers of this program praise us when we speak up. Always respond to what we say. I thought they make it easy for us to be receptive of classes creating the environment that enable us to participate.”
- Soliciting student opinions/views: “[Instructors] expect not only a summary in our presentations but our reflections, not just summary but our evaluation of what was important and what I thought about it...” or “Classes often had assignments like getting into group discussions and produce one-page summaries. It was most trying when other [American] students asked me for my opinion,” “we did not just turn them[assignments] in but made presentations each time which allowed us to hear the opinions of others and receive stimulations.”

The seniors were impressed by the absence of certain negative behaviors:

- “In Japan, I had teachers often write on the blackboard on and on, then say something when we are copying and unable to listen at the same time... that is why I did not like the Japanese lecture method.” He then observed “I always thought the teachers here do not use whiteboard or blackboard too much.” He was so delighted to think of the answer to his own question, “I was thinking why it doesn’t happen here, it is because they give us handouts with everything on.”

The seniors also recognized the influence of other overall factors:

- Understanding the content helped think of questions as one student said “as I understand what is being said, more questions came to my mind, more questions came up especially if teachers discuss new information in classes and get me interested.”
- Experiences with different “foreign” instructors made it increasingly easier to speak up. One student described it this way: “usually first time meetings, especially relating to foreigners, tends to be uneasy. On top of that we had different languages that created a wall. But as the time passed, it [fear] disappeared. After that [first] course, it not only disappeared but there were no difficulty talking.”
- Smiles: “I thought many of the teachers smiled while they talked. I have not seen too many Japanese teachers smile and talk, but most teachers here do smile and talk...”

## DISCUSSION

The surveys and focus groups data revealed that the instructors were saying and doing all the right things to encourage these Japanese students to speak up. Smiles, eye contact, cheerfulness, friendliness were all appreciated by the students for creating a receptive learning environment.

Combined with repeated invitation, the workshop instructor was able to convince almost 20% of the attendees to speak up during the three days. The juniors moved on from their initial shock to thorough adaptation over the several courses. The faculty consistently affirmed their value as partners in collaborative learning. It gave them an unabashed confidence and joy of participatory learning. They responded to the faculty's message with strong positive affect and belief, although their comments may have been naïve. The seniors' assessment of pedagogies became more philosophical contrasting the benefit of dialectic style with the comfort of passive style. They continued to grapple with the gap between their growing desire and the felt inadequacy to perform well. The faculty kept encouraging and building closer relationships with the seniors that gave them a bitter-sweet experience of satisfaction and frustration.

In spite of the effective teaching by the faculty, dialectic pedagogy still remained somewhat counter intuitive to Japanese students who were entrenched in a belief that their questions might interrupt the class or their comments might offend the instructor. Student statements provided an interesting insight into how the egalitarian practice of dialectic method and the Japanese practice of status differentiation can come in conflict. Japanese power relations (Khuo, 2007) dictate younger persons to defer to older ones, students to teachers, and sometimes women to men. Instructors must be mindful of the potential interference this practice presents to collaborative learning activities.

This hierarchical power structure created the long tradition of the sage on the stage approach to education in Japan, and it continues to feed the fear of disrupting the status quo. This fear of disrespecting or disappointing the instructor was a strong emotion and no one seemed to be able to convert it effectively except the students themselves. Some students on their own came to a realization that it is rude to be quiet in American classes. One instructor was able to use their fear of disrespecting the teacher to her advantage when she "required" the students to speak up at least once every session. It worked because the students' fear of being perceived as apathetic or obstinate superseded the fear of speaking up. It will probably work again if an instructor can top the students' fear of speaking with another stronger emotion.

Another reason that the students keep quiet is the higher level of tolerance that seems to exist in Japanese culture for shy students who are uncommunicative in classes. Reverence for silence is reflected in numerous Japanese proverbs that stress this virtue and the admiration for men and women of few words is found in folklore and literature. There was almost a sense of justification when the workshop attendees made such excuses as "Japanese are not good at making comments," or "I usually do not ask questions." Several students said that some Japanese teachers encourage students to ask questions sometimes, but these statements were often qualified by how Japanese teachers have "low expectations" for student responses, implying they do not usually press on students to speak up.

A vicious cycle seems to exist when shyness is excused and students do not have to face the challenge of speaking up in classes, effectively forgoing the very opportunities they need to exercise their self expressions. This was evident in a circular reasoning many workshop attendees gave. For example the same students who said they were too embarrassed to speak up in public also expressed their regret for not trying because, they said, trying would have improved their abilities to speak.

Most students thought asking questions as a means to clarify what s/he did not understand in the class. They did not see a need for interrupting a class in order to get help because in their mind it was something personal. Their thinking was to save the classroom activities for collective communication. In addition, many students seem to think that the more expedient option was to individually seek the answers from the peers or the instructors. Only a few students were beginning to see how the student questions revealed different perspectives. Another vicious cycle revealed itself because these students do not have enough opportunities to see the benefit of questions and comments shared by others they do not become convinced of the importance of sharing their own. Perhaps, sitting side by side with American students in a class is the catalyst these Japanese students need since some of the seniors who had that experience seemed to have gained much.

Many students spoke of their habits that kept them from speaking up. Most were talking about the passive learning habit that prevented them from even coming up with questions. It was obviously a formidable task to change the pattern that had worked well for 12 to 15 years of schooling. One workshop attendee said it exactly right when he recognized the need for the change to develop and express own thoughts in everyday learning. A habit of listening to lectures critically with some skepticism and to know that it is not disrespectful to do so may take time to develop. New habits may not emerge spontaneously, just as some seniors had to be warned ahead of time to prepare their questions beforehand, some concerted effort may be needed before these new behaviors to become natural and effortless. Guided exercises to show some strategies for critical thinking may be very helpful in developing the new habit.

There is an easy remedy to restore some opportunities for participation in interpreted classes. An orientation can be provided to all the instructors who use interpreters for the first time, making sure they will not be tempted to fill every silent moment and to remind themselves that the time to solicit participation is when the interpreter completes each segment.

## LITERATURE CITED

- Bakhtin, M (1986). *Speech genres and other late essays*. Austin: University of Texas.
- Hegel, G. W. F. (1975). *The Logic of Hegel* (W. Wallace, Trans.). Oxford: Clarendon Press.
- Isoda, M, Nobuchi, M, & Morita, M. (2009). *Designing problem solving class with basic standards given by check sheets*. Japan: Meijitosyo-publisher (written in Japanese).
- Isoda, M (2011). Problem Solving Approaches in Mathematics Education as a Product of Japanese Lesson Study. *Journal of Science and Mathematics Education in Southeast Asia, Vol. 34 No. 1, 2 – 25*
- Khoo, K (2007). Nonverbal communication across Eastern-Western cultures: facial expressions during interviews of Japanese students. *New Horizon in Education, 55* (1), 37-50.
- Kuh, GD (2005). *Taking Stock of What Matters to Student Success*. Atlanta, GA: NASPA Assessment & Retention Conference.
- Soothill, WE 1999. *The Analects - Confucius*. Mineola, NY, & Toronto, Dover Publications.
- Vygotsky, L (1978). *Mind and society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

*Students with Visual Disability and Active Touch: Levels of Understanding and Think-Aloud Protocols*

Vassilios Argyropoulos, Sofia Chamonikolaou, Magda Nikolarazi

University of Thessaly, Greece

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Abstract

There is a lot of ongoing research regarding the key functions of the sense of active touch and their links to patterns of conception and cognition, with implementations in the education of students who have visual disabilities. The general research aim of this study was to investigate levels of understanding when individuals with blindness apply haptic exploratory movements to explore small manipulative geometric objects. The knowledge of geometry is crucial for individuals with blindness because it facilitates the formation of conceptual maps which are very important in their daily life as they move from one place to another. Furthermore knowledge of geometry gives them the opportunity to refine their motor control and tactile skills that is also useful in their lives. Twelve individuals with severe visual impairments participated in the study. The data were obtained by a series of experiments wherein individuals with visual disability actively manipulated by both hands the following types of geometric shapes: a. two-dimensional and three-dimensional simple geometric shapes, and b. complex shapes. The findings, were based on video recordings, support on one hand the existence of an integrated mapping of the participants' active touch while they were trying to detect and identify two-dimensional and three-dimensional figures and on the other hand the complexity of tactual shape perception and its uniqueness regarding every student's thinking.

**Keywords:** blindness, shape perception, haptic exploration, active touch, think aloud protocols, van Hiele, levels of understanding in geometry.

## INTRODUCTION

Touch is considered to be a multidimensional sense rather than a single sense. For example, Gibson (1962) divides touch into two main types: a) active touch or touching, and b) passive touch or being touched. In the first case we have impressions on the skin resulting from exploratory movements of the perceiver and in the second, the same but resulting from “some outside agency” (p.447). Katz (1989) suggested that it is misleading to consider touch as a single sense because touch conveys impressions of roughness or smoothness, of dryness or wetness, of hot or cold, of pressure or caress and so on. All these are partly overlapping skin sensations which are attributed to skin receptors.

On the other hand, shape perception by touch requires many factors to be considered; and this is because there are many sources which provide information. Shapes differ in size, depth and composition and at the same time they provide different kinds of cues depending on the type of configuration. More analytically, there are at least six categories of tactual configuration (Millar, 1997). Because of their different types they stimulate the skin receptors in different ways and this implies every time the corresponding reference organisation. Millar (1994) refers to the recognition of shapes from vibrotactile stimulation, flat and outline forms placed on the skin and in the hand, small three-dimensional shapes actively manipulated by hand, large three-dimensional objects which cannot be grasped in the hand, small continuous raised outlines and very small raised-dot patterns (e.g. braille).

In brief, the issue of touch is roughly distinguished in two types: active touch which produces exploratory movements and passive touch which is characterised by non-exploratory movements. The term movement constitutes one of the basic complementary sources in formulating spatial coding. It is suggested that movement falls in two general types; exploratory and performatory. The former type implies perception and the latter behaviour (Gibson, 1966). For instance, grasping an object is an exploratory movement or to be more precise it is a set of exploratory movements. This sequence of exploratory movements was found to be very common in this research. There is awareness on the part of the subject that s/he is trying to find out the shape of the object or the properties of the object or the relationships between the object and environment. Put briefly, the whole organism is in a state to receive and interpret cues from all the available senses (modalities). All this leads to the formation of a perception. The subjects, after this sequence of events can recall the experience and perform the same movements a second time more confidently because now there is an area of prior knowledge about the object in question. The movement is performatory and both kinds of movements are motivated through conscious procedures.

Active touch is considered as one of the dominant senses for individuals with visual disability about the properties of the surrounding environment. Furthermore, an individual with visual impairment uses the respective exploratory movement depending on the information he/she wants to extract from an object. For instance, it seems that exploratory movement *enclosure* is used by individuals with visual disability when they want to extract information about the overall picture of an object, while other movements provide details of the object (Piaget and Inhelder, 1997). Additionally, it has been observed that the identification of geometric shapes by

individuals who are blind is based mainly on the exploration of their angles and curves and not of their sides. Also, it seems that the characteristics of three-dimensional objects are learned easier and faster than those of two-dimensional ones (Ittyerah, 2010; Withagen et al., 2011). Finally, it seems that individuals with visual disability prefer to use their indexes and thumbs when they actively manipulate objects (Heller, 1989).

The general research aim of this study was to investigate levels of understanding when individuals with blindness apply haptic exploratory movements to explore small manipulative geometric objects. The research objectives were as follows: a. describe types of blind participants' exploratory movements while dealing with small manipulative geometric objects, b. assess blind participants' ability to recognize small manipulative geometric objects, and c. describe levels of blind participants' levels of understanding while dealing with small manipulative geometric objects.

## METHODOLOGY

### *Participants*

Twelve adults from Greece with blindness (total sight loss) participated in the present study (age,  $M= 38.8$ ). Eight participants were congenitally blind, while the rest were adventitiously blind with no additional disabilities. Furthermore, five participants had light perception.

### *Stimulus Material*

The shapes, which were used in this study, were small three-dimensional ones, able to be actively manipulated by both hands. Forty two shapes were used in the present study. Thirty were simple (Figure 1) and 12 were complex (Figure 2). Most of the shapes were constructed of wood, carton board, plastic and glass.

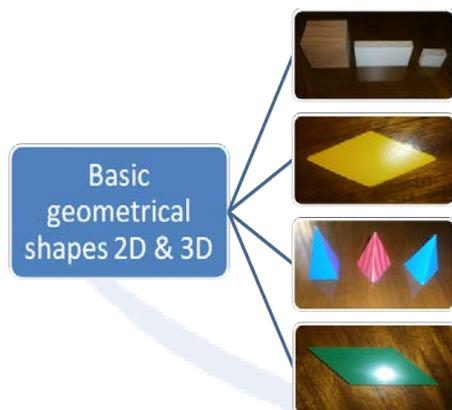


Figure 1. Simple two- and three-dimensional geometric shapes

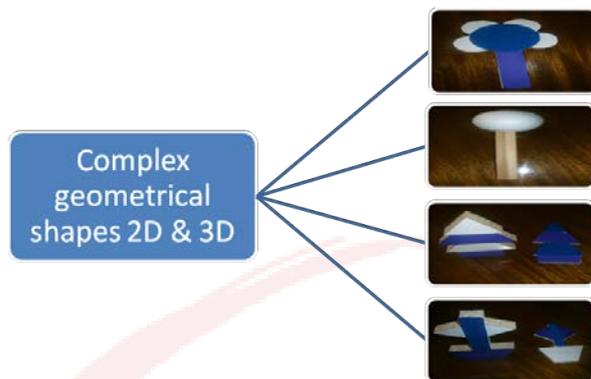


Figure 2. Complex two- and three-dimensional geometric shapes

### ***Research procedure***

As mentioned before, 42 shapes were explored by 12 participants with blindness. In specific, the participants were asked to verbally describe the properties of the shapes in question. All experiments were video-recorded and the camera shot focused exclusively in the participants' hands. A preliminary phase took place before the main experiments. During this phase all participants had the chance to work out some shapes – which were not included in the main experiments – and comment on their attributes, texture and material. In turn, the participant was given a tray with all shapes and he/she randomly picked up one by one, without time limit and described the shape.

### ***Data analysis***

Data analysis was based on video recording sessions. In order to analyze the data linked to the 1<sup>st</sup> research objective, the researchers saw the video multiple times and categorized all participants' tactile exploratory movements according to a protocol developed by Lederman and Klatzky (1987). This protocol includes hand movements which can be distinguished as follows: a. *enclosure* (for holistic approach and volume of a object), b. *contour following* (for holistic approach and detailed outline of the shape), c. *lateral motion* (for texture), d. *pressure* (for hardness or softness), e. *static contact* (for temperature), f. *unsupported holding* (for weight), g. *function test* (for main function of the object), and h. *part motion test* (for specific function of the object). The first research sub-aim was met applying the above protocol.

The analysis of the participants' verbal descriptions while manipulating the geometric objects, (2<sup>nd</sup> and 3<sup>rd</sup> research objectives), was based on think-aloud protocols. Specifically, the authors transcribed the participants' verbal comments and descriptions, while dealing with the geometric objects and in turn developed protocols. Following, the authors used two scoring systems to analyze the think-aloud protocols. The first scoring method was the bit-by-bit approach. All participants' verbal descriptions (verbal protocols) were transcribed and splitted into geometric ideas (idea unit). The maximum value of a correct idea unit would be 3 while the minimum value was 1 (Mayer, 1985; Nikolarazi et al., 2012). In essence, the authors assessed all idea units of the participants' verbal descriptions applying the formula: Mean Score (MS) = Total Scoring/Total Number of Idea Units [MS=S/N<sub>IU</sub>].

The second scoring system used was the holistic approach. It is called “holistic” because the scoring was based on the participant’s overall response. Again, the maximum value of a correct holistic approach was 3, while the minimum was 1. The point system followed the bellowed structure:

- 3 points = participant provides correct definitions of the shape and its properties
- 2 points = participant provides correct definitions of the shape without defining its correct properties (or vice versa).
- 1 point = participant provides incorrect definitions of the shape accompanied with incorrect properties

Finally, the analysis of the participants’ levels understanding during the manipulation of the geometric objects was based on the van Hiele’s model (Van Hiele, 1959). In specific, the Van Hiele Model identifies five levels of thinking in geometry:

- Level 0 (Recognition): Recognition of shapes as a whole
- Levels 1 & 2 (Analysis & Ordering): Progressing to discovery of the properties of figures and informal reasoning about these figures and their properties
- Levels 3 & 4 (Deduction & Rigour): Culminating in a rigorous study of axiomatic geometry (Fuys et al., 1988).

Based on the above levels, the authors linked the participants’ exploratory movements (1<sup>st</sup> research objective) to their levels of understanding (3<sup>rd</sup> research objective). Following, in the results section, the authors describe briefly the participants’ types of exploratory movements, while they place strong emphasis on the participants’ understanding when dealing with geometric objects. For more analytical data regarding the type of exploratory movements the readers can go through the study conducted by Argyropoulos, Chamonikolaou, and Nikolarazi, (2013).

## RESULTS

**Regarding the 1<sup>st</sup> objective**, the authors found that all types of exploratory movements - as mentioned by Lederman and Klatzky (1987) - were present (see analytical research report in Argyropoulos, Chamonikolaou, & Nikolarazi, 2013). Also, two additional types of complex movements, apart from those mentioned in Lederman’s and Klatzky’s protocol, were detected through the experiments. That is, a. *the procedure of hitting an object with fingers or hitting on the table* (in this way a sound was produced providing information about the material of the object), and b. *the function test* procedure and the *part motion test* procedure (with this complex movement the participants made use of a third surface, such as the table, in order to determine if the length of the sides of a shape was equal or unequal).

The results of exploratory movements showed that the movement which was favored by all participants (100%) in recognizing the property of shape was *enclosure* (using palms to get a global idea of the shape) and *lateral motion* (using the index finger when the shape was small and the palms for bigger shapes). Also the movement *contour following* was found in high percentages amongst the participants (81.5%) and by this movement the latter could figure out the exact shape of the objects they

explored. This movement occurred when the participants followed with their index finger the outline of a shape (see analytical research report in Argyropoulos, Chamonikolaou, & Nikolarazi, 2013). The rest of the exploratory movements were present at lower percentages.

**Regarding the 2<sup>nd</sup> objective**, the authors found that almost all participants did manage to recognize the shapes (as a whole as well as from their properties). Both scoring systems gave similar results. Some extracts are provided below based on the two different scoring systems:

First scoring system: **bit-by-bit approach**

Formula used:  $MS = S/N_{IU}$

1=min. value & 3=max. value

Example: (hexagon)

Participant: *it's gotta be hexagon* (3 points-idea unit=hexagon)

Researcher: *which means....*

Participant: *which means 6 sides* (3 points-idea unit=side) *and they are all the same*

Researcher: *when you same the same you mean...*

Participant: *I mean equal* (3 points- idea unit=equality) *and I forgot also 3 acute and 3 obtuse angles* (1 point- idea unit angle)

**Mean Score:**  $(3+3+3+1)/4 = 2.5$

Second scoring system: **holistic approach**

Example for a trapezium

Participant (he picked up a trapezium): *Well this shape is kind of parallelogram but these two opposite sides are not parallel* (2 points = participant provides correct definitions of the shape without defining its correct properties).

**Total Score = 2**

Figure 1, provides information about the participants' overall recognition based on their think-aloud protocols. Based on Figure 1 only two participants (5<sup>th</sup> & 6<sup>th</sup>) had low average ( $M = 1.85$  and  $M = 1.43$  respectively) who were also congenitally blind.

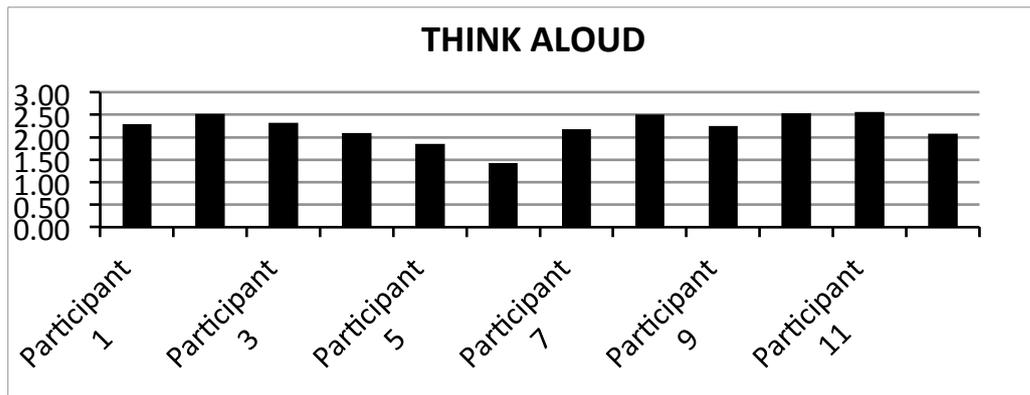


Figure 1: Think aloud protocols and scoring

**Regarding the 3<sup>rd</sup> objective**, the analyses of the think aloud protocols provided rich information about the participants’ levels of understanding in geometry based on van Hiele’s model. A single level seems not to be adequate to describe and classify participants’ thinking. Rather, we suggest that a synthesis of levels might provide a more integrated “picture” of participants’ understanding in geometry. Table 1 provides information about the participants’ levels of understanding based on the van Hiele’s model, coupled with their average scores in their verbal descriptions from both scoring systems (think-aloud protocols). It was observed that when the average value from both scoring systems in the think-aloud protocols was below 2, then the corresponding level of understanding was less or equal to level 1; whereas, when the average value in the think-aloud protocols was greater than 2, then the participants’ level of understanding was greater or equal to level 1.

Table 1. van Hiele levels of understanding related to think aloud protocols

Participants	Average Think-aloud	Min/max values	SD	Van Hiele's level
1	2,29	1/3	0,69	1 & 2
2	2,52	0,5/3	0,64	1 & 2
3	2,32	0,5/3	0,57	1 & 2
4	2,09	0,5/3	0,84	1 & 2
5	1,85	0,5/3	0,77	0 & 1
6	1,43	0,5/3	0,77	0 & 1
7	2,18	0,95/3	0,62	1 & 2
8	2,51	0,62/3	0,66	1 & 2
9	2,25	1,1/3	0,65	1 & 2
10	2,54	0,87/3	0,53	1 & 2
11	2,57	1/3	0,58	1 & 2
12	2,08	0,81/3	0,79	1 & 2

**Note:** Level 0 = Recognition (The participant identifies the figures by name according to their appearance as a whole).

Level 1 = Analysis (The participant analyses figures in terms of their properties and discovers properties/rules of a class of shapes empirically).

Level 2 = Ordering (The participant logically establishes the relationships among previously discovered properties/rules by giving or following informal arguments).

Level 3 = Deduction (The participant understands the role of postulates and proves theorems deductively).

Level 4 = Rigour (The participant establishes theorems in different postulates and analyses them).

## DISCUSSION - CONCLUSIONS

We can assert that shape perception by touch is an intersensory processing activity, since all the parameters analyzed in the literature review were present in the participants' performances (Ballesteros and Heller, 2008; Fisher and Bornstein, 1982; Lederman et al., 1990; Millar, 1997). Exploratory movements provided kinesthetic information and it worth mentioning that movements such as *enclosure*, *contour following*, *lateral motion* and *hitting the object with fingers* or *hitting the object on the table*, yielded information about the temperature and texture and the properties of the shape. It seems that the *enclosure* procedure constitutes the active movement by which people with blindness, either congenitally blind or adventitiously blind receive the most information about the whole picture of the object (global approach) and the *contour following* and *lateral motion* procedures aim at specific properties of the shape (feature approach) (Homa et al., 2009; Piaget and Inhelder, 1997).

Also, it is argued that individuals' understanding does not fit neatly into one level or another (i.e. van Hiele's levels). The use of "levels" satisfies the hierarchical structure of geometry or maths in general but it is not sufficiently refined to characterise thinking. This position can be justified by the following points: 1) the number of levels seem to be flexible, 2) performances generally seem to be spread across levels, and 3) performances are determined by what is taught. This implies that the nature of the van Hiele's levels are more psychological than logical and undoubtedly has a bearing on teaching processes (Clements and Battista, 1992). That is to say, that progress from one level to the next is more dependent upon instruction than on age or biological maturation (van Hiele, 1959).

To conclude, the influence of a teaching/learning process may accelerate the progress from a lower to a higher level of thinking. The previous considerations lead to the conclusion that van Hiele's levels are not discrete but there is a dominant level of elaboration and furthermore the phenomenon of transition needs to be investigated in greater detail, especially when the first stage of understanding is haptic and not visual. For this, it is vital to conduct similar studies increasing the size of the sample including students with visual disability in order to shape a more integrated protocol of active exploration and correlate its elements to levels of understanding such as van Hiele's levels.

### **Acknowledgments**

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## REFERENCES

- Argyropoulos, V., Chamonikolaou, S. and Nikolarazi, M. (2013) 'Investigating types of active touch in individuals with visual disability during the exploration of geometrical shapes'. *6th International Conference of Education, Research and Innovation*. Seville, 18-20 November. Seville: International Association of Technology, Education and Development, pp. 1626-1632.
- Ballesteros, S. and Heller, M. A. (2008) 'Haptic object identification'. In: Grunwald, M. ed. *Human Haptic Perception: Basics and Applications*. Boston: Birkhäuser Verlag.
- Clements, D. and Battista, M. (1992) 'Geometry and spacial reasoning'. In: Grouws, D. ed. *Handbook of research on mathematics teaching and learning*. New York: Macmillan Publishing Company.
- Fisher, C. and Bornstein, M. H. (1982) 'Identification of symmetry: Effects of stimulus orientation and head position'. *Perception & Psychophysics*, 1982 (32): 443-448.
- Fuys, D., Geddes, D. and Tischler, R. (1988) 'The van Hiele model of thinking in geometry among adolescents'. *Journal for Research in Mathematics Education*. Monograph No. 3
- Gibson, J.J. (1962) 'Observations on active touch'. *Psychological Review*, 69(6): 477-491.
- Gibson, J.J. (1966) *The Senses Considered as Perceptual Systems*. Boston: Houghton Mifflin.
- Heller, M.A. (1989) 'Picture and pattern perception in the sighted and the blind: the advantage of the late blind'. *Perception*, 18 (3): 379-389.
- Homa, D., Kahol, K., Tripathi, P., Bratton, L. and Panchanathan, S. (2009) 'Haptic concepts in the blind'. *Attention, Perception and Psychophysics*, 71 (4): 690-698.
- Ittyerah, M. (2010) 'Haptic touch and hand ability'. In: Zadeh, M., H. ed. *Advances in Haptics*, 25: 463-475 [Internet]. Available from: <http://www.intechopen.com/> [Accessed 10 March 2013].
- Katz, D. (1989) *The World of Touch* (edited and translated by L.E.Krueger). Hillsdale, N.J.:Lawrence Erlbaum Associates.
- Lederman, S.J. Klatzky, R.L., Chataway, C. and Summers, G.D. (1990) 'Visual mediation and the haptic recognition of two-dimensional pictures of common objects'. *Perception and Psychophysics*, 47 (1): 54-64.
- Mayer, R.E. (1985) 'Structural analysis of science prose: Can we increase problem solving performance?' In: B. K. Britton and J. B. Black eds. *Understanding expository text: A theoretical and practical handbook for analyzing explanatory text*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Millar, S. (1997) 'Theory, experiment and practical application in research on visual impairment'. *European Journal of Psychology of Education*, 12: 415-430.

Millar, S. (1994) '*Understanding and representing space: theory and evidence from studies with blind and sighted children*'. Oxford: Oxford University Press.

Nikolarazi, M., Vekiri, I. and Easterbrooks, S.R. (2012) 'Investigating deaf students' use of visual multimedia resources in reading comprehension'. *American Annals of the Deaf*, 157(5): 458-473.

Piaget, J. and Inhelder, B. (1997) '*The Child's Conception of Space*'. London and New York: Routledge.

Van Hiele, P.M. (1959). 'The child's thought and geometry'. In: Fuys, D., Geddes, D. and Tischler, R. eds. *English translation of selected writings of van Hiele-Geldof, D. and Van Hiele, P.M.*. Brooklyn, NY: Brooklyn College, School of Education

Withagen, A, Kappers, A., Vervloed, M., Knoors, H. and Verhoeven, L. (2011) 'Haptic object matching by blind and sighted adults and children'. *Acta Psychologica*, 139 (2012): 261-271.

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*Teacher-Student Interactions Considering Cyberspace: An Action- Based Approach*

Samira Alirezabeigi, Narges Sajadieh

University of Tehran, Iran

0754

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Abstract

Teacher-student interactions are one of the critical components of an educational process. Upon an action-based view, human beings are regarded as agents. Thus, teachers and students are all considered actors, who can act and interact with each other actively. Every action is based on cognitive, emotional and willing foundations. Accordingly, students and teachers interact their cognitions, beliefs, emotions and interests forever. However, this kind of transaction is not a balanced one, and it ought to be an unequal interaction, in which the teacher plays a guidance role. On the other hand, in the second decade of twenty-first century our life is interweaved with Internet and digital services. Regarding cyberspace and its consequences on education, this article attempts to redefine student-teacher interactions in a framework of action. In cognition foundations of action, we should accompany some shifts: from knowledge transferring models to knowledge authorizing ones; from knowledge receiving models to knowledge constructing ones and from universal knowledge models to local knowledge ones. In emotional action foundations, we should perform these shifts: from non-reflective emotional models to more-reflective ones; from simple models of interests to complex heterogeneous models of interests. Finally, concentrating on action and decision-making, we should do these shifts: from atomic views to holistic approaches, from simple models to complex models and from impulsive models of action to reflective ones.

## Introduction

It passes only four decades since the earliest version of what has become the Internet went online, but leaps in this brand new technology and wide usage of it has made the Internet one of the key factors of the first decades of twenty-first century. It has introduced new terms and opened new opportunities to many aspects of human lives. In social communication new social media and social networking frameworks make people with same interests bind together. In Politics the Internet has this capacity to support collective reflection on participant interests and therefore form a more democratic society. The Internet's effects can also be characterized by its broad changes in entertaining businesses, like the video game industry which now has millions of subscribers in multiplayer games<sup>1</sup>. Thus, these new terms like E-mail, E-commerce, open source and social networking making our lives easier and faster in a way that living without using them is unthinkable.

These innovative activities rooting from the Internet have also found their ways in education, whether in the policies and educational systems, or in some smaller scale of an educational process, like in class rooms. The development of online learning invented in 1980 is one of the major examples of this influence. This brand new approach to learning offers every individual who wants to learn something and would not be able to study in a traditional university setting, the opportunity to participate in online courses and learn whatever they would like. The development of online learning goes so far in the way that the term MOOC<sup>2</sup> was started in 2008 as a connectivist experiment in education with a participatory focus. These courses are becoming part of our educational landscape and may benefit many learners. As other examples in teaching methods, mobile learning and using avatars as a teaching assistance can be named. These fresh changes in education have some advantages. Inclusiveness, being real time and also open for any other usages are some features of them, which are totally fresh in comparison with the traditional educational processes.

On the other side using the Internet, like every other new technology, has also brought some challenges and hazards that need to be taken care of. These information and communication technologies raise complex ontological, epistemological, ethical, and identity issues; they at one and the same time present exciting educational possibilities but also grave dangers<sup>3</sup>. The Net has also this tendency to offer the worst of a series of asymmetrical trade-offs like, economy over efficiency in education, the virtual over the real in our relation to things and people, and anonymity over commitment in our lives<sup>4</sup>. Therefore, it is essential to note that the nature of the network is still in question as innovative usages continue to appear. It is not a fully developed technology like the refrigerator or the ball point pen. Accordingly, in this chain of influences we cannot capitalize all the advantages without being aware of the implications the Internet might bring for education.

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<sup>1</sup> Feenberg, 2010

<sup>2</sup> Massive open online course

<sup>3</sup> Burbules, 2001

<sup>4</sup> Dreyfus, 2001

The focus of this paper therefore, will be on class rooms, where both the teacher and students are present and where it can be addressed as the core of educational process in an educational system. Teachers and students are exposed to the Internet and this would also have some effects on their relationship. In the following, challenges of the relationship between teacher and student implicated by the cyberspace will be discussed and suggesting shifts will be indicated.

### **Perspective Overview of Student-Teacher Relationship**

Student-Teacher relationship is one of the most important components of an educational process, in the way that it can be called as the touchstone of education. There are several different models addressing this relationship, and the most important ones are briefly explained in the following.

“Dialectic model” first inspired by Plato, in which the student achieves the knowledge through a Socratic dialogue and guiding questions of the teacher. “Problem Solving” model stated by Dewey, as one of the first thinkers criticizing the traditional model of teaching-learning process and therefore, the relationship between teacher and student. He explained the teacher’s role as a facilitator to the learning process. “Banking model” represented by Freire(1993), corresponds this relationship with some banking transactions, in which teacher is not only transmitting the information, but also expects students to memorize and retrieve those information without any defects. “Liberal Model” first proposed in England, explains this relationship with much focus on knowledge recognition and the forms of knowledge, so this narrows the relationship in theoretical knowledge. “Indoctrination Model” raised by behaviorism viewpoints, in which the proper educational activities always are determined by the environmental stimulus. Therefore, the S-T relationship in this model focuses on forming and preserving the appropriate behavior of students and consequently students are playing a passive role in the class.

In order to demonstrate the desired relationship between student and teacher, it is needed to elaborate the framework in which this relationship is going to be defined.

### **Theory of Action**

In this paper human is identified as an agent, thus he has been referred to his actions rather than his behaviors. Accordingly, action is a behavior based on cognition, conation and rule-following. In this theory the foundation of human actions have three aspects named as cognition, interest and will. These three aspects should be founded sequentially in human in order to lead to an action. To illustrate these aspects in an example the case of a person, who wants to stop smoking can be supposed. First, he needs to know about the damaging effects of smoking, while this knowledge alone is not enough for giving it up. He also needs to have this tendency towards this decision, but unless he has a dogged determination to stop this, he won’t be able to quit.

Beside every effect that an action might have in the world, it can be indicated that it is followed by two other effects called as the first and the second reflexive effects. The first one is an effect of one action on its own foundation and the second one is the effect of action on the current position of its agent. Putting it into other words, some effects refer to the foundation of a specific action and reinforce them, while others

just refer to the current situation agent. It is also possible, when an agent ponder about his actions, the foundation of his action will be strengthen as well.

### **Student-Teacher Relationship in Framework of Action**

Based on this framework of action, humans are considered as agents and therefore, the relationship between two humans is the kind of an agent-agent relationship called 'inter'action'. Asymmetrical interaction and symmetrical interaction are two different forms of interaction. Concentrating on the existing relationships in educational environment, these two forms of interactions can also be recognized. Symmetrical interaction is taking place among the student-student, teacher-teacher and teacher-parents interaction and asymmetrical one is the interaction between teacher and student (Bagheri, 2012).

As mentioned earlier, the desired model considers student and teacher two poles of education, interacting asymmetrically with each other, and this means the teacher is neither the sage on stage with the students being just receivers of knowledge, nor the guide on the side with students ruling the whole procedure in a classroom. There is a bilateral relationship going on between teacher and student, in which both parts are endowed with the privilege of being influential in the educational process. However, the action of teacher is not comparable with action of students, while the teacher has obtained more knowledge and experience and the foundation of his actions are more sophisticated. He carries the knowledge and values, which have been persistent and consistent. Because of this fact the interaction is addressed as an asymmetrical one. Yet, It is needed to note that the condition of teacher being more knowledgeable and experienced, should not let the students be passive learners in the classroom, and this interaction therefore, needs to maintain their independence as individuals who can act based on their own cognitions, interests and wills and, there is a possibility of change both for the student and teacher all the time during the educational process. Unpredictability from the other side is reserved in interaction, not only for teachers but also for students (Bagheri, 2010).

Accordingly, the school is not and should not be understood as a place for just learning, but also as a place for teaching. (Biesta 2012). To apply this interaction more in the learning-teaching process it can be said that a school is a place for 'learning from' in terms of interaction and a place for 'teaching to'.

Based on this framework of action both teacher and student are considered as agents, thus neither is superior to the other one and the focus would be on the interaction between them. The exploding interest in the Internet among teachers, students and other learning communities during the past few years has put this interaction through some challenges. These challenges will be argued in the following.

### **Challenges of Student-Teacher Interaction Considering Cyberspace**

Since the early years of its emergence the Internet has sparked curiosity, debates, and dreams revolving around its likely role in our everyday life, and it is needed to recognize its effects in education, as Burbules(2001) indicates we are in midst of a transformative moment in education. And as Kellner (1999) asserts the information and communication technologies have enormous implications for the organization of

schools, for funding opportunities, for new forms of pedagogy, for new approaches to curriculum, and as the main issue of this paper, for new forms of agencies and therefore new forms of interaction between teacher and student.

As mentioned earlier, the interaction between teacher and student is based on considering them both being agents and acting according to a foundation with three aspects. From the other hand, all these new innovative technologies and especially the virtual space has caused some positive and negative effects on this interaction. The emphasis of this paper would be on the challenges for this interaction. The fact that students have a whole new source of information and place of communication even before they start school, puts the teacher's role into some challenges that it might be needed to set some new missions for the teacher to maintain the desired asymmetrical interaction.

In order to identify the challenges threatening this interaction, we need to return to the definition of action and its aspects and determine the influences of cyberspace on each aspect. What has changed in students and teachers cognitions, interests and wills when they are using the Internet? Does this have any influences on their agency?

Cognitive foundations of action is in relation with the information the learners may obtain in the world. As Siemens (2005) asserts, "educators today face challenges relating to: (a) defining what learning is, (b) defining the process of learning in a digital age, (c) aligning curriculum and teaching with learning and higher level development needs of society (the quest to *become better people*), and (d) reframing the discussion to lay the foundation for transformative education—one where technology is the enabler of new means of learning, thinking, and being". Today we experience knowledge in different formats and at a different pace. We are exposed to an overwhelming amount of information. It is here—where knowledge growth exceeds our ability to cope—that new theories of knowledge and learning are needed. And it is in this space that content inflation might be a hindrance to the interaction between teacher and student, (Bagheri, 2012) since the teacher is no more the only carrier of knowledge and value.

The instruments we use determine our way of thinking and shape them (ref). Those children growing up using these new technologies and computer have different forms of thinking. Their mind structures are not sequential anymore, but parallel. Today's competitors of books and school structures are digital technology and virtual space (Hirumi, 2009). In this situation technology does not have a marginal and supplementary role (Strong and Hutchin 2009). While blogs, wikis, podcasts, and social bookmarking are receiving much attention, the real point of interest lies not in the tools themselves, but in what the growth of the tools represents and what the tools enable. The prominence will continue to grow in as knowledge grows in complexity (Siemens, 2005). In this case, when a student's role is switched from a relatively dependent and passive one towards self-accessed, self-paced, and self-directed learning, the teacher's role undergoes, in tandem, an evolution from 'sage on the stage' to 'guide on the side' that is caused by the dominance of instrument (Bagheri, 2012). Consequently, for holding the interaction in its best way the teacher need to prevent the passivity of himself against all these instruments and keep the dominancy himself.

The Internet is asserting the idea of globalization and it is one of its best symbols as

well, therefore the knowledge and information obtained from the Internet are quite universal rather than local and lack the cultural plurality which exist in localized knowledge learning systems. Everyone from everywhere in the world has also access to the same entertaining and cultural feeds and this universal model neglects the local characteristics of interaction too.

From what Dreyfus believes, hyperlinks indeed have been levelled meaningful differences. Relevance and significance have disappeared, and this is an important part of the attraction of the Web. Nothing is too trivial to be included. Nothing is so important that it demands a special place. (Dreyfus, 2001)

What avoids levelling through the net is choosing between the interesting sites and the boring ones, and every interesting thing would be one click away. Life consists in fighting off boredom by being a spectator at everything interesting in the universe and in communicating with everyone else so inclined (ibid). The process could continue to the condition that everyone is interested in almost similar stuff, that sometimes it is impossible to figure out if this interest is one of the real interests originating from innate dispositions of the student, or it is becoming his interest just because of the sharing feature in the Internet, letting everyone knows about every interest. In other words, the Internet make the interests of people more impulsive than reflective.

On the other hand, when students today enter schools, they do so with a different mindset from even a few years ago. Video games, mobile phones, instant messaging, and online social networking have been constant for many teenagers. And it is much harder for the teacher to make them excited about the content using the same old methods.

Considering both these mentioned challenges and now focusing on the decision making step, there is this possibility that students would resign from making decisions and unconsciously devolve the process to the Internet. They are going to be lost among all the information and interesting things that Internet is choosing for them, if they were not aware of it. On the other hand,

Returning to the teacher's role in the class room in presence of these influences, and his interaction with students, now his previous role as a carrier of knowledge does not help anymore and he also loses this track, in which students' interests are shaping and consequently his human agency will be threatened, as the students has found new interactive ways of learning, that there's no big need for a teacher and they are harder to be engaged.

In order to keep the asymmetrical interaction stable, it is needed to accompany some shifts in every aspect of action relative to the changes these aspects are facing considering virtual space.

### **Shifts**

In order to retain this interaction in cognition level, the teacher now needs more to authorize this flood of information that learner can gain using Internet. Years ago while the resources of knowledge was so limited the process of valuation and authorization was embedded in the teaching-learning process. The rapid evaluation in this connective world is something that teachers need to do instead of transmitting

knowledge and for the learners it is constructing the network of knowledge that plays an important role in their learning process. “Knowledge and cognition are distributed across networks of people and technology and learning is the process of connecting, growing, and navigating those networks”<sup>5</sup>. Learning is now the action of assimilation and comprehension of the whole system and their connection. Accordingly, teacher-student interaction would survive when the teacher teaches how to authorize and value knowledge and the student learns how to connect and construct his networked knowledge. They need to know they can and should as an agent choose among the data, those worth knowing about them and those they intend to learn. The Internet cannot give this insight to the students in any ways.

In order to avoid the passivity of students facing the flood of information, the task of making them produce something on the Internet can restore their agency and give them the chance to share something unique with the world. This way prevents the challenge of being consumers of information.

The face to face interaction has local requirements and it is concrete (Bagheri, 2012). It is crucial that the teacher emphasizes more on these local characteristics of knowledge and fill the part that internet cannot meet. The new term of flipping the class room emerges when the old mission of teacher would now be the students’ homework, like listening to the lectures and reading texts and the class procedure would have more accent on the personal interaction of students with teacher.

Facing dispositional challenges now the teacher has to use more reflective models in order to keep the desired interaction safe. The teacher’s mission with regard to the passivity of interests should be to make the students conscious about their interests and teach them to find the sources of these interests. In this level the teacher does not need to judge whether the interests are reasonable or not. He should also try to ignite genuine interest of students, which are correspondent with their characteristic and type.

And putting all shifts together and coming back to decision making moment as a whole, when the other aspects are reflected in this process, we figure out humans’ decision making bases are in rapid change, while new information and dispositions are surrounding us, and thanks to Internet our actions have a broad domain of effects. Now the mission of teacher is to postpone the actions of students for more consideration and contemplation, while there is not much distance between the action and its effect when something is done in the Internet.

Additionally, in the classroom students should have this chance to make decisions and practice the process of decision making with a holistic perspective. Again, the role of the teacher is significant and restore both his and students agency.

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<sup>5</sup> Siemens & Tittenberger, 2009, p. 11

## Conclusion

Regarding Virtual space and its consequences on education, redefined student-teacher interactions in a framework of action. In cognition foundations of action, we should accompany some shifts: From knowledge transferring models to knowledge authorizing ones. From knowledge receiving models to knowledge constructing ones and from universal knowledge models to local knowledge ones. In emotional action foundations, we should perform these shifts: from non-reflective emotional models to more-reflective ones. From simple models of interests to complex heterogeneous models of interests. Finally, concentrating on action and decision-making, we should do these shifts: from atomic views to holistic approaches, from simple models to complex models and from impulsive models of action to reflective ones.

## References

Bakardjieva, Maria(2009)'Subactivism: Lifeworld and Politics in the Age of the Internet',*The Information Society*,25:2,91 — 104

The logo for the International Association for Educational Research (IAFOR) is centered on the page. It consists of the lowercase letters "iafor" in a light blue, sans-serif font. The logo is partially enclosed by a large, light blue circular arc that starts from the bottom left and curves towards the right. A smaller, light red circular arc is positioned above the "iafor" text, partially overlapping the blue arc.

*Making of a Japanese Traditional Automation, Namely Renrigaeri, and its  
Application to Education*

Kazuki Hiro, Toshio Hira, Mitsunori Ozaki

Nara National College of Technology, Japan

0761

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## 1. Introduction

Karakuri dolls are Japanese traditional automata. They move with spiral springs or gravity forces instead of electric motors or fuel engines. Therefore, in a view of energy consumption, the movements have been applied to many manufacturing factories in Japan.

For example, a Karakuri doll called Chahakobi ningyo carries a cup of tea, and goes back as a result of complex mechanisms with many parts such as gears. The movement was applied to machines which carries automobile parts. The machines have brought cost down of electric power and contributed prevention of global warming (Ikeda 2011).

Thus, Karakuri dolls are not only interesting but also important for students who study technologies to understand their mechanisms.

Our college of technology accepts junior high school graduates and educates students on technologies for five years to become researchers or engineers who will contribute to the development of industrial technologies. The fifth year students research themes about technologies for graduation.

On the other hand, our college has implemented public relations such as science classes for junior high school students or elementary school students in order to increase the number of applicants for entrance to our college. It has been said that one of serious problems in Japan is children's phobias about technologies or science (Ogura 2013).

Thus, we adopted reproduction of Karakuri dolls as themes which the fifth year students researched for graduation, and as teaching materials in science classes for the fourth, fifth, and sixth year pupils in elementary school. It is difficult to reproduce Karakuri dolls because of the complex mechanisms. So, we selected Renrigaeri which seemed to have simplest mechanism.

## 2. Renrigaeri models

We made Renrigaeri models which were different a little from original Renrigaeri. Figure 1 shows original Renrigaeri produced by Hosokawa in the Edo era (Tachikawa 2002). The original Renrigaeri, hereafter we call it Renrigaeri, consists of two puppets, two wooden cylinders into which an amount of mercury is put, and stairs. The puppets continue to go down the stairs by force moments on a basis of weight of mercury; the upper puppet jumps over the lower one and lands the stairs. By far, many Renrigaeri models have been reproduced by many people. Because the mercury was harmful, metal balls have been often used in them (Suzuki 1994). So, we also used metal balls. The balls rolled in two plastic straws used as cylinders.



Figure 1 Renrigaeri (Tachikawa 2002)

Photo 1 shows our Renrigaeri model. The metal balls move in the cylinders, the upper puppet jumps over the lower one and lands the stairs. The action is repeated.

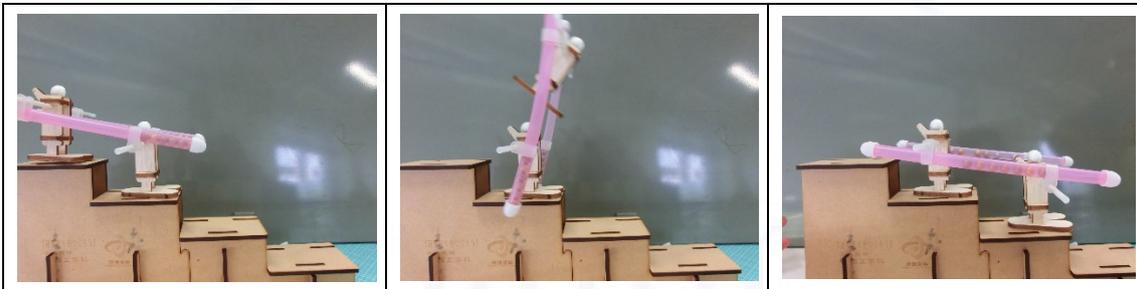


Photo 1 Renrigaeri model: two puppets continue to go down stairs as shown in the left, the middle, and the right.

Photo 2 shows puppets. The puppet was assembled from these parts made of Balsa woods. Balsa wood was very light. The parts were cut by a laser cutting machine. The cutting machine facilitated that the puppets were almost the same in size.

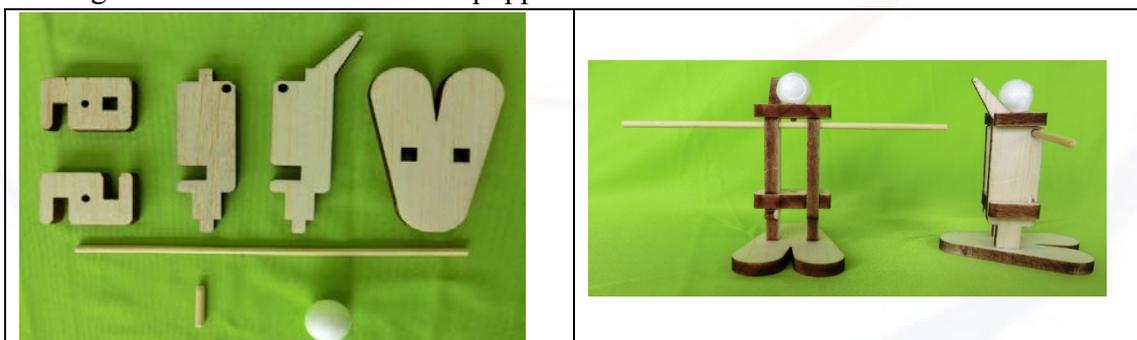


Photo 2 Puppet: parts (left) and whole (right)

Photo 3 shows cylinders. The cylinders were made of straws, nylon cramps, caps, and metal balls. They were commercially available.



Photo 3 Cylinders: parts (left) and whole (right)

Photo 4 shows stairs. Parts of stairs were made of middle density fiberboard. They were cut with a laser cutting machine. The fiberboard was hard and suitable as a material of stairs. The laser cutting machine facilitated that the pitch of the stairs was almost the same in length.

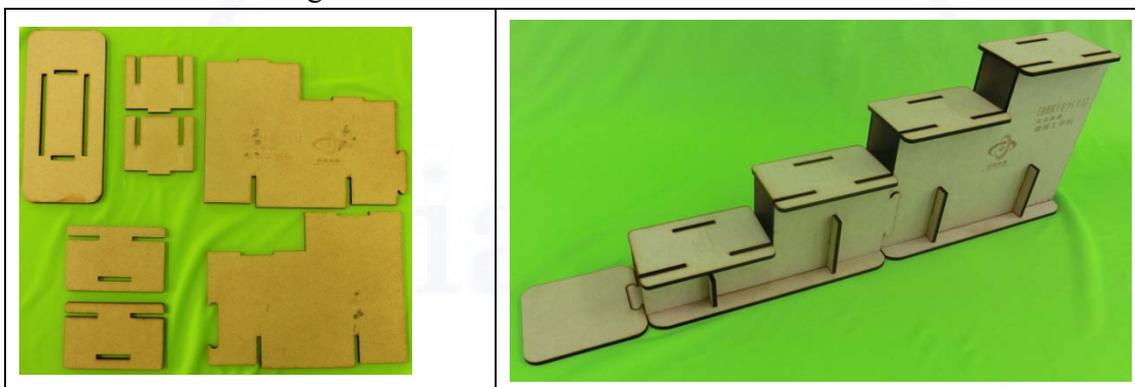


Photo 4 Stairs: parts (left) and whole (right)

By assembling the parts, we made a Renrigaeri model as shown in Photo 5. Some know-how was required to move the model smoothly. The two cylinders and the two rotating axes were parallel, respectively. Furthermore, the lengths from ends of cylinders to nylon clamps were the most crucial. When they were too short or too long, the model did not move at all or failed to jump or failed to land.



Photo 5 Pair of puppets having two cylinders

### 3. Science class

In a science class, we decided that the number of pupils was 20 at most. Therefore,

we prepared 20 sets of manuals and parts. Furthermore, we collected staff to help us and trained the staff so that the staff could assemble the parts. We prepared time schedule, too. In a manual, we used many photos and little sentences so that pupils were not frustrated.

As staff, we collected about 10 students in our department. On the basis of the manuals, the staff assembled the parts and moved the Renrigaeri models in advance. It was important for them to understand how to move the Renrigaeri models smoothly.

About 20 pupils participated in a science class which had four hours. They were eager to move the models smoothly as if they played with toys. Table 1 shows results of questions to pupils. Good results were obtained.

Table 1 Results of questions to 20 pupils

Questions	Results
Could you assemble Renrigaeri?	Yes 100% No 0%
Could you move Renrigaeri?	Yes 100% No 0%
Could you understand manual?	Yes 100% No 0%
Could you feel that staff was kind?	Yes 100% No 0%
Was staff's explanation good?	Yes 100% No 0%

#### 4. Theme for graduation

In our department, the fifth year students research themes about mechanical engineering for a year. In a theme, improvements of Renrigaeri models and understanding of their mechanisms have been carried out. Figure 2 shows a mechanism to move Renrigaeri models. M1 and M2 are force moments. Counterclockwise moment, M1 is caused by weights, while clockwise moment, M2 is by that of the upper puppet. When an angle  $q$  between the ground and the upper puppet is achieved, M1 becomes larger than M2, and the model starts to move. The mechanism is similar to that of a seesaw.

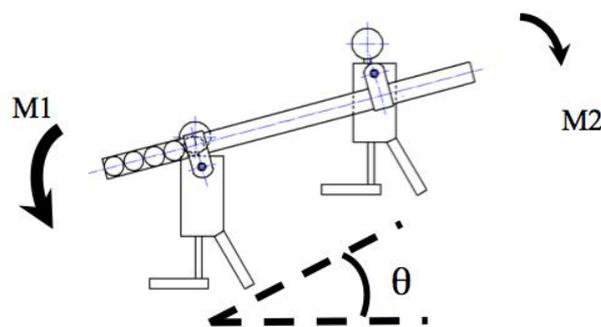
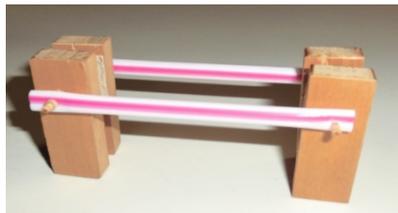


Figure 2 Mechanism of Renrigaeri models:  $M1 > M2$  at  $q$   
 The mechanism and the know-how described in previous section (see Photo 5)

could be understood by many trials and errors of models. Photo 6 shows models made from 2009 to 2012. The first model in 2009 could not be moved. But we could understand how to move Renrigaeri. This model was important. The 2nd model in the same year could be moved and used for a science class in the year. In the third model in 2010, the puppet was hand-made, and we knew that two puppets should have the same size. In the 4th model, the puppets were made with a laser cutting machine so that they had the same size. Thus, models developed with year by many trials and errors including analyses of results of the trials.



(a) First model in 2009



(b) Second model in 2009



(c) Third model in 2010



(d) Fourth model in 2011

Photo 6 Evolution of Renrigaeri models from 2009 to 2011

## 5. Conclusion

Renrigaeri models were reproduced as themes for the fifth year students to graduate and made for science classes to pupils in elementary schools. The models were suitable teaching materials for the pupils. Many trials and errors including analyses of results of the trials were indispensable to evolution of the models.

## References

- Ikeda, S. (2011) "The Robot Research and Development of the Taking of a Lesson from the Past", *Journal of RSJ*, Vol. 29 No.6, pp. 506-507 (in Japanese)
- Ogura, Y. (2013) "Problems in Science Education at Secondary School Level and the Gender Difference", *Journal of IEEJ*, 133(9), Vol. 133 No.9, pp. 604-607 (in Japanese)
- Tachikawa, S. (2002), *Zusetsu Karakuri*, Kawade Shoboshinsha, Tokyo. (in Japanese)
- Suzuki, K. (1994), *Karakuri Ningyo*, Gakushukenkyusha, Tokyo. (in Japanese)

*Structural Equation Modeling for Korean Elementary School Students'  
Achievements of English Capacity*

Jongsup Jun

Hankuk University of Foreign Studies, Korea

0762

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Abstract

The goal of this paper is to find out causal relationships among Korean elementary school students' achievements of English capacity, their motivation and attitude for study, their self-directed methodology, the level of self-esteem, and such parent factors as parental education. For this, we used the Korean government's official survey data of 5,059 4th graders and their parents in the year of 2010. The questionnaire for students comprises 190 detailed questions about each home/school environments, psychological factors like the level of self-esteem, academic performances of English. Likewise, the questionnaire for parents comprises 94 questions about their education, socio-economic status, and general thoughts about life and education. Using the survey data, we built up a causal model for Korean elementary school students' English capacity, where (1) parents' educational background affects the level of parental support, (2) the level of parental support affects the children's self-esteem, (3) the children's self-esteem affects their motivation for study, (4) the motivation affects their attitude and study methods, (5) the attitude and study methods affect their English capacity. The proposed model includes several causal chains or paths, and is called a path model. We analyzed the path model using the structural equation modeling technique, and found out that children's level of self-esteem played an important role in boosting up their positive attitude and self-directed methods of study, that the attitude made a significant contribution to their English capacity, but that the self-directed method did not explain much of the children's English capacity.

**Keywords:** English education, Korean elementary school, Structural Equation Modeling, causal model

## 1. Introduction and Research Methods

The goal of this paper is to find out causal relationships among Korean elementary school students' achievements of English capacity, their motivation and attitude for study, their self-directed methodology, the level of self-esteem, and such parent factors as parental education, etc.

For this, we used the SERII Dataset, which is the Korean government's official survey data of 5,059 4th graders and their parents in the year of 2010. The questionnaire for students comprises 190 detailed questions about each home/school environments, psychological factors like the level of self-esteem, academic performances of English. Figure 1 shows the cover page and one content page of the detailed 15-page-long questionnaire for students.

Figure 1. Questionnaire for students (Sample pages)

**2010년 서울교육중단연구 1차년도 조사**

**학생 설문지 [초등학교]**

<b>학교명</b>	<b>초등학교</b>		
<b>반</b>		<b>번호</b>	
<b>성명</b>			

안녕하십니까?

서울시교육청에서는 서울대학교 연구진과 함께 서울교육의 발전 방향을 모색하고자 중장기 연구를 계획하고 있습니다. 이 연구의 결과는 서울교육의 실태를 파악하고, 궁극적으로는 서울교육의 최우선 보육 하기 위한 정책 수립의 기초자료로 활용될 것입니다.

본 설문지는 1차년도 "학생 설문지"로서 학생의 학교생활과 가정생활, 방과후학교 및 사교육 참여, 학습시간, 여가시간, 컴퓨터 사용, 공부와 진로에 대한 생각 등이 조사됩니다. 본 설문은 시험이 아니며 서울교육 발전을 위한 중요한 자료가 되므로 성실하고 솔직하게 응답하여 주시기 바랍니다.

본 설문에서 학생의 성명을 적는 것은 부모님의 응답과 연계해서 분석하기 위해서일 뿐이며, 자료의 처리나 결과 분석과정에서 학생의 개인 정보가 드러나는 일은 결코 없을 것입니다.

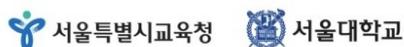
조사에 참여해 주신 데 대해 감사드리며, 여러분의 응답은 서울교육의 발전을 위한 우리 모두의 노력에 큰 보탬이 될 것입니다.

2010년 7월

설문지에 관해서 문의하실 내용이 있으면, 다음으로 연락주시기 바랍니다.

☎ 문의처 : 서울특별시교육청 기획예산담당관실(02-3999-343)

서울대학교 박현정 교수(02-880-7638)



7. 학생이 현재 학교에서 받고 있는 "수학 수업"에서의 태도에 대한 질문입니다. 해당하는 곳에 로 표시하십시오.

항 목	전혀 그렇지 않다	그렇지 않다	보통이다	그렇다	매우 그렇다
나는...					
1) 수업 시간에 집중한다	<input type="checkbox"/>				
2) 수업 시간에 적극적으로 참여한다	<input type="checkbox"/>				
3) 숙제를 꼬박꼬박 한다	<input type="checkbox"/>				
4) 수업 시간에 배운 것을 복습한다	<input type="checkbox"/>				
5) 수업 시간에 배운 내용을 미리 예습한다	<input type="checkbox"/>				

8. 학생이 현재 학교에서 받고 있는 "수학 수업"의 분위기와 만족도에 대한 질문입니다. 해당하는 곳에 로 표시하십시오.

항 목	전혀 그렇지 않다	그렇지 않다	보통이다	그렇다	매우 그렇다
1) 수업 시간에 학생들이 시끄럽고 무질서하다	<input type="checkbox"/>				
2) 수업 시간에 학생들은 수업에 집중한다	<input type="checkbox"/>				
3) 나는 이 수업 시간이 재미있고 기다려진다	<input type="checkbox"/>				
4) 이 수업은 내 공부에 도움이 된다	<input type="checkbox"/>				

9. 학생의 현재 "담당 선생님"에 대한 질문입니다. 해당하는 곳에 로 표시하십시오.

항 목	전혀 그렇지 않다	그렇지 않다	보통이다	그렇다	매우 그렇다
우리 담당 선생님은...					
1) 아는 것이 많으시다	<input type="checkbox"/>				
2) 학생들이 열심히 공부하기를 원하십니다	<input type="checkbox"/>				
3) 수업을 열심히 하십니다	<input type="checkbox"/>				
4) 수업내용을 알기 쉽게 잘 가르치십니다	<input type="checkbox"/>				
5) 학생들이 수업 중에 얼마나 잘 이해하고 있는지 확인하십니다	<input type="checkbox"/>				
6) 과제를 꼼꼼하게 검사 하십니다	<input type="checkbox"/>				

15-3

Also, the questionnaire for parents comprises 94 questions about their education, socio-economic status, and general thoughts about life and education. . Figure 2 in the next page shows the cover page and one content page of the detailed 10-page-long questionnaire for students.

Using the survey data, we tested a causal model for Korean elementary school students' English capacity, in which (1) parents' educational background affects the level of parental support, (2) the level of parental support affects the children's self-esteem, (3) the children's self-esteem affects their motivation for study, (4) the motivation affects their attitude and study methods, (5) the attitude and study methods affect their English capacity. To test a causal model, we used the the structural equation modeling technique.

## 2. The Nature of the SERII Dataset

The data collection was conducted in 2010 by Seoul Education Research & Information Institute, which is the official research center of education of the city government of Seoul, Korea. The purpose of data collection was to investigate the relationship between students' academic capacity and their cognitive and emotional development, and to apply the result of the study to educational policies of the city government of Seoul.

To collect the data, they chose 108 elementary schools in Seoul, and obtained data from 5,059 4th graders and their parents. In fact, the original dataset also includes the survey results of teachers, school principals, and the school administration. But we used only the questionnaires from students and their parents for the purpose of this study.

Figure 2. Questionnaire for parents (Sample pages)

**2010년 서울교육중단연구 1차년도 조사**

**학부모 설문지 (초등학교)**

<b>학교명</b>	<b>초등학교</b>
<b>반</b>	<b>번호</b>
<b>자녀명</b>	

안녕하십니까?

서울시교육청에서는 서울대학교 연구진과 함께 서울교육의 발전 방향을 모색하고자 중·장기 연구를 계획하고 있습니다. 이 연구의 결과는 서울교육의 실태를 파악하고, 궁극적으로는 서울교육의 책무를 높여 가기 위한 정책 수립의 기초자료로 활용될 것입니다.

본 설문지는 1차년도 "학부모 설문지"로서 학생의 가정환경과 학교교육에 대한 요구, 자녀교육에 대한 지원 및 교육관 등이 조사됩니다. 본 설문은 서울교육 발전을 위한 중요한 자료가 되므로 성실하고 솔직하게 응답하여 주시기 바랍니다.

본 설문에서 자녀의 성명을 적는 것은 자녀의 응답과 연계해서 분석하기 위해서일 뿐이며, 자료의 처리나 결과 분석과정에서 부모님이나 자녀의 개인 정보가 드러나는 일은 결코 없을 것입니다.

조사에 참여해 주신 데 대해 감사드리며, 여러분의 응답은 서울교육의 발전을 위한 우리 모두의 노력에 큰 보탬이 될 것입니다.

2010년 7월

설문지에 관해서 문의하실 내용이 있으면, 다음으로 연락주시기 바랍니다.  
 ① 문의처 : 서울특별시교육청 기획예산담당관실(02-3999-3431)  
 서울대학교 박헌정 교수(02-880-7638)

**III. 자녀의 학교 교육**

14. 부모님(보호자)께서는 설문지를 가져온 자녀가 다니고 있는 학교에 대해 만족하십니까?

㉠ 전혀 그렇지 않다

㉡ 그렇지 않다

㉢ 보통이다

㉣ 그렇다

㉤ 매우 그렇다

15. 설문지를 가져온 자녀가 다니고 있는 학교에 대해 부모님(보호자)께서는 다음 사항에 어느 정도 동의 하십니까?

항 목	전혀 그렇지않다	그렇지 않다	보통이다	그렇다	매우 그렇다
1) 학교는 자녀의 학습 능력을 잘 길러주고 있다	<input type="radio"/> ㉠	<input type="radio"/> ㉡	<input type="radio"/> ㉢	<input type="radio"/> ㉣	<input type="radio"/> ㉤
2) 학교는 자녀의 흥미와 적성을 잘 개발해 주고 있다	<input type="radio"/> ㉠	<input type="radio"/> ㉡	<input type="radio"/> ㉢	<input type="radio"/> ㉣	<input type="radio"/> ㉤
3) 학교 선생님들은 학생들을 가르치는 데 열의가 있다	<input type="radio"/> ㉠	<input type="radio"/> ㉡	<input type="radio"/> ㉢	<input type="radio"/> ㉣	<input type="radio"/> ㉤
4) 학교에서는 자녀의 수준에 맞게 잘 가르치고 있다	<input type="radio"/> ㉠	<input type="radio"/> ㉡	<input type="radio"/> ㉢	<input type="radio"/> ㉣	<input type="radio"/> ㉤
5) 학교는 자녀에 대한 개별상담과 진로지도를 잘 하고 있다	<input type="radio"/> ㉠	<input type="radio"/> ㉡	<input type="radio"/> ㉢	<input type="radio"/> ㉣	<input type="radio"/> ㉤
6) 학교는 학습에 불편함이 없는 시설과 환경을 갖추고 있다	<input type="radio"/> ㉠	<input type="radio"/> ㉡	<input type="radio"/> ㉢	<input type="radio"/> ㉣	<input type="radio"/> ㉤
7) 학교는 자녀의 안전을 위해 노력하고 있다	<input type="radio"/> ㉠	<input type="radio"/> ㉡	<input type="radio"/> ㉢	<input type="radio"/> ㉣	<input type="radio"/> ㉤

16. 설문지를 가져온 자녀가 다니는 학교는 부모님(보호자)에게 자녀의 학교생활에 대한 정보를 충분히 제공하고 있습니까?

㉠ 전혀 그렇지 않다

㉡ 그렇지 않다

㉢ 보통이다

㉣ 그렇다

㉤ 매우 그렇다

10-4

The huge dataset was coded into analyzable formats, and was distributed to professional researchers, who were mostly university professors and doctoral fellows, through the peer-reviewed assessment process of the research proposals.

For the purpose our study, we chose around 100 variables (or factors) from the original SERII dataset, built up a causal model with causal chains, and tested the model by the application of the Structural Equation Modeling (=SEM) procedure.

### **3. Structural Equation Modeling (SEM)**

The Structural Equation Modeling or SEM is also called Covariance Structure Analysis. SEM enables researchers to test and assess complicated causal relations and interactions among variables. SEM can also estimate possible amounts of measurement errors and various indirect effects among variables in the model, which cannot be estimated by linear regression. SEM is usually considered as an outstanding, if not the best, analytical tool in empirical sciences these days, and has become a standard tool for data analysis in such fields as sociology and business management.

SEM tests a causal model which includes numerous causal chains. The causal model is also called a path model. In a path model, a path is a graphical representation of a causal chain between two variables by using an arrow mark, i.e. [Cause]→[Effect]; e.g. [Big\_Income]→[ Purchase\_of\_a\_Luxury\_Car]. A path model of various paths aims at principled explanation of empirical phenomena. Therefore, SEM is a powerful technique of statistics that tests (or works on) a path model.

### **4. A Proposed Path Model for Students' Achievements of English Capacity**

By using AMOS, a standard tool for SEM among many researchers these days, we built up an initial path model in Figure 3.



Figure 4. Drawing the initial model in AMOS

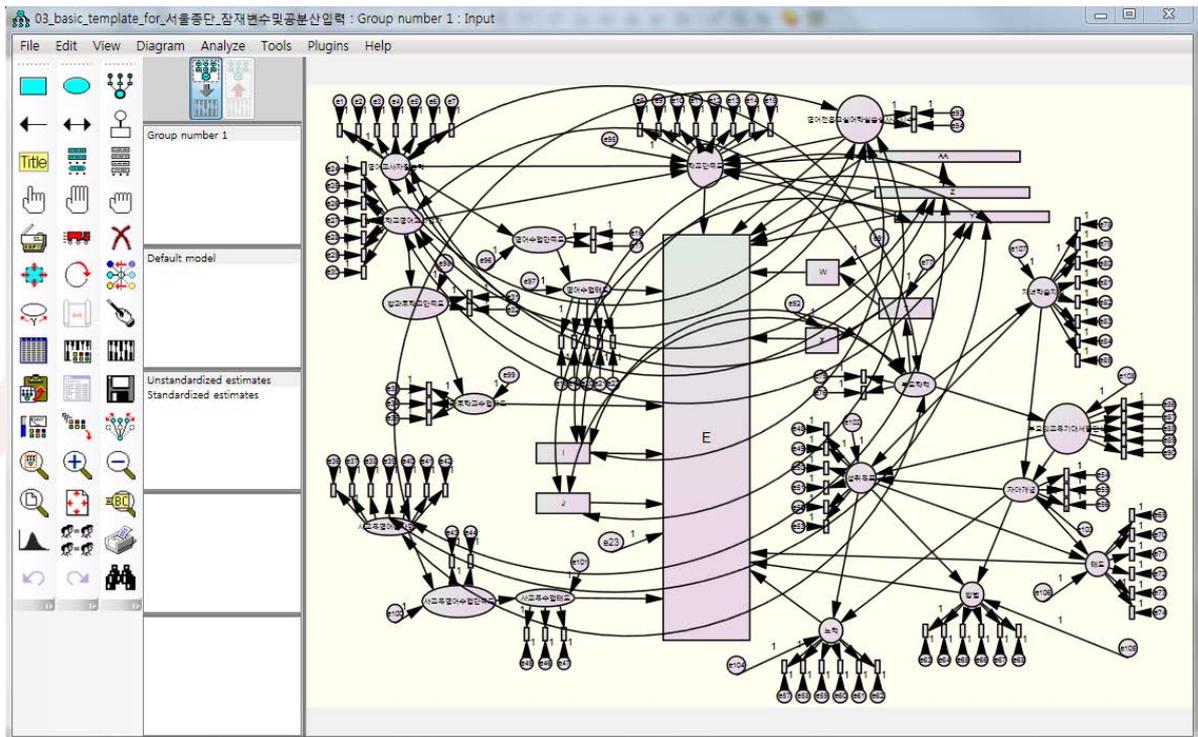
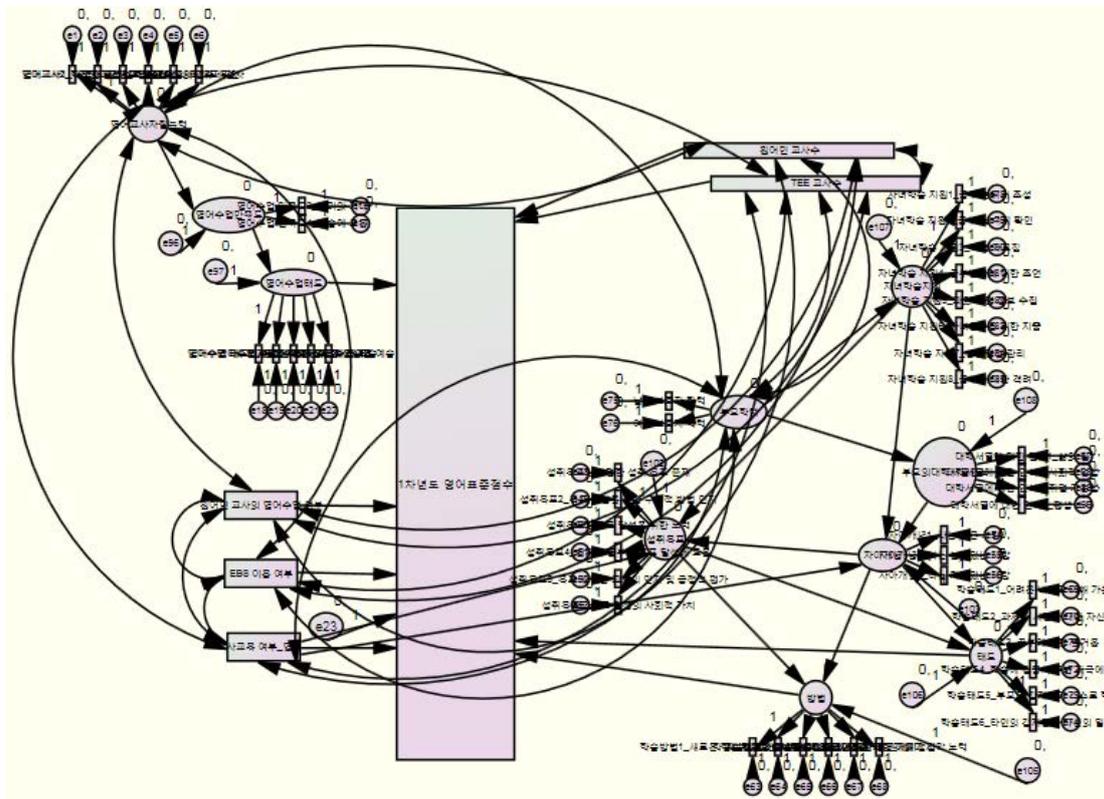


Figure 5. A revised path model for Korean Elementary School Students' achievements of English capacity in AMOS





(4) <Parents' level of education> influences <parental support for children's education> (.345); <parental support for children's education> affects children's <self-esteem> (.243) and <motivation (.099)> a lot; and the <self-esteem> and <motivation> affects <students' attitude> (.303 from 'self-esteem' + .541 from 'motivation') significantly. In the end, the 'attitude' factor is a single most important factor for elementary school students' achievement of English capacity.

(5) The greater the <self-esteem>, the bigger the <motivation> (.506).

(6) Elementary school students' <self-directed method> is greatly affected by <self-esteem> (.243) and <motivation> (.522), but the <self-directed method> itself does not influence the overall achievement of English capacity significantly (.002).

## 6. Conclusion

We found out that children's level of self-esteem played an important role in boosting up their positive attitude and self-directed methods of study, that the attitude made a significant contribution to their English capacity, but that the self-directed method did not explain much of the children's English capacity.

iafor

## References

- Bollen, Kenneth A. (1989). *Structural Equations with Latent Variables*. Wiley-Interscience.
- Byrne, Barbara M. (2009). *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming, 2<sup>nd</sup> ed.* Routledge.
- Garson, David G. (2012). *Structural Equation Modeling*. Statistical Associates Publishers.
- Hoyle, Rick H. (2012). *Handbook of Structural Equation Modeling*. The Guilford Press
- Kline, Rex B. (2010). *Principles and Practice of Structural Equation Modeling, 3<sup>rd</sup> ed.* The Guilford Press.

The logo for 'iafor' is centered on the page. It consists of the lowercase letters 'iafor' in a light blue, sans-serif font. The text is enclosed within a large, light blue circular arc that is partially visible at the top and bottom. A red arc is also visible on the left side of the page, overlapping the blue arc.

*A Multi-level Modeling Approach to Predict Teaching Quality, Student's Satisfaction,  
School Climate on Student Achievement in Thailand*

Penpak Pheunpha

Ubonratchathani University, Thailand

0768

The Asian Conference on Education 2013

Official Conference Proceedings 2013

Abstract

This study explores theoretical and empirical research concerning school effectiveness and school improvement, in particular, improving student achievement through school process as dependent variable on changing teaching quality, school climate and students' satisfaction. A multi-level model of school practice consisting of student grade point average (GPA, dependent variable), teaching quality, students' satisfaction, and school climate (independent variables) was implemented. The relationship between dependent variable and independent variables were examined by multilevel regression analysis of data from 1,852 students studied in ninth-grade secondary schools in Bangkok and Nonthaburi Provinces, Thailand. A questionnaire was used to ask students about their demographics, GPA, teaching quality, students' satisfaction, and school climate. The study found that school educational climate and student's satisfaction were important to relate directly to student achievement. However, of note is that teaching quality was not found to be significant to student learning, so it may be recommended that the educators, policy-makers and administrators in Thailand realize and assist renewal of secondary schools with the intention of improving learning outcome in classroom.

**Keywords:** teaching quality, student's satisfaction, school climate, student achievement, multi-level modeling

## **Introduction**

How to improve the educational quality is a much-talked-about concern in many countries and to this Thailand is no exception. As the Education Ministry of Thailand is considering a reform of the curriculum to make teaching performance and school practice for enhancing school effectiveness to be the same as in the developed countries, education reform in Thailand focusing on teaching quality seems to be an significant first step towards achieving a higher student outcome, because the instructional techniques produce student achievement higher than other factors (Wallin, 2003). School effectiveness research has flourished since 1979, and has drawn considerable political support both in Thailand and internationally. This kind of research seeks to indentify the factors that contribute to education effectiveness and especially those that schools can implement (Creemers & Reezigt, 2005). The research on school effectiveness pinpoints those characteristics or factors that are important for effectiveness at difference levels of the system (Papanastasiou, 2008), such as student learning, teaching quality and school climate. The previous school effectiveness research found that sustainable school improvement requires a school and classroom culture to have elements such as teaching quality that focuses on child centered instruction, incorporation of student beliefs, attitude, and the satisfaction level of both teachers and students, (Cavanagh & Waugh, 2004). If we know the special factors of an effective school, then we will be in a position to improve underperforming schools by encouraging them to adopt the factors of effective schools (Luyten et al., 2005).

Although a number of studies have been conducted to examine of student satisfaction on GPAs, school climate on student achievement, and teaching quality on student performance, there are only few studies that have examined the effect of students' satisfaction, teaching quality and school climate on GPA together. Because of varying statistical methodological procedures, difference was found in the countries examined, whose findings were therefore inconsistent. The purpose of this study is to investigate the influence of students' satisfaction, teaching quality and school climate on student achievement by using multi-level regression modeling and a database of students in Thailand.

Considering this, there are questions to answer before implementing any kind of reform, and one of these is the way the social place of school behaves in Thailand, and how it can change. How do students and teachers interact in this place? This paper focuses on the issues that create a positive school environment, most often referred to as "School Climate." I will first outline the literature concerning the meeting point of different variables involved in creating a positive School Climate, and then compare how these studies understand how teachers and students interact in different classroom settings. Then, I will consider how student achievement is affected by different variables, as well as how learning outcome can be predicted by the initiation of different variables. I will follow this with a presentation of the findings, which show how the variables interact. This will help us to answer the question: what is the point of connection between school climate, teacher attitude and student performance.

## **Literature Review**

In trying to improve overall achievement and decrease the achievement gap, an education reform proposed has been to evaluate and analyze the teaching quality of instructors (Porter, 2005). Other studies using value-added methods linking teacher quality to student outcomes in schools suggest that the effects of teachers may be quite substantial (Rowan et al., 2002; Wright et al., 1997). Most of the research on teaching quality to student outcome found positive associations with student achievement (Fetler, 1999; Murnane & Phillips, 1981; Rowan, et al., 2002). However, studies of the relationship between teaching certification and student performance show a negative correlation (Fetler, 1999). Goldhaber & Brewer (2000) found a difference in the mathematics achievement to regularly teaching quality for high school, yet the variance in these findings from the others are likely due in part to the fact that certification is operationalized quite differently across states and countries.

One such factor that affects student achievement is students' satisfaction with the school experience (Tessema, et al. 2012). Student satisfaction is a significant part of the effort to successfully higher education (Hermans, et al., 2009). For this study, the researcher selected student satisfaction as a variable, because it is an important facet of successfully higher education. If students are viewed as consumers of higher education, their satisfaction is crucial (Moro-Egido & Panades, 2008). One way through which school quality are measured is by student outcomes, such as GPAs, dropout rates and graduation rates. One such factor that affects student achievement is students' satisfaction with the school experience. Therefore, student satisfaction is of compelling interest to schools and colleges as they seek to continually improve the learning environment for students, meet the expectations of their constituent groups and legislative bodies, and show their school effectiveness (Tessema, et al., 2012; Moro-Egido & Panades, 2008; Russell, et al., 2009).

Freiberg and Stein (1999) described school climate as the heart and soul of the school, also and the essence of the school that draws teacher and students to love the school and to want to be a part of it. "School Climate" refers to the quality and character of school life, and School Climate is based on patterns of students, parents and school personal's experience of school life and reflects norm, goals, value, interpersonal relationships, teaching and learning, and organizational structures (Dary & Pickeral, 2013). Samdall, et al. (1998) and DiStefano (2008) mentioned school climate as a factor to increase student achievement, and it has been receiving increased attention in the school improvement literature. The studies by Greenberg (2004), Furlong, et al. (2004), and Sebring, et al. (2006), and Secker & Lissitz (1997) have demonstrated that the dimensional nature of school climate and its relationship to achievement.

## **Research questions**

The two research questions for this study are:

1. Is student achievement associated with three groups of independent variables: group teaching quality; group student's satisfaction; and group school climate?

2. How are inferences about the association between and strength and direction four groups of independent variables and learning outcome (GPA: grade point average)?

### **Identification of Variables**

This study examined variations among schools using hierarchical linear models (HLM) to test whether school practices such as teaching quality, school climate and students' satisfaction affect student achievement. Multilevel models allowed this researcher to analyze on two-levels, when five students' satisfaction indicators have been taken into account in regression model at the student-level, and then school level variables were considered. School level factors consisted of average School Climate per school, and mean teaching quality per school were studied for in this study. All independent variables were measured by a questionnaire with a five-point Likert scale ranging from 1, "Very disagreed or very dissatisfied," to 5, "Very agreed or very satisfied".

### **Dependent variable specification**

**Grade Point Average:** The student's GPA was defined as a calculation of the average of all of a student's grades for all semesters and courses completed up to a given academic term depended on a scale from 1.00 to 4.00. Each course grade was changed to a number A = 4, B = 3, C = 2, D = 1 and an average was taken for all the course the student has completed to date. For this study the students' GPA were calculated based on all the courses the student completed 4 semesters in their high school by asking 9<sup>th</sup>-grade students about their 8<sup>th</sup>-grade GPAs average. Although the student academic achievement has been evaluated using number for 200 years (Metz, 2011), GPAs may be calculated differently among schools and countries. However, GPAs may be recorded differently when they are used for class ranking, or for university admission in Thailand, as sometimes this is a way to distinguish the students' success in education and to evaluate school performance. They are also used to predict achievement. For example, Metz (2011) makes a prediction of secondary students' achievement and satisfaction in online course based on the GPA. Another study by Desimone & Long (2010) examined teacher effects and the achievement gap, asking: does teacher and teaching quality influence the achievement gap between black and white, and high and low, SES students in the early grades? The study revealed that types of instruction and teacher quality variables were not related to achievement growth.

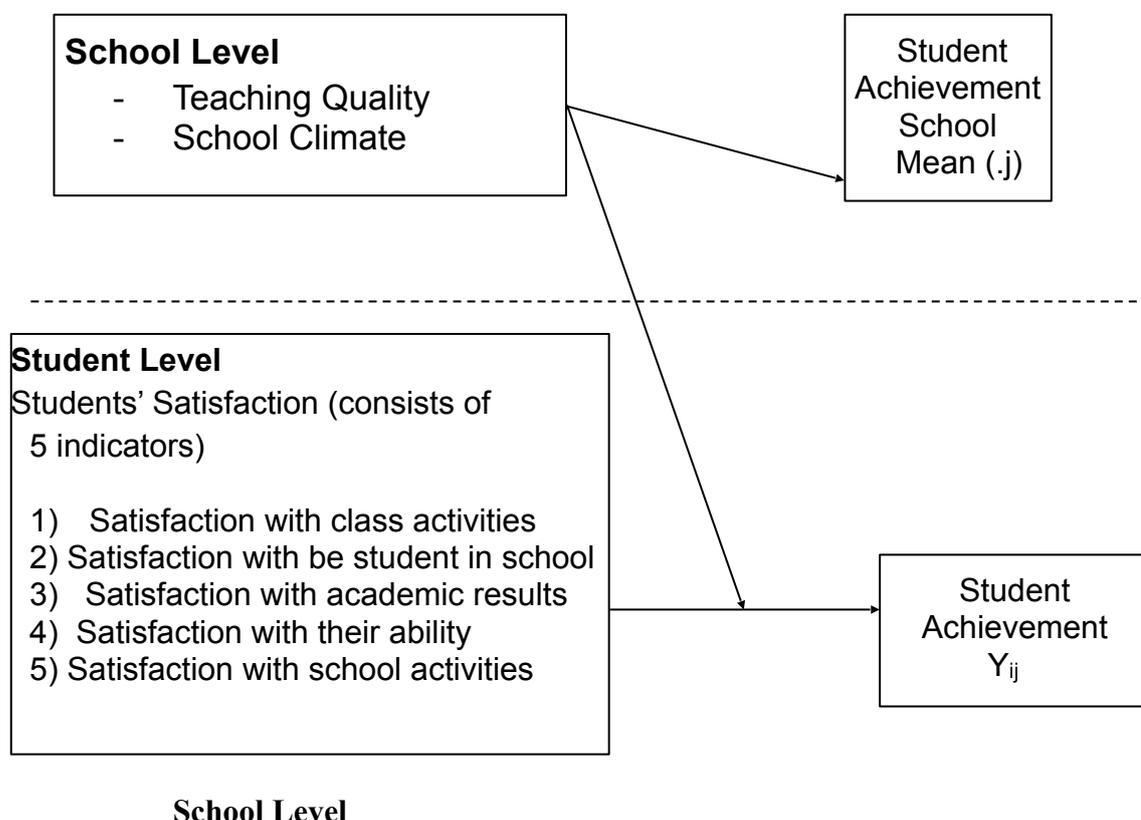
### **Independent variable specification**

**Students' satisfaction:** There are 27 items on students' satisfaction survey. The dimensions of the students' Satisfaction were measured with assessment using a 5-point Likert scale, with items such as: satisfaction with class activities; satisfaction with student in school; satisfaction with academic results; satisfaction with their ability; and satisfaction with school activities. Other questions directly addressed student attitude, such as: Class rarely respond promptly to students' needs; I am satisfied to be student in this school; and the behavior of school usually instills confidence in me. I used constructs similar to the line of questioning made by Similar

to Keavene and Young (1997), Kara (2004), and Metz (2011) to measure the hypothesized effects in the study.

**Teaching Quality:** There are 17 items on teaching quality in the survey. Overall teaching quality was obtained from the teaching quality literature from Department of Education Science and Training, Australian Government (2004); Scheerens (2000); Desimone & Long (2010); and Hattie (2003). The dimensions of the teaching quality were measured with assessment using a 5-point Likert scale, having items such as: Teachers present information or skill clearly and enthusiastically; Teachers keep lessons task oriented; Teachers have expectations for students to achieve, and Teachers provide positive feedback.

**School Climate:** There are 10 items on the school climate survey. School Climate, as a factor to increase student achievement, has received increased attention recently. Information on overall school climate was obtained from the school climate literature, for example from the papers written by the Department of Education Science and Training, Australian Government (2004), Secker. & Lissitz (1997), Scheerens (2000), and DiStefano, et al. (2008). The dimensions of the school climate were measured with assessment using a 5-point Likert, having questions such as: The classroom and school environment are conducive to learning; The school community has a shared vision for the school; There is meaningful and positive leadership; The school is a place of learning for all; and There is a strong focus on teaching and learning. Details of all predictors and dependent variable are presented in this conceptual framework (Figure 1):



## Student

### Level

#### Figure1: A Conceptual Framework for Analysis

Where  $Y_{ij}$  is grade point average for student  $i$  in school  $j$   
 $\bar{Y}_j$  is mean grade point average for school  $j$

### Methodology

#### Sample

Data for this study were drawn from Pheunpha (2012) to develop value-added models for measuring school effectiveness in Thailand. A two-staged random sampling was used to select one classroom from each of 50 schools, in five academic areas in secondary schools in Bangkok and Nonthaburi Provinces, Thailand. However, only 49 schools have data completed for analysis. In order to use data file in HLM, the research had to delete cases that were missing data on any of the variables. When accounted for good data from students, the working database was reduced to 1,852 cases from 2,000 students. All students studied in the third Mutthayomsuksa (equal to ninth-grade in the United States,  $n = 1,852$ ) in the first semester in 2010. There were 21 to 54 students per classroom. The average number of students per school was 38. The sample was 54.8% female and 45.2% male. 22 (42.9%) of the 49 schools were private schools and 27 (57.1%) were public schools.

#### Instrument

A questionnaire was used in this study collect information from students about grade point average (GPA), teaching quality in each school, student's satisfaction, and school climate. These ordinal 5 scales were developed in this study. Analysis of the data obtained from a sample of 1,852 students in two sector secondary schools (public and private schools) was used to develop the original instrument. As applied in the study, the questionnaire was considered to involve a dependent variable and three dependent variable groups. Independent variables were organized according to the three elements of schoolwork in the theoretical model. Items were answered on a five-point Likert scale with the items Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree (scored from 5 to 1, respectively). So as to make the questionnaire reliable and valid, the researcher reviewed previous research and theory (primarily as outlined in the *Literature Review* section) that related research variables and reviewed the definition, after then made the first draft questionnaire. Since the purpose and structure of this questionnaire are important, as is the wording of the questions, 10 scholars in the fields of education research, assessment, Thai language and psychology were consulted, and from them I was directed to the Item Objective Congruence (IOC) of Rovinelli & Hambleton (1977) to use as a template in creating the questionnaire.. Content experts evaluated each item by giving the item a rating of 1 (for clearly measuring), -1 (clearly not measuring), or 0 (degree to which it measures the content area is unclear) for each independent variable indicators. If IOC of each factor is  $\geq 0.5$ , that factor will be accepted to use in this research and it send out as a test to pilot study 34 students. The Cronbach Alpha reliability of the questionnaire was 0.86.

### **Data Analysis**

The data analysis of this study was as an example of what Fraenkel and Wallen (2001) describe as ‘correlation research’. This research describes a phenomenon by examining relationship between variables, without manipulating any variables. The components of the theoretical model (Figure1) were treated as either dependent or independent variables. A survey-type instrument was administered to provide ordinal data on all 7 groups of the independent variables. The multilevel regression analysis was applied to test hypothesized relationships between the dependent and independent variables.

The first step was to run a model without independent variables, which the research called the “unconditional model.” It was fitted to provide estimates of the variance components at each level using a hierarchical linear model, and to present useful preliminary information about how much variation in the outcome lies within and between schools and to offer the reliability of each school’s sample mean as an estimate of its true population mean (Raudenbush and Bryk, 2002). The unconditional model for student and school levels can be stated in the equations as follows:

#### **Level-1 model**

$$Y_{ij} = B_{0j} + R_{ij}$$

#### **Level-2 model**

$$B_{0j} = G_{00} + U_{0j}$$

Where:  $Y_{ij}$  is the grade point average of student  $i$  in school  $j$ ;  $B_{0j}$  is the mean score in school  $j$ ; and  $R_{ij}$  is the deviation of each student score from the mean score in the school (the random student effect). At the school-level model (level-2), school means are a function of a grand mean for all schools in the samples ( $G_{00}$ ), and a random effect specific to each school ( $U_{0j}$ ). The mixed unconditional model is this:

$$Y_{ij} = G_{00} + U_{0j} + R_{ij} \quad \text{where: } U_{0j} \text{ and } R_{ij} \text{ are assumed normally}$$

distributed.

The second step undertaken was to estimate effects in which independent variables were added to the level-1 and level-2 equation in the unconditional model. At this stage, a step-up approach was followed to examine which of the seven independent variables was significantly influenced by GPA (at  $p \leq 0.05$ ). The seven variables of Satis1, Satis2, Satis3, Satis4, Satis5, teaching quality and school climate were also found to be important and significant in previous studies. Therefore, I included them at this stage. A set of equations we call the “Hypothetical Model” is as the same as one-way ANCOVA with random effects in Hierarchical Linear Models of Raudenbush and Bryk (2002).

### Descriptive Statistics Results

The un-standardized means, standard deviations, minimum, and maximum values of all variables in the two levels (student and school levels) are included in Table 1. Coefficients for these variables can be interpreted as the change in student achievement expected for 1 unit (1 unit = 1 standard deviation) change in the variable. Among the 1,852 students in this study, the average GPA is 3.04, standard deviation is 0.74, ranging from 0.21 to 4.00. The average Satisfaction Indicator-1 is 3.40, standard deviation is 0.68, the average Satisfaction Indicator-2 is 3.66, standard deviation is 0.62, The average Satisfaction Indicator-3 is 3.55, standard deviation is 0.53, The average Satisfaction Indicator-4 is 3.40, standard deviation is 0.62, and The average Satisfaction Indicator-5 is 3.53, standard deviation is 0.55 respectively, ranging from 1.00 to 5.00. At school level variables, the average teaching quality is 3.74; standard deviation is 0.24 and the average school climate is 3.61, standard deviation is 0.26. Descriptive statistics for contributory variables both student and school levels are shown in Table 1.

Table 1: Descriptive statistics for contributory variables in Hierarchical Linear Model

Variables	Number	Mean	S. D.	Min	Max
<b>STUDENT LEVEL</b>					
Satis1_Class Activi	1852	3.40	0.68	1.00	5.00
Satis2_Be Student	1852	3.66	0.62	1.00	5.00
Satis3_Achievemet	1852	3.55	0.53	1.00	5.00
Satis4_Ability	1852	3.40	0.62	1.00	5.00
Satis5_School Activi	1852	3.53	0.55	1.00	5.00
GPA (output)	1852	3.04	0.74	0.21	4.00
<b>SCHOOL LEVEL</b>					
TQ (teaching quality)	49	3.74	0.24	3.06	4.31
SC (School Climate)	49	3.61	0.26	2.88	4.11

Correlations between predictor variables and student achievement (GPA) are present in Table 2. The highest association is GPA and the second indicator of students' satisfaction. The next strongest relationships when ranking with correlation magnitude are GPA and the third students' satisfaction indicator, the fifth satisfaction indicators, the fourth satisfaction indicators, school climate, and teaching quality, respectively. For associations among predictors, all correlation magnitudes are moderate association at significant 0.01, so they do not have multicollinearity issue ( $r > 0.80$ ) between independent variables.

Table 2: Correlations between predictor variables and GPA

Variables	GPA	Satis1	Satis2	Satis3	Satis4	Satis5	TQuality	SClimate
<b>GPA</b>	1.00							
<b>Satis1</b>	0.13**	1.00						
<b>Satis2</b>	0.23**	0.49**	1.00					
<b>Satis3</b>	0.22**	0.54**	0.48**	1.00				
<b>Satis4</b>	0.14**	0.41**	0.48**	0.47**	1.00			
<b>Satis5</b>	0.16**	0.52**	0.40**	0.58**	0.47**	1.00		
<b>TQuality</b>	0.02**	0.57**	0.46**	0.44**	0.38**	0.39**	1.00	
<b>SClimate</b>	0.07**	0.54**	0.47**	0.54**	0.47**	0.50**	0.64**	1.00

\* Correlation is significant at the 0.05 level, \*\* Correlation is significant at the 0.01 level.

## Research Results

### *Analysis results of unconditional model*

The first step was to analyze the data using a combination of statistical methods that has no adjusting predictors. This model is equivalent to the one-way ANOVA with random effects. In the fixed Effect, from Table 3 below, the grand-mean GPA across 49 schools is 3.009. This has a standard error of 0.074 and yields a 95% confident interval of  $3.009 \pm 1.96() = (2.496, 3.522)$ . The t-test in unconditional model is 40.886,  $p < 0.01$ , which indicates that the grand mean,  $\gamma_{00}$ , is not null. Table 3 also lists restricted maximum likelihood estimates of the variance components. At the student level,  $(r_{ij}) = 0.287$ . At the school level,  $\tau_{00} = 0.263$ , which is the variance of the true school means,  $\beta_{0j}$ , around the grand mean,  $\gamma_{00}$ . One of the purposes of estimating this unconditional model is to assess the degree of GPA variances between schools. A common metric for these variances is the Intra-Class Correlation (ICC), which measures the proportion of the variance in GPA between schools. The ICC can be computed as follows:  $ICC = \tau_{00}/(\tau_{00} + \sigma^2) = 0.263/(0.263 + 0.287) = 0.4781$ , indicating that there is about 47.81% variance student achievement (GPA) between schools and about 51.83% between students. For the unconditional model output,  $\rho = 0.97$ , indicating that the sample means tend to be quite reliable as indicators of the true school means (Raudenbush & Bryk, 2002). The value of chi-square ( $\chi^2$ ) is 1701.5 with 48 degrees of freedom. The null hypothesis is implausible ( $p < 0.01$ ) which is indicating significant variation does exist among schools in their achievement (GPA). Why do schools differ, then? I then modified the model by adding Level 1 and Level

2 variables to hypothetical model.

Table 3: Final estimation of fixed effects and random effects for the unconditional model

Fixed Effect	Coefficient	Standard Error	T-ratio	d.f.	p-value	
Intercept GPA,G00	3.009	0.074	40.886	48	0.000	
Random effect	Standard Deviation	Variance Component	Total variance	df	Chi-square	P-value
INTERCEPT, U0	0.513	0.263	0.550	48	1701.484	0.000
Level-1, R <sub>ij</sub>	0.536	0.287				

The outcome variable is Grade Point Average.

***Analysis results of the hypothetical model***

The second step was to estimate effects when seven independent variables were added to unconditional model. I added students’ satisfaction indicator of 1 to 5, with the variables of teaching quality and school climate to the unconditional model and called the new model the “Hypothetical Model.” This is equivalent to the means-as-outcomes regression sub models of Raudenbush and Bryk (2002). For the results shown in Table 5 below, the chi-square statistics reported are based the on 49 schools that had sufficient data for computation. Fixed Effects, as can be seen here, are a robust measure of GPA, whose mean value is 3.008,  $t = 44.051$ , and with a  $p < 0.01$ , which indicates that the grand mean,  $\gamma_{00}$ , is not null. School climate is the best indicator, which is positively related to school mean GPA,  $\beta_2 = 0.983$ ,  $t = 2.656$ . On average, an increase in student GPA of 0.983 points is expected when school climate improved increase 1 unit (1 unit = 1 standard deviation). Students’ satisfaction with their academic results (satisfaction indicator 3) is the second variable that is strongly associated with GPA: on average, an increase in student GPA of 0.188 point is expected when student s’ satisfaction indicator 3 increase by 1 unit. Students’ satisfaction with be student (indicator 2) is also strongly associated with GPA: on average, a decrease in student GPA of 0.07 point is expected when Students happy to be student in their school increases 1 unit, next students’ satisfaction with their ability (satisfaction indicator 4) is the third variable that is strongly associated with GPA: on average, an increase in student GPA of 0.052 point is expected when student s’ satisfaction indicator 4 increase by 1 unit, and the last variable associated with GPA is students’ satisfaction with classroom activity and classmate (satisfaction indicator 1) is strongly associated with GPA: on average, an increase in student GPA of 0.049 point is expected when student s’ satisfaction indicator 1 increase by 1 unit.

The school-level effect is presented in the random effect part in Table 4 below. The residual between schools,  $\sigma_{00} = 0.235$ , is substantially smaller than the unconditional model,  $\sigma_{00} = 0.263$ . The researcher found a new  $B_{0j}$  value, which is an average 3.008 GPA then when we use a 95% confidence interval as shown below, we discovered that

95% of the students with the aforementioned variables will fall into a GPA range of (2.50, 3.52). This data shows strongly that these independent variables affect the students' GPA values.  $\gamma_{00} \pm 1.96 = 3.008 \pm 1.96() = (2.50, 3.52)$ .

Table 4: Final estimation of fixed effects and random effects for the hypothetical model

(with robust standard errors)

Fixed Effect	Coefficient	Standard error	t-ratio	df	p-value	
GPA -intercept, G00	3.008**	0.068	44.051	46	<b>0.000</b>	
Teaching Quality, G01	-0.362	0.351	-1.031	46	<b>0.308</b>	
School Climate, G02	0.983*	0.370	2.656	46	<b>0.011</b>	
Satis Indicator1, G10	0.049*	0.023	2.123	1844	<b>0.034</b>	
Satis Indicator2, G20	0.070**	0.026	2.685	1844	<b>0.008</b>	
Satis Indicator3, G30	0.188**	0.036	5.235	1844	<b>0.000</b>	
Satis Indicator4, G40	0.052*	0.024	2.190	1844	<b>0.029</b>	
Satis Indicator5, G50	-0.15	0.026	-0.585	1844	<b>0.558</b>	
Random Effect	Standard Deviation	Variance Component	total observed variance	df	$\chi^2$	p-value
GPA-intercept, $U_{0j}$	0.486	0.235	0.506	46	1564.521	<b>0.000</b>
Level-1, $R_{ij}$	0.521	0.272				

The schools' mean GPAs varied significantly after adding seven independent variables. If these variables had no effect on school achievement, we would expect  $\sigma_0 = 0$ , where  $\sigma_0$  is residual variance. However, the statistics has produced a value of 1564.521,  $p < 0.001$ , indicating that the null hypothesis is rejected and some variance between mean schools GPA remains to be explained.

From Table 5 below, the reliability of the GPA intercept ( $\rho$ ) is 0.969, indicating that the mean of this sample tends to be reliable predictors of the true school means. When we compared the amount of variance around each parameter in the unconditional model with the remaining unexplained variance in the hypothetical model, we discovered that 10.6% of the school variance in GPA could be explained by students' satisfaction, teaching quality, and school climate. Given the 96.9% reliability of the hypothetical model, these seven predictor variables appear to account for 10.2% of the total variance in the model (see Table 5). Before adding for seven independent variables, the correlation between an individual student's GPA and the mean GPA of his/her school was 0.4781. After these independent variables were accounted for, this correlation was reduced to 0.464. In other words, the relationship between student achievement and school achievement was dropped by around 3 %.

Table 5: Reliability and variance for the hypothetical model

Hypothetical Model	Y <sub>ij</sub> is GPA (grade point average of 9 <sup>th</sup> grade students)		
Reliability (R <sub>xx'</sub> ) (Parameter Variance./Total Variance)	B0	0.969	
Proportions Parameter Variance Explained (R <sup>2</sup> ) = (σ <sub>00 (uncon)</sub> - σ <sub>00 (hypo)</sub> ) / σ <sub>00 (uncon)</sub>	Tau U0	0.106	(0.263 - 0.235) / 0.263
Total Variance Explained by Model (R <sub>xx'</sub> *R <sup>2</sup> )	Tau U0	0.102	(0.957*0.106)
ICC = τ <sub>00</sub> / (τ <sub>00</sub> +σ <sup>2</sup> )	0.23 / (0.235+0.272) = 0.464		

### Conclusions and Recommendation for Further Research

Based on the empirical finding in this study, it can be concluded that students' satisfaction with academic results in school (Satis3), students' satisfaction being a student (Satis2), students' satisfaction with their ability (Satis4), students' satisfaction with class activity (Satis1), and school climate have a significant effect on student achievement, despite the size effect of these variables on student achievement being small. But they have been shown to be important for student achievement. The study results demonstrate that students' satisfaction and school climate be meaningful and positive association with student academic achievement. Understanding students' satisfaction and school climate can benefit students by promoting achievement, reducing dropout rates, and increasing positive attitudes.

One surprising result of the study was that teaching quality does not have an important effect on GPAs. At first, this might seem to contradict conventional wisdom for example Joyce et al (1988); Creemers et al (1994) and Hill et al. (1996), These study found that the quality of teaching is foremost in effective schooling, it has been shown that student learning is enhanced when teachers can use appropriate teaching strategies and understand of differences in students' learning styles, Teachers are the heart of education. Determine the quality of the students and the quality of the population in the society. where it is thought that better teachers equals better teaching. how can teaching quality actually benefit students? In Thailand, since the Act of 2004, teachers must enhance their career by doing research. This is the main criterion to pursue their job. However, in order to do good research, they have to practice and work hard. They do not have much time to prepare and create class activities. This causes serious morale reduction of teachers, and takes away focus from their primary duty of instructing students. This may be the reason why teaching quality does not benefit students and promote achievement in Thailand. Therefore, the educators, policy-makers and administrators in Thailand should realize and assist reform of secondary schools, with the intention of improving learning outcome in classroom.

However, this research is only seven independent variables to student achievement and sample is small (49 schools). Samples are also only from Bangkok and Nonthaburi Provinces which in the central region in Thailand. Further research should focus on the non-school variables and have a larger sample that includes all school regions in Thailand. That is, additional research is needed to examine the robustness of the results and generalizations. Moreover, including an in-depth interview of teachers also may reveal data that strengthens the findings of this study.

## References

- Australian Government (2004). *Schooling issues digest school effectiveness*. [Online]. Available from: <http://dest.gov.au/schools/publications/2004/index.htm> [2013, June 23]
- Cavanagh, R. F., & Waugh, F. R. (2004). Secondary school renewal: the effect of classroom learning culture on educational outcomes. *Learning Environment Research*, 7, 245-269.
- Cremers, B. (1994). *The Effective Classroom*. London: Cassell.
- Creemers, B., & Reezigt, G. J. (2005). *Linking school effectiveness and school improvement: the background and outline of the project*. *School Effectiveness and School Improvement*, 16(4), 359 -371.
- Dary, T., & Pickeral, T. (2013). School climate practices for implementation and sustainability. School Climate Practice Brief, No.1, New York, NY: National School Climate Center. (Available on: [www.schoolclimate.org/publications/documents/SchoolClimatePractice Briefs-2013.pdf](http://www.schoolclimate.org/publications/documents/SchoolClimatePracticeBriefs-2013.pdf))
- Desimone, L. M., & Long, D. (2010). Teacher effects and the achievement gap: do teacher and teaching quality influence the achievement gap between black and white and high-and low-SES students in the early grades?. *Teacher College, Columbia University*, 112(12), 3024-3073.
- DiStefano, C., Monrad, D. M., May, R. J., Smith, J., Gay, J., Mindrilla, D. Gareau, S., & Rawis, A. (2008). Parent, student, and teacher perceptions of school climate: investigation across organizational levels. *Paper presented at the annual meeting of American Educational Research Association*. New York, New York.
- Fetler, M. (1999, March). High school staff characteristics and mathematics test results. *Education Policy Analysis Archives*, 7(9). Retrieved from <http://epaa.asu.edu/epaa/v7n9.html>
- Fraenkel, J. R., & Wallen, N. E. (2001). *How to design and evaluate research in education* (5<sup>th</sup>.ed.), Sydney, Australia: McGraw Hill.
- Furlong, M. J., Greif, J. L., Bates, M. P., Whipple, A. D., Jimenez, T. C., & Morrison, R. (2004). Development of the California school climate and safety survey-short form. *Psychology in the Schools*, 42(2), 137–149.
- Greenberg, E. (2004). Climates for learning. Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.
- Goldhaber, D. D., & Brewer, D. J. (2000). Does teacher certification matter? high school teacher certification status and student achievement. *Educational Evaluation and Policy Analysis*, 22, 129–145.
- Hattie, J. (2003). Teacher makes a difference: what is the research evidence?. *Distinguishing expert Teachers from Novice and experienced Teachers*. University of Auckland, Australian Council for Educational research.

- Hermans, C. H. Haytko, D. L., & Mott-Stenerson, B. (2009). Student satisfaction in web-enhanced learning environment, *Journal of Instructional Pedagogies*, 1, 1-19.
- Hill, P., Rowe, K., & Holmes-Smith, P. (1996). *The Victorian quality schools project: a study of school and teacher effectiveness*. Melbourne: Center for Applied Educational Research, The University of Melbourne.
- Joyce, B. & Showers, B. (1988). *Student achievement through staff development*. New York: Longman.
- Kara, A., & DeShields, O. W., (2004). *Business student satisfaction, intentions and retention in higher education: an empirical investigation*. MEQ, Vol 3, Fall 2004.
- Keaveney, S. M., & Young, C. E., (1997). The student satisfaction and retention model (SSRM). *Working paper, University of Colorado at Denver*.
- Luyten, H., Visscher, A., & Witziers, B. (2005). *School effectiveness research: from a review of the criticism to recommendations for further development*. School Effectiveness and School Improvement, 16(3), 249 – 279.
- Metz, K. F., (2011). Predictors of secondary students' achievement and satisfaction in online course. *A Dissertation Present to the Faculty of the School of Education, Liberty University*.
- Moro-Egido, A. I., & Panades, J. (2010). An analysis of student satisfaction: full-time versus part-time students. *Social Indicators Research*, 96(2), 363-378.
- Murnane, R. J., & Phillips, B. R. (1981). Learning by doing, vintage, and selection: Three pieces of the puzzle relating teaching experience and teaching performance. *Economics of Education Review*, 1, 453–465.
- Papanastasiou, C. (2008). *A residual analysis of effective school and effective teaching in mathematics*. Studies in Educational Evaluation, 34, 24-30.
- Pheunpha, P. (2012). Development of multi-level value-added models for measuring school effectiveness. *Journal of Education Studies*, Chulalongkorn University, Thailand, 40(2), 197-212.
- Porter, A. C. (2005). Prospects for school reform and closing the achievement gap. In C. A. Dwyer (Ed.), *Measurement and research in the accountability era* (pp. 59–95). Mahwah, NJ: Erlbaum.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and Data analysis methods. (second edition)*. California: sage Publications, Inc.
- Rovinelli, R. J., & Hambleton, R. K. (1977). On the use of content specialists in the assessment of criterion-referenced test item validity. *Dutch Journal of Educational Research*, 2, 49-60.
- Rowan, B., Correnti, R., & Miller, R. (2002). *What large-scale survey research tells us about teacher effects on student achievement: Insights from the Prospects study of elementary schools*. Philadelphia: Consortium for Policy Research in Education.
- Russell, M. & Lehman, A. (2008). Predicting student satisfaction with academic advising. *The Mentor: An Academic Advising Journal*, 10(1) (January – March, 2008)
- Samdall, O., Nutbeam, D., Wold, B., & Kannas, L. (1998). Achieving health and educational goals through schools – a study of the importance of the school climate and the

- students' satisfaction with school. *Health Education Research*, 13(3), 383-397.
- Scheerens, J. (2000). *Improving school effective*. Amsterdam: North-Holland Publishing Company. (Paris, UNESCO).
- Schreiner, L. A. (2009). Linking student satisfaction and retention. Retrieved on July 21, 2013 from <http://www.unefsu.edu/uts/reports/LinkingStudentSatis0809.pdf>.
- Sebring, P. B., Allensworth, E., Bryk, A. S., Easton, J. Q., & Luppescu S. (2006). The essential supports for school improvement. Retrieved June 9, 2013, from [http://ccsr.uchicago.edu/content/publications.php?pub\\_id=86](http://ccsr.uchicago.edu/content/publications.php?pub_id=86).
- Secker, C. E., & Lissitz, R. W. (1997). Estimating school value-added effectiveness: consequence of respecification of hierarchical linear model. *Paper presented at the American Educational Research Association Annual Meeting. Chicago.*
- Tessema, M., Ready, K., & Malone, M., (2012). Effect of gender on college students' satisfaction and achievement: the case of a midsized midwestern public university. *International Journal of Business and Social Science*. 3(10).
- Wallin, J. (2003). *Improving school effectiveness*. ABAC Journal, 23(1), 61 – 72.
- Wright, S., Horn, S., & Sanders, W. (1997) Teachers and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education*, 11(1), 57–67.

*Development International Professional Qualification Standards in Computer Field  
for Academic Personnel Rajamangala University of Technology*

Suwut Tumthong, Pallop Piriyasurawong, Namon Jeerungsuwan

King Mongkut's University of Technology North Bangkok, Thailand

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Abstract

The purpose of the research study is to develop international professional qualification standard in computer field for academic personnel of Rajamangala University of Technology (RMUT). The objectives of the research study are (1) to develop the international professional qualification standard, and (2) to evaluate the appropriateness of the standard. The samples are comprised eighteen experts from nine universities of Rajamangala University of Technology. The experts were selected by purposive sampling to evaluate the appropriateness of the international professional qualification standard in computer field for academic personnel of RMUT. The research methods are (1) conducting the document research and (2) conducting a focus group of experts from RMUT and industry sector.

The research results found that the international professional qualification standard in computer field is consisted of two parts: (1) the Certificate Level and (2) the Functional Competency. For the first part, the certificate level is consisted of three levels which are Basic Level (four certificates), Specialist Level (six certificates), and Professional Level (eight certificates). The opinions of the experts toward the appropriateness of all three levels were good. The second part is the functional competency consisted of five competencies which were: (1) Knowledge, (2) Training pass, (3) Certificate, (4) Instructors (5) Trainers. The experts' opinions toward competency (3), (4), and (5) high. ( $\bar{X} \geq 3.50$ ) However, their opinions toward competencies (1) and (2) moderate. ( $\bar{X} < 3.50$ )

**Keywords:** The International Professional Qualification Standard in Computer Field, The International Certificate in Computer Field, Functional Competency of international level in Computer Studies, Personnel Rajamangala University of Technology

## 1. Introduction

It is necessary for Thailand to promote the personnel in the field of computer for by enhancing their knowledge, skills, and capabilities in terms of international performance, especially the academic personnel in tertiary level. Personnel in this area of study also, personally, would like to develop themselves in order to get a world-class functional competency so that they will be ready for the changes and progresses in Information and Communication Technology (ICT). To develop computer personnel in order to reach the international standard, Thailand has specified the performance model which conforms to the Policy of Information and Communication Technology in Thailand during 2011-2020 (ICT 2020) (Ministry of Information and Communication Technology, 2011). The policy focuses on Thailand's smart development, the implementation of economic and social activities that are based on knowledge and intelligence, and the importance of ICT personnel development. It addresses the development of ICT personnel who has the standardized capability and specialization in the second strategic plan. Moreover, in Thailand's Second Model Scheme of Information and Communication Technology (ICT) (Ministry of Information and Communication Technology, 2009) during 2009-2013, there is a specification of the first strategic plan about the development of ICT personnel and general public to have the capabilities in creating, manufacturing and using information considerably and knowingly. In the ICT Model Scheme of ASEAN 2015 (ASEAN ICT MASTERPLAN 2015), the development of capital human resource, in which its main point is ICT skills training and the certification of ICT skills, is specified in the fifth strategic plan (Ministry of Information and Communication Technology, 2013). Moreover, the second model scheme of Information and Communication Technology (ICT) of the Ministry of Education during 2009-2013 (Ministry of Education, 2009) prescribes the development of personnel in the field of ICT that conforms to the strategies primarily related to the first strategy and focuses on how to create the man power who are able to use the Information and Communication Technology effectively. Nowadays, the requirement of personnel in computer engineering is relatively high as they are very important for state's development. However, the production of the personnel in field of computer engineering is very limited in the education sector, especially in the tertiary level. There are currently two standard for producing personnel in this field according to Thai Qualifications Framework for Higher Education (TQF: HEd) and the qualification framework for graduates in the area of computer 2009 (Ministry of Education, 2009).

Computer Certificate is an instrument for guaranteeing the level of the personnel competency in IT so that their customers and employers along with their colleagues are confident in personnel's quality to some extent (Pipat, 2013). In the international level, the Computer Certificate is accepted and is taken as a tool to show the individual capabilities in his/her profession, and specified as a means to computer vocation accepted by the international standard. The certificate is consisted of two parts:

1. Certificate that is not based on products, for example, ITPE Certificate (National Science and Technology Development Agency, 2013), CompTIA Certificate (The Computing Technology Industry Association, 2013), ECDL/ICDL Certificate (The International Computer Engineering Driving License: ICDL Thailand, 2013).
2. Certificate that is based on product, for example, IBM Certificate (IBM Thailand, 2013), Microsoft Certificate (Microsoft Thailand, 2013), Oracle Certificate (Oracle, 2013), CISCO Certificate (Suntorn, 2004).

The professional qualification is evidence that shows the level of competency of the personnel's performance for every profession. Personnel have to pass examinations in order to receive the certificate. To develop an international standard of professional computer engineering qualification, the researcher has studied the related literatures written by Sanchai Intapichai (Sanchai, 2003), Somkid Saivael (Somkid, 2003), Tongmoah Supaseup (Tongmoah, 2004), Rongroj Sileungsawad (Rongroj, 2004), and Moncahi Manutaram (Monchai, 2007).

The development of international professional qualification's standard for academic personnel among nine branches of Rajamangala University of Technology (RMUT) is the specification of the instructor's competency standard that should reach the standard of teaching in order to promote the personnel of this country to the international competition. The mutual feature among the nine universities of Rajamangala University of Technology (RMUT) is the production of practical graduates (Rajamangala University of Technology, 2005). To operate according to the identified implementation, the major factor for graduates' production is the academic personnel like instructors and academic administrators. Hence, academic personnel who are accepted by their knowledge and skills in the international standard will be able to transfer their knowledge and skills to the students. In terms of the development of academic personnel in the field of computer to have the accepted performance's capabilities in the international level, not only the qualification received after graduating in computer, but also the examination for computer certificate is accepted internationally. The personnel's international computer certificate obviously shows their knowledge and skills in computer according to their internationally acknowledged certificates. However, the problem in achieving the development of the academic personnel in the field of computer of the nine branches of Rajamangala University of Technology (RMUT) is that there is still the lack of the unifying international professional qualification standard' requirements in the field of computer for the academic personnel among the branches of Rajamangala University of Technology, so there is no scope for the development of computer personnel that conforms to the demand of the country. This research has examined and operated the development the international professional qualification standard for academic personnel in Rajamangala University of Technology which is consisted of the identification of the international professional qualification standard in computer, international computer certificate in each level of professional qualification standard of the academic personnel, and functional competency certificate in each level of international professional qualification in computer of academic personnel in Rajamangala University of Technology.

## **2. Research Objectives**

2.1 To develop the international professional qualification standard in computer field for the academic personnel in Rajamangala University of Technology (RMUT).

2.2 To evaluate the appropriateness of professional qualification standard in computer field, international certificate in computer field in each level of professional qualification standard, functional competency in each level of international professional certificate for academic personnel in Rajamangala University of Technology (RMUT).

## **3. Hypothesis**

The international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology is developed appropriately.

## **4. Scope of the Research**

### **4.1 Independent variable and dependent variable**

Independent variable is the international professional qualification standard in the field of computer engineering for academic personnel in Rajamangala University of Technology.

Dependent variable is the examination result of the suitability of the international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology.

### **4.2 Population and Sampling**

Population is the specialist in examination, administration and instruction in the field of computer, professional competency development, computer programming development, and the examination for international computer certificate.

The representative sample is 18 specialists selected by purposive sampling they all have experiences in the related field for at least 3 years.

## **5. Research Methodology**

The process of the international professional qualification standard' development in computer field for academic personnel in Rajamangala University of Technology is divided into two stages as follows:

The first stage: the development of international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology has several steps as below:

Study and analyze the documents and researches that relate to the development of the

international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology.

Manage a sub-group meeting between representative instructors who teach the courses related to computer field, the representative of organization, and the representative whose roles or duties related to the examination of international certificate in computer field in order to listen to their comments about the implementation of the draft of the international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology.

Present the draft of the professional qualification standard in computer field for academic personnel in Rajamangala University of Technology to propose to the adviser for further examining and revising.

Create the instruments for estimating the suitability of the evaluation of international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology for specialists.

Bring up the evaluation of the international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology to propose to five specialists in order to evaluate the suitability of the evaluation of the international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology.

Take the result of the evaluation to analyze the information by categorizing the suitability in to three sections: (+1) proper, (0) not sure, and (-1) not proper, and then analyze the result by calculating the average; this is called the 'IOC' (Index of Item Objective Congruence) as the following formula:

$$IOC = \frac{\sum R}{N}$$

When IOC is the consistency of the specialists' opinions index

$\sum R$  is the total result of all specialists

N is the number of the specialists

Giving a mark for a technician's opinion

+1 Proper means the evaluation topic conforms to the standard that wants to be measured

0 Not sure means the respondent is not sure that the evaluation topic conforms to the standard that wants to be measured

-1 Not proper means the evaluation topic is not conformed to the standard that wants to be measured

The evaluation criterion is to find the consistency of specialist's opinion index (IOC). Any evaluation topic that has IOC less than 0.50 has to be adjusted.

The second stage: The evaluation of suitability of the international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology is consisted of several steps as below:

Bring up the evaluation of international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology in order to propose it to the eighteen specialists to evaluate the international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology.

Take the result to analyze by using the criteria that categorizes the suitability. Analyze the result by using 5-level Likert which is comprised of statistics that use the average ( $\bar{X}$ ).

– 1.49 means the evaluation topic which is the least proper

1.50 – 2.49 means the evaluation topic which is less proper

2.50 – 3.49 means the evaluation topic which is moderately proper

3.50 – 4.49 means the evaluation topic which is very proper

4.50 – 5.00 means the evaluation topic which is the most proper

## **6. Research results**

The research process can present the research result into two stages as below:

First stage: the development of the international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology according to Figure 1 detailed as follows:

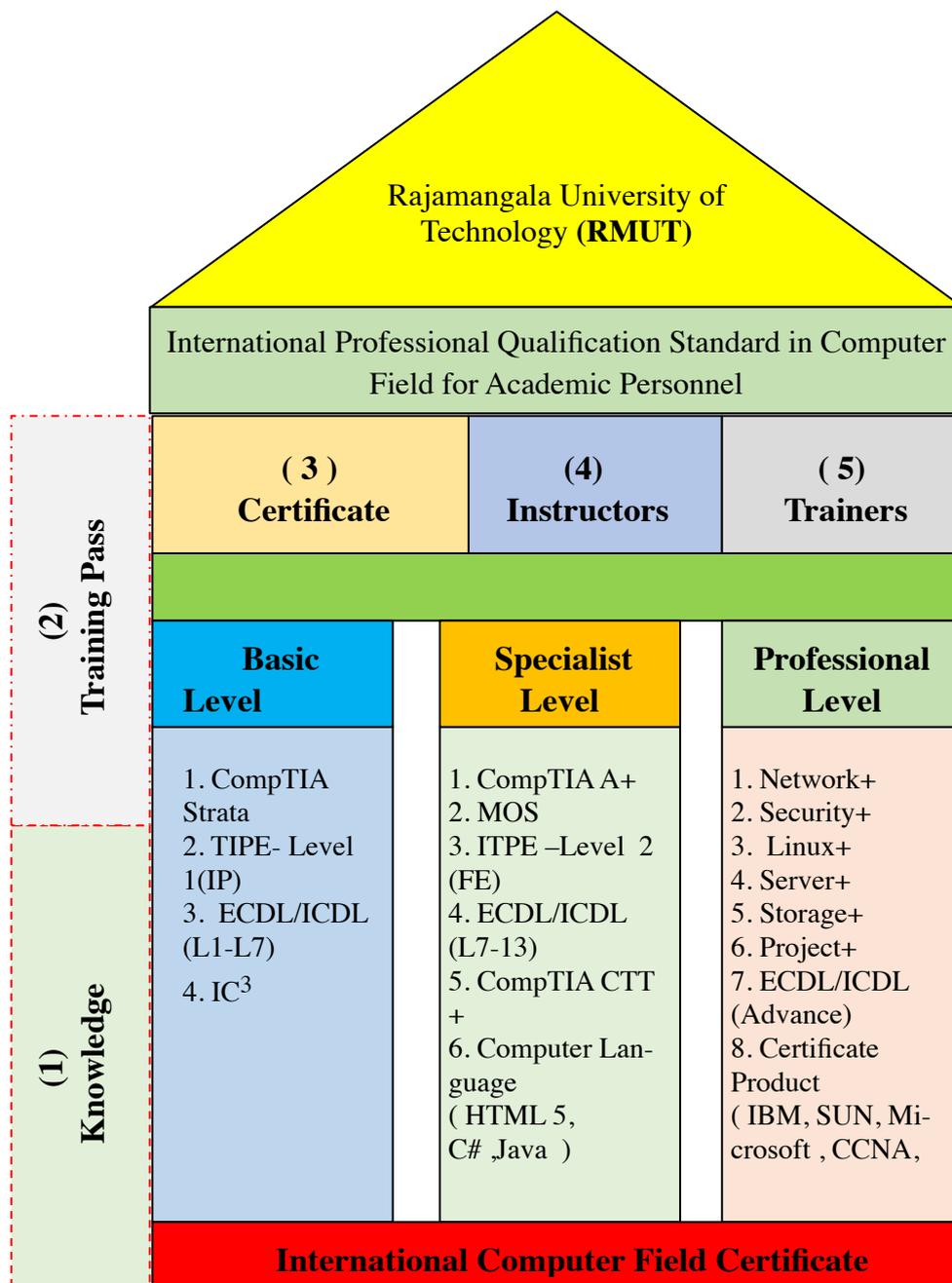


Figure 1: International Professional Qualification Standard in Computer Field for Academic Personnel in Rajamangala University of Technology

The developed international professional qualification standard in the field of computer filed for academic personnel in Rajamangala University of Technology are divided into three levels which are 1) Basic level, 2) Specialist level, and 3) Professional level. Each level is consisted of the international certificates in computer filed as below:

1. The basic level is consisted of 1) CompTIA Strata, 2) TIPE- Level 1 (IP), 3) ECDL/ICDL (L1-L7), and 4) IC<sup>3</sup>, the international certificates in computer field.

2. The specialist level is composed of 1) CompTIA A+, 2) MOS, 3) ITPE – Level 2 (FE), 4) ECDL/ICDL (L7-13), 5) CompTIA CTT+, and 6) Computer Language (HTML 5, C# Java), the international certificates in computer field.

3. The professional level is comprised of 1) Network+, 2) Security+, 3) Linux+, 4) Server+, 5) Storage+, 6) Project+, 7) ECDL/ICDL (Advance), and 8) Certificate Product (IBM, SUN, Microsoft, CCNA, Oracle), the international certificates in computer filed.

By developing the international professional qualification standard in the field of computer filed for academic personnel in Rajamangala University of Technology in which the academic personnel will be developed according to their self-efficiency during each level of standard; this is related to the subjects that the personnel are appointed to teach in the TQF program. The development of functional competency for academic personnel in international-level computer filed has been progressed during each level of standard level and there are five levels of it: the first level is knowledge (have knowledge about the international certificates in computer field), the second level is training pass (pass the training for international certificates in computer field), the third level is certificate (receive the international certificates in computer field), the fourth level is instructors (carry the knowledge that derive from international certificates for each standard in computer field and teach it in the appointed classes), and the fifth level is trainers (to be a trainer who gets the international certificate in computer field).

From the Table 1, the evaluation result of suitability of the international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology by the five specialists shows that the evaluation is separated into four sections. In the first section, the general information is suitable (IOC valued .98). In the second section, the overall international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology are suitable (IOC valued 1) and the standard level can be divided into three levels which are basic level, specialist level, and professional level that is suitable (IOC valued 1). In the third section, the international computer field certificates in each level of international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology are suitable in overall (IOC valued .96) and the international computer field certificates in the basic level are suitable (IOC valued 1) while the specialist level is also suitable (IOC valued .93) as well as the professional level is (IOC valued .95). In the fourth section, the level of functional competency along with the capability-based performance criteria for each level of international professional qualification standard in computer filed for academic personnel in Rajamangala University of Technology is classified into five competencies for each level of standard (basic level, specialist level and professional level) which are 1) knowledge, 2) training pass, 3) certificate, 4) instructors and 5) trainers, and it is also suitable (IOC valued 1).

Table 1 Evaluation Result of the Suitability of International Professional Qualification Standard in Computer Field for Academic Personnel in Rajamangala University of Technology by Specialists

The Evaluation Result of the Suitability of International Professional Qualification Standard in Computer field for Academic Personnel in Rajamangala University of Technology								
Evaluation Topics			IOC		Results			
<b>Section 1</b> General Information			.98		Suitable			
<b>Section 2</b> The level of International Professional Qualification Standard in Computer filed for Academic Personnel in Rajamangala University of Technology								
1. The level of International Professional Qualification Standard in Computer Field			1		Suitable			
1.1 Basic Level			1		Suitable			
1.2 Specialist Level			1		Suitable			
1.3 Professional Level			1		Suitable			
<b>Section 3</b> The International Computer Engineering Certificates in Each International Professional Qualification Standard in Computer Filed for Academic Personnel in Rajamangala University of Technology								
1. International Field Computer Certificates			.96		Suitable			
1.1 Basic Level			1		Suitable			
1.2 Specialist Level			.93		Suitable			
1.3 Professional Level			.95		Suitable			
<b>Section 4</b> The Level of Functional Competency along with the Capability-Based Performance Criteria in Each Level of International Professional Qualification Standard in Computer Filed for Academic Personnel in Rajamangala University of Technology								
Level of Functional Competency	Basic		Specialist		Professional		Average	
	IOC	Results	IOC	Results	IOC	Results	IOC	Results

<u>First Functional Competency :</u> <b>Knowledge:</b> having enough knowledge about the international computer field certificates	1	Suitable	1	Suitable	1	Suitable	1	Suitable
<u>Second Functional Competency : Training Pass:</u> passing the training for international computer field certificates	1	Suitable	1	Suitable	1	Suitable	1	Suitable
<u>Third Functional Competency: Certificate:</u> receiving the international computer field certificates	1	Suitable	1	Suitable	1	Suitable	1	Suitable
<u>Fourth Function Competency: Instructors:</u> acquiring knowledge from the international computer field certificates and teach it in appointed course.	1	Suitable	1	Suitable	1	Suitable	1	Suitable

Table 1 Evaluation Result of the Suitability of International Professional Qualification Standard in Computer Field for Academic Personnel in Rajamangala University of Technology by Specialists (Continuous)

Level of Functional Competency	Basic		Specialist		Professional		Average	
	IOC	Results	IOC	Results	IOC	Results	IOC	Results
<u>Fifth Functional Competency: Trainers :</u> being a trainer who received the international field computer certificate	1	Suitable	1	Suitable	1	Suitable	1	Suitable

Section 2 Evaluation of the Suitability of International Professional Qualification Standard in Computer Field for Academic Personnel in Rajamangala University of Technology by Specialists

Table 2 Evaluation Result of the Suitability of International Professional Qualification Standard in Computer Field for Academic Personnel in Rajamangala University of Technology by Specialists

The Evaluation Result of the Suitability of International Professional Qualification Standard in Computer Field for Academic Personnel in Rajamangala University of Technology			
Evaluation topics		SD	Results
<b>Section 1</b> The Level of International Professional Qualification Standard in Computer Field for Academic Personnel in Rajamangala University of Technology			
1. Level of International Professional Qualification Standard in Computer Field	4.19	.51	High
1.1 Basic Level	4.28	.57	High
1.2 Specialist Level	4.17	.71	High
1.3 Professional Level	4.11	.58	High
<b>Section 2</b> The International Computer Engineering Certificates in Each Level of International Professional Qualification Standard in Computer field for Academic Personnel in Rajamangala University of Technology			
1. International Computer field Certificates	4.14	.30	Excellent
1.1 Basic Level	4.21	.54	Excellent
1.2 Specialist Level	4.13	.35	Excellent
1.3 Professional Level	4.07	.27	Excellent

Table 2 Evaluation Result of the Suitability of International Professional Qualification Standard in Computer Field for Academic Personnel in Rajamangala University of Technology by Specialists (Continuous)

<b>Section 3</b> The Level of Functional Competency along with the Capability-Based Performance Criteria in Each Level of International Professional Qualification Standard in Computer Field for Academic Personnel in Rajamangala University of Technology												
Functional Competency	Basic			Specialist			Professional			Average		
		SD	Result		SD	Result		SD	Result		SD	Result
<u>First Functional Competency :</u> <b>Knowledge:</b> having enough knowledge about the international computer field certificates	3.06	.94	moderate	3.22	.73	moderate	3.33	.84	moderate	3.20	.62	moderate
<u>Second Functional Competency :</u> <b>Training Pass:</b> passing the training for international computer field certificates	3.28	.75	moderate	3.33	.59	moderate	3.44	.78	moderate	3.35	.55	moderate
<u>Third Functional Competency:</u> <b>Certificate:</b> receiving the international computer field certificates	4.22	.55	high	4.00	.34	high	3.94	.42	high	4.06	.31	high
<u>Fourth Function Competency:</u> <b>Instructors:</b> acquiring knowledge from the international computer field certificates and teach it in appointed course.	4.11	.58	high	3.94	.24	high	3.94	.54	high	4.00	.26	high

Table 2 Evaluation Result of the Suitability of International Professional Qualification Standard in Computer Field for Academic Personnel in Rajamangala University of Technology by Specialists (Continuous)

Functional Competency	Basic			Specialist			Professional			Average		
		SD	Result		SD	Result		SD	Result		SD	Result
<u>Fifth Functional Competency:</u> <b>Trainers</b> : being a trainer who received the international field computer certificate	4.17	.62	high	4.00	.34	high	4.06	.54	high	4.07	.27	high

From Table 2, it is clear that the 18 specialists found out that 1) the overall international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology is highly suitable ( $\bar{X}=4.19$ ) in which there are three levels of international professional qualification standard in computer field which are basic level ( $\bar{X}=4.28$ ), specialist level ( $\bar{X}=4.17$ ), and professional level ( $\bar{X}=4.11$ ) that are also highly appropriate. 2) The international computer certificates in each level of international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology is suitable in overall ( $\bar{X}=4.14$ ). Moreover, the international computer field certificates in each level of international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology can be divided into 1) basic level consisted of the 4 international certificates in computer field which is highly suitable ( $\bar{X}=4.21$ ), 2) specialist level consisted of 6 international certificate in computer field which also is very suitable ( $\bar{X}=4.13$ ), and 3) professional level consisted of international certificates in computer field which is very appropriate as well ( $\bar{X}=4.07$ ). 3) The level of functional Competency along with the capability-based performance criteria in each level of international professional qualification standard in computer field for academic personnel in Rajamangala University of Technology can be grouped into five competencies comprised of 1) knowledge stage (having enough knowledge about the international certificates in computer field), 2) training pass stage (passing the training for international certificates in computer field), 3) certificates stage (receiving the international computer field certificates), 4) instructors stage (acquiring knowledge from the international computer field certificates and teach it in appointed course), and 5) trainers stage (being the trainers who receive the international computer field certificate). The whole picture of each level of certificate

consisted of 1) basic level, 2) specialist level, and 3) professional level, is suitable with the functional competency. From level 3 to level 5, there is a high suitability ( $\bar{X}=4.06$ ,  $\bar{X}=4.00$ ,  $\bar{X}=4.07$ ) and in level 1 and level 2, there is a moderate suitability ( $\bar{X}=3.20$ ,  $\bar{X}=3.35$ ). By considering each level of the certificates, it shows that 1) there is a suitability in functional competency in level 3 to level 5 in the basic level ( $\bar{X}=4.17$ ,  $\bar{X}=4.11$ ,  $\bar{X}=4.22$ ) while level 1 and level 2 is in the moderate level ( $\bar{X}=3.28$ ,  $\bar{X}=3.06$ ). 2) There is a suitability in functional competency in level 3 to level 5 in the specialist level ( $\bar{X}=4.00$ ,  $\bar{X}=3.94$ ,  $\bar{X}=4.00$ ) while level 1 and level 2 is in the moderate level ( $\bar{X}=3.22$ ,  $\bar{X}=3.33$ ). 3) There is a suitability in functional competency in level 3 to level 5 in the professional level ( $\bar{X}=3.94$ ,  $\bar{X}=3.94$ ,  $\bar{X}=4.06$ ) while level 1 and level 2 is in the moderate level ( $\bar{X}=3.33$ ,  $\bar{X}=3.44$ ) respectively.

## 7. Discussion

The evaluation result by the specialists shows that the suitability of international professional qualification standard in the field of computer for academic personnel in Rajamangala University of Technology is consisted of two sections: 1) international computer field certificate which can be separated into three levels---1.1) basic level comprised of 4 certificates, 1.2) specialist level comprised of 6 certificate, and 1.3) professional level comprised of 8 certificates. Every level is highly suitable ( $\bar{X} \geq 3.50$ ). And 2) functional competency can be categorized into five levels which are 2.1) knowledge, 2.2) Training pass, 2.3) Certificate, 2.4) Instructors, and 2.5) Trainers. All three levels of international computer certificates are highly suitable ( $\bar{X} \geq 3.50$ ) except the functional competency level in level 2.1) knowledge and 2.2) Training pass among the three levels of the certificates that are moderately suitable ( $\bar{X} < 3.50$ ).

## References

- CISCO Training & Certifications, (2013) *CISCO Certificate* Available from: <http://www.cisco.com/web/learning/certifications/index.html> [Accessed 30<sup>th</sup> June 2013 ].
- IBM Thailand, (2013) *IBM Certificate*. Available from: <http://www-03.ibm.com/certify/certs/> [Accessed 30<sup>th</sup> June 2013 ].
- Microsoft Thailand, (2013) *Microsoft Certificate* Available from: <http://www.microsoft.com/learning/us/certification-overview.aspx> [Accessed 30<sup>th</sup> June 2013 ].
- Ministry of education, (2009) *Qualification Framework for High Education in Computer Engineering 2009* Bangkok: office.
- Ministry of education, (2009) *ICT Master Plan VERSION 2 ICT: 2 of Thailand 2009-2013* Bangkok: office.
- Ministry of Information and Communication Technology, (2009) *ICT Master Plan VERSION 2 ICT: 2 of Thailand 2009-2013* Bangkok: office.
- Ministry of Information and Communication Technology, (2011) *National ICT Policy Framework 2011-2020 of Thailand (ICT2020)* Bangkok: office.
- Ministry of Information and Communication Technology, (2013) *ASEAN ICT Master Plan 2015* Bangkok: office.
- Monchai, M. (2007) *The Process of the Professional Qualification in Textile's Development. Master degree in Vocational and Technical Education Management faculty of technical education* King Mongkut's University of Technology North Bangkok.
- National Science and Technology Development Agency (NSTDA), (2013) *Information Technology Professionals Examination: ITPE* Available from: <http://www.nstdaacademy.com/webnsa/> [Accessed 20<sup>th</sup> June 2013 ].
- Oracle, (2013) *Oracle Certificate* Available from <http://www.oracle.com/technetwork/topics/newtojava/certification-140469.html> [Accessed 30<sup>th</sup> June 2013 ].
- Pipat, E. (2013) The Lost Thing in Computer Engineering Program in Thailand. *Engineering*, 66(3), 25-32.

Rajamangala University of Technology, (2005) *Rajamangala University of Technology Act, 2005* Available from [http://www.rmutsb.ac.th/university\\_council/knowledge\\_council/index2.php](http://www.rmutsb.ac.th/university_council/knowledge_council/index2.php) [Accessed 20th June 2013 ].

Rongroj, S. (2004) *The Development of Hotel Industry Occupations Standard in Thailand. Master degree in Vocational and Technical Education Management, Faculty of Technical Education King Mongkut's University of Technology North Bangkok.*

Sanchai, I. (2003) *The Development of Professional Qualification Specification Process for Construction- Related Professions in Thailand.* Master degree in Vocational and Technical Education Management, Faculty of Technical Education King Mongkut's University of Technology North Bangkok.

Somkid, S. (2003) *The Process of Professional Qualification Specification's Development for Vehicle- Related Professions in Thailand.* Master degree in Vocational and Technical Education Management, Faculty of Technical Education King Mongkut's University of Technology North Bangkok.

Suntorn, N. (2004) *Development of the Professional Qualification in Thailand: the Case Study of Manufacturing Sector, not Cutting Work Out in the Related Field* Master degree in Vocational and Technical Education Management, Faculty of Technical Education King Mongkut's University of Technology North Bangkok.

The Computing Technology Industry Association – CompTIA, (2013) *CompTIA Certificate* Available from : <http://certification.comptia.org/> [Accessed 23rd June 2013 ].

The International Computer Engineering Driving License: ICDL Thailand, (2013) *ICDL Certificate* Available from <http://icdl-thailand.com/> [Accessed 25th June 2013 ].

Tongmoah, S. (2004) *The Development of Qualification for Thailand: The Case Study of Manufacturing Sector in Cutting Work* Master degree in Vocational and Technical Education Management, Faculty of Technical Education King Mongkut's University of Technology North Bangkok.

*Trend in Vocational Education Provision of Municipalities in Thailand*

Nalirat Rakkusol

Kasetsart University, Thailand

0791

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Abstract

The objectives of this research were to 1) study the trends and factors of vocational education provision of municipalities and 2) propose guidelines for enhancing municipalities' learning process to provide vocational education and training for developing career in the community. The research method was divided into two parts. The first part was the survey research by using a questionnaire for collecting data from executives of 378 municipalities in order to study the current condition, trends and conditional factors of vocational education provision of the municipalities. Another part was the educational experts' focus group discussion in order to find guidelines for enhancing municipalities' learning process to develop career in the community.

The results of the survey research showed that, for the trends in vocational education provision in the next three years, 1.5 percent of sub-district municipalities, 20.7 percent of town municipalities and 33.3 percent of city municipalities had a trend towards the education provision in the form of college by themselves. The sub-district and town municipalities had increasing average value of the participation level in vocational education provision to develop careers and the results were in the high level for the arrangement of community learning forums for local people to know their social capital, and training for transmission of local wisdom to people in the community. The city municipalities had increasing average value of trend of participation level in vocational education provision to develop careers in the future and the results were in the high level for the education provision to develop careers by exploring the demand of labor in local market, and for the education given to local entrepreneurs on business management of small and medium enterprises.

Findings from the educational experts' focus group discussion were two guidelines for enhancing municipalities learning process to provide vocational education and training for developing career in the community. The first guidelines involve development of municipalities' readiness to provide vocational education. It should focus on promoting awareness of the importance of career development and providing sufficient operational knowledge for municipalities. The second guidelines concentrate in enhancement of municipalities learning process according to three stages of career development which included the knowledge creation in community analysis, education on the performance of each career of local people and education on creativity development for local people.

**Keywords:** vocational education; education provision; municipality

## **Introduction**

In the past, Thailand development at early stages relied heavily on economic growth from the industrial and service sectors. Past governments' policies were emphasized on infrastructure improvements and urban growths to improve Thailand global competitiveness. (Office of the National Economic and Social Development Board [NESDB], 2009) On the contrary, the local wisdom was neglected and community development programs were predominantly originated from governments' initiatives. These centralized and top-down "government preferred" policies resulted in homogeneous government's programs which neglected each community heterogeneous characteristics and unique resources. Furthermore, these development programs lacked abilities to enhance each local community resources and knowledge management capabilities. (Ngarmwitayaphong, 2006) After the economic crisis in 1997, nevertheless, the trend of the development of the country changed. The government focused more on community strengthening and economic development in rural areas with the aim at community self-reliance. The King's sufficiency economy philosophy was adopted as a main method so that the country could overcome the economic crisis. Therefore the government had community-based development approach allowing communities to arrange their own development activities in order to be in consistent with community's real needs. (United Nations Development Program, 2006)

Thailand is a country with diverse geography which causes people in different area to have different culture, tradition, lifestyle, and local occupations that use resources available in the area such as natural resources and local wisdom to create income for people in such area so that they can live their lives. This creates economic and social development in the locality. Local administrative organization is one of the important agencies that have a key role in the development in response to problems and needs by using the resources available in each locality.

### **Roles of municipalities in vocational education provision**

A municipality is one form of local administrative organizations in Thailand which is a form of local administration in urban area that has been in use since 1933. The Municipality Act (Vol.10) B.E. 2542 was amended to be in consistent with the Constitution of Thailand B.E. 2540 and pursuant to decentralization principles. Central government will decentralize partially to people or local administrative organizations so that people can have authority in the management and decision making regarding public activities by themselves according to their authority and duty as prescribed by law. Today municipalities are increasingly important since the development process has been creating quick expansion of economic and social system which in turn creates the expansion of community, complication of economic activities, more investment and more money supply, and more employment and education institutions. Such changes are the stimulants for the growing importance and necessity of local administrative organizations in the form of municipality for people. There are three levels of municipalities in Thailand as follows.

Sub-district municipality. Currently there are 2081 sub-district municipalities. The area that is a sub-district municipality needs to have at least 12,000,000 Baht of revenue, 7,000 people, and approval from local people.

Town municipality: Currently there are 172 town municipalities. Every area that is the location of city hall will be a town municipality without considering other criterions. But if the area is not the location of city hall, there must be at least 10,000 people in the area to be a town municipality and the area must have enough revenue to perform duties as required by law.

City municipality: Currently there are 30 city municipalities. The area that is a city municipality must have at least 50,000 people and must have enough revenue to perform duties as required by law.

Municipalities have duties to perform in the municipality area as prescribed by Municipality Act B.E. 2496. Some of the duties are education, promotion of the development of women, children and youth, and nurture of local wisdom, arts, tradition and culture of the locality. It can be seen that municipality's duties are related to vocational education provision to develop careers for local people. Vocational education is an education for career. In other words, learners can utilize their knowledge to have honest occupations as a practitioner or a self-employed so that they can earn a living in their daily lives (Ramwarangkura, 2011). Therefore, vocational education provision for career development in the locality is an education that aims to provide learners with knowledge, understanding and attitudes about the local career as well as ability and skill of local career enough to use in a career and to create income for families and society. Local career subjects will be different according to the physical nature, natural resources and local wisdom which will lead to a different career.

Currently the municipality has managed education for career development of local people in the forms of formal and informal education. For formal education, 7 municipalities in Thailand has established vocational college under the municipality with objectives to teach knowledge in careers that are in consistent with the demand of labor to local people. In addition, most of the municipalities provide budget and personnel support to basic education institutions in order to manage education about the local career in the extracurricular activities so that learners know careers, local wisdom, and career development that is specifically appropriate to each locality. For informal education, each municipality will have informal and non-formal education centers running short career management training according to the needs to local people. It can be seen that municipalities have a main role in local development by using education as a tool for development, particularly in the vocational education provision that truly fulfills the needs of a locality

### **Objectives of the study**

This research has objectives to

1. Study the trend and factors in vocational education provision of municipalities.
2. Propose guidelines for enhancing municipalities' learning process to develop career in the community.

## Methodology

This research has been taken in two steps as follows.

The first step was to study the trend in vocational education provision in Thailand by using questionnaire in survey research which was the survey of executive's sentiments in order to study the current conditions of vocational education provision of municipalities and trend in the future as well as conditional factors of municipalities in providing vocational education.

The population of this research was divided into three groups which were the executives of 2081 sub-district municipalities, 172 town municipalities and 30 city municipalities, which were collectively 2283 municipalities in total throughout the country. The samples of this research were derived by using the sample size specification of Krejcie and Morgan (1970) as shown in table 1.

**Table 1: Number of population and size of samples for each type of municipalities**

Type of municipality	Number of population	Number of samples
Sub-district municipality	2081	324
Town municipality	172	119
City municipality	30	28

Department of Local Administration, 2013

The researcher sent a questionnaire to the samples via post. Upon answering in the questionnaire, the answerer would send the questionnaire back to the researcher via post as well. The researcher received 265 sets, or 81.79 percent, of questionnaire from the executives of sub-district municipalities, 92 sets, or 77.31 percent, of questionnaire from the executives of town municipalities, and 21 sets, or 75 percent, of questionnaire from the executives of city municipalities.

The second step was focus group discussion in local education provision policies and local management with experts in order to propose guidelines for enhancing municipalities' learning process to develop career in the community. The researcher proposed the results of the study in the first steps and asked attendants of the focus group discussion to propose their opinions related to methods to promote learning process of municipalities to provide vocational education to develop careers for local people.

## Results of the study

From the first step, the analysis from the questionnaire showed that currently 87.9 percent of sub-district municipalities, 92.4 percent of town municipalities, and 81 percent of city municipalities participated in the education provision in the form of budget support, while less than 50 percent of all types of municipalities participated in

the education provision in the form of joining the local curriculum provision. For the trend of vocational education provision in the next three years, it was found that 1.5 percent of sub-district municipalities, 20.7 percent of town municipalities and 33.3 percent of city municipalities had a trend towards the education provision in the form of college by themselves. Furthermore, the survey of executives' opinions regarding the participation of municipalities in the education provision for career development found that:

Sub-district municipalities had increasing average value of trend of participation level in education provision to develop careers in the future and the results were in the high level for the arrangement of community stage to provide community people with awareness of community and resources available to the community, the arrangement of training to create the transmission of locality intelligence to people in the community, the arrangement of short courses to develop career of local people, the education provision to make local people have creativity to use in career development, the cooperation with education institutions to prepare projects to promote local career to students and arrange activities for career development such as internship during summer semester, the support of budget, building, location, and technology for training to develop career for local people, the local career database provision, and the support of activity arrangement to develop knowledge and ability in technology used in career development for local people, as shown in Table 2.

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**Table 2: Opinion level of sub-district municipality executives regarding the participation in education provision for career development both in the present and in the future**

Education provision for career development of municipalities	Current participation level			Expected participation level in the future		
		S.D.	Meaning		S.D.	Meaning
Arrangement of community stage to provide community people with awareness of community and resources available to the community	3.19	1.166	Medium	3.75	1.101	High
Arrangement of training to create the transmission of locality intelligence to people in the community	3.37	1.044	Medium	3.93	.999	High
Arrangement of short courses to develop career of local people	3.18	1.151	Medium	3.74	1.198	High
Support of budget, building, location, and technology for training to develop career for local people	2.96	1.124	Medium	3.57	1.192	High
Cooperation with schools to prepare projects to promote local career to students	2.80	1.181	Medium	3.48	1.187	High
Cooperation with education institutions to prepare activities for career development such as internship during summer semester	2.95	1.266	Medium	3.54	1.181	High
Support/promotion of activity arrangement to develop knowledge and ability in technology used in career development for local people	2.92	1.152	Medium	3.60	1.127	High
local career database provision	2.89	1.139	Medium	3.51	1.162	High
Education provision to make local people have creativity to use in career development	2.95	1.134	Medium	3.60	1.154	High

Remark: For reference of meaning, the average of 1.00-1.80 means Lowest, 1.81-2.60 means Low, 2.61-3.40 means Medium, 3.41-4.20 means High, and 4.21-5.00 means Highest.

Town municipalities had increasing average value of trend of participation level in education provision to develop careers in the future and the results were in the high level for the arrangement of community stage to provide community people with

awareness of community and resources available to the community, the arrangement of training to create the transmission of locality intelligence to people in the community, the arrangement of short courses to develop career of local people, the education provision to make local people have creativity to use in career development, and the education arrangement to various learning sources or communities successful in education provision for career development, as shown in Table 3.

**Table 3: Opinion level of town municipality executives regarding the participation in education provision for career development both in the present and in the future**

Education provision for career development of municipalities	Current participation level			Expected participation level in the future		
		S.D.	Meaning	()	S.D.	Meaning
Arrangement of community stage to provide community people with awareness of community and resources available to the community	3.10	1.276	Medium	3.49	1.236	High
Arrangement of training to create the transmission of locality intelligence to people in the community	3.32	1.309	Medium	3.70	1.315	High
Education arrangement to various learning sources or communities successful in education provision for career development	3.36	1.237	Medium	3.64	1.419	High

Remark: For reference of meaning, the average of 1.00-1.80 means Lowest, 1.81-2.60 means Low, 2.61-3.40 means Medium, 3.41-4.20 means High, and 4.21-5.00 means Highest.

City municipalities had increasing average value of trend of participation level in education provision to develop careers in the future and the results were in the high level for the arrangement of education provision for career development by exploring the demand of labor in local market, the curriculum development that was consistent with future industrial trend in the locality, the cooperation with entrepreneurs to provide education that corresponded to the entrepreneurs' demand, the knowledge provision to local entrepreneurs regarding small and medium enterprise business management, and education provision so that people in the community had creativity to use in career development. In addition, there was a trend of education provision in foreign language for career development after the country entered into ASEAN Economic Community, student exchange program arrangement with the countries in ASEAN community for career development, arrangement of project/education to create value and good attitude towards vocational education, development of vocational education teachers to have knowledge that was in consistent with the

demand of locality and society, and support of research studies and inventions of students and teachers in vocational education, as shown in Table 4.

**Table 4: Opinion level of city municipality executives regarding the participation in education provision for career development both in the present and in the future**

Education provision for career development of municipalities	Current participation level			Expected participation level in the future		
		S.D.	Meaning		S.D.	Meaning
Arrangement of education provision for career development by exploring the demand of labor in local market	3.00	1.265	Medium	3.43	1.434	High
Knowledge provision to local entrepreneurs regarding small and medium enterprise business management	2.90	1.221	Medium	3.48	1.250	High
Education provision so that people in the community had creativity to use in career development	3.29	1.102	Medium	3.71	1.271	High
Curriculum development that was consistent with future industrial trend in the locality	3.05	1.024	Medium	3.57	1.287	High
Cooperation with entrepreneurs to provide education that corresponded to the entrepreneurs' demand	3.10	1.044	Medium	3.62	1.284	High
Education provision through e-learning in community ICT learning centers	3.14	1.153	Medium	3.62	1.359	High
Education provision in foreign language for career development after the country entered into ASEAN Economic Community	3.33	.913	Medium	4.05	.865	High
Student exchange program arrangement with the countries in ASEAN community for career development	2.76	1.136	Medium	3.71	1.056	High
Development of vocational education teachers to have knowledge that was in consistent with the demand of locality and society	2.95	1.396	Medium	3.33	1.238	High
Arrangement of project/education to create value and good attitude	3.24	1.091	Medium	3.57	.926	High

Education provision for career development of municipalities	Current participation level			Expected participation level in the future		
		S.D.	Meaning		S.D.	Meaning
towards vocational education						
Support of research studies and inventions of students and teachers in vocational education	3.05	1.071	Medium	3.67	.966	High

Remark: For reference of meaning, the average of 1.00-1.80 means Lowest, 1.81-2.60 means Low, 2.61-3.40 means Medium, 3.41-4.20 means High, and 4.21-5.00 means Highest.

However, city municipalities had the average value of current participation level in education provision for career development in the high level and also had the average value of participation level in education provision for career development in the future in the high level as well in many aspects such as education arrangement to various learning sources or communities successful in education provision for career development, cooperation with schools to prepare projects to promote local career to students, and support/promotion of activity arrangement to develop knowledge and ability in technology used in career development for local people.

The results of the comparison of the difference of priorities of the factors that affected the vocational education provision of municipalities classified by the types of municipalities by using ANOVA analysis showed that the factors that affected the vocational education provision of municipalities in the high level and were not statistically significant at .05 confidence level as per types of municipalities were the participation of municipalities with community in gathering local wisdom and education source, and the full term in office and the continuity of executives, as shown in Table 5 and 6.

**Table 5: Average of significance level of factors affecting the vocational education provision of each type of municipalities**

Topic	City municipality			Town municipality			Sub-district municipality		
		S.D	Meaning		S.D	Meaning		S.D	Meaning
The municipality executive had good understanding on vocational education provision.	3.81	.814	High	3.42	.975	High	3.26	.967	Medium
The municipality executive had policy about the management of vocational education provision to achieve the three-year municipality development	3.19	1.436	Medium	2.27	1.250	Low	2.06	1.108	Low

Topic	City municipality			Town municipality			Sub-district municipality		
		S.D	Meaning		S.D	Meaning		S.D	Meaning
plan.									
The municipality executive had budget for the establishment of vocational education institutions.	2.48	1.167	Low	1.92	1.141	Low	1.57	.931	Lowest
The municipality executive prepared to provide vocational education institution with management executive.	2.33	1.155	Low	1.76	1.103	Lowest	1.56	.899	Lowest
The municipality explored the demand of career development of community people.	3.10	1.300	Medium	2.90	1.196	Medium	3.29	1.216	Medium
The municipality had good cooperation with the community to manage vocational education.	3.05	1.322	Medium	2.70	1.211	Medium	2.66	1.179	Medium
The municipality prepared building, material, supplies and facilities for the provision of vocational education.	2.76	1.091	Medium	2.04	1.148	Low	1.87	.992	Low
The municipality prepared the curriculum development with entrepreneurs and community people.	2.14	1.276	Low	2.29	1.172	Low	2.09	1.113	Low
The municipality created a network with private sector for the establishment of vocational school.	2.24	1.261	Low	1.95	1.062	Low	1.68	.916	Lowest
The organization located in municipality area cooperated in vocational education provision.	2.67	1.278	Medium	2.18	1.185	Low	2.10	1.056	Low
The municipality had system to support further education and employment for community.	2.48	1.436	Low	2.30	1.077	Low	2.14	1.005	Low
The municipality had a plan related to manpower of vocational personnel.	2.76	1.546	Medium	1.95	.987	Low	1.86	1.009	Low

Topic	City municipality			Town municipality			Sub-district municipality		
		S.D	Meaning		S.D	Meaning		S.D	Meaning
The municipality had more than 10 percent of average annual revenue spent on education.	3.52	1.12 3	High	3.05	1.23 5	Medium	2.69	1.26 8	Medium
The municipality cooperated with the community to gather local wisdom and education sources.	3.81	.928	High	3.42	1.05 1	High	3.45	1.01 0	High
The municipality executive completed his term in office and there was continuity in office.	4.14	1.15 3	High	3.89	1.19 0	High	3.83	1.20 2	High
The municipality had database related to vocational education provision for career development.	2.62	1.07 1	Medium	2.40	1.15 8	Low	2.22	1.01 0	Low
The municipality had a connection with other local administrative organizations to provide vocational education.	2.62	1.24 4	Medium	2.34	1.19 8	Low	2.06	1.04 1	Low
The Ministry of Interior had clear policies and practices related to vocational education provision in municipality areas.	2.76	1.17 9	Medium	2.60	1.25 0	Low	2.14	1.11 1	Low
The Department of Local Administration created knowledge and understanding and supported municipalities in vocational education provision.	2.95	1.11 7	Medium	2.70	1.23 8	Medium	2.25	1.12 4	Low

Remark: For reference of meaning, the average of 1.00-1.80 means Lowest, 1.81-2.60 means Low, 2.61-3.40 means Medium, 3.41-4.20 means High, and 4.21-5.00 means Highest.

**Table 6: Comparison of significance level of factors affecting the vocational education provision of each type of municipalities**

Topic		Sum of Squares	df	Mean Square	F	Sig.
The municipality executive had good understanding on vocational education provision.	Between Groups	6.925	2	3.462	3.744	.025*
	Within Groups	346.739	375	.925		
	Total	353.664	377			
The municipality executive had policy about the management of vocational education provision to achieve the three-year municipality development plan.	Between Groups	25.770	2	12.885	9.524	.000*
	Within Groups	507.354	375	1.353		
	Total	533.124	377			
The municipality executive had budget for the establishment of vocational education institutions.	Between Groups	21.741	2	10.870	10.880	.000*
	Within Groups	374.664	375	.999		
	Total	396.405	377			
The municipality executive prepared to provide vocational education institution with management executive.	Between Groups	13.156	2	6.578	7.033	.001*
	Within Groups	350.749	375	.935		
	Total	363.905	377			
The municipality explored the demand of career development of community people.	Between Groups	10.272	2	5.136	3.476	.032*
	Within Groups	554.133	375	1.478		
	Total	564.405	377			
The municipality had good cooperation with the community to manage vocational education.	Between Groups	2.862	2	1.431	1.002	.368
	Within Groups	535.540	375	1.428		
	Total	538.402	377			
The municipality prepared building, material, supplies and facilities for the provision of vocational education.	Between Groups	16.208	2	8.104	7.536	.001*
	Within Groups	403.273	375	1.075		
	Total					

Topic		Sum of Squares	df	Mean Square	F	Sig.
		419.481	377			
The municipality prepared the curriculum development with entrepreneurs and community people.	Between Groups	2.917	2	1.459	1.129	.325
	Within Groups	484.651	375	1.292		
	Total	487.569	377			
The municipality created a network with private sector for the establishment of vocational school.	Between Groups	9.422	2	4.711	4.964	.007*
	Within Groups	355.911	375	.949		
	Total	365.333	377			
The organization located in municipality area cooperated in vocational education provision.	Between Groups	6.326	2	3.163	2.608	.075
	Within Groups	454.774	375	1.213		
	Total	461.101	377			
The municipality had system to support further education and employment for community.	Between Groups	3.452	2	1.726	1.566	.210
	Within Groups	413.267	375	1.102		
	Total	416.720	377			
The municipality had a plan related to manpower of vocational personnel.	Between Groups	15.983	2	7.991	7.398	.001*
	Within Groups	405.089	375	1.080		
	Total	421.071	377			
The municipality had more than 10 percent of average annual revenue spent on education.	Between Groups	19.615	2	9.807	6.253	.002*
	Within Groups	588.208	375	1.569		
	Total	607.823	377			
The municipality cooperated with the community to gather local wisdom and education sources.	Between Groups	3.865	2	1.932	1.788	.169
	Within Groups	405.355	375	1.081		
	Total	409.220	377			

Topic		Sum of Squares	df	Mean Square	F	Sig.
The municipality executive completed his term in office and there was continuity in office	Between Groups	2.004	2	1.002	.700	.497
	Within Groups	536.843	375	1.432		
	Total	538.847	377			
The municipality had database related to vocational education provision for career development.	Between Groups	4.765	2	2.383	2.156	.117
	Within Groups	414.378	375	1.105		
	Total	419.143	377			
The municipality had a connection with other local administrative organizations to provide vocational education.	Between Groups	9.740	2	4.870	4.082	.018*
	Within Groups	447.416	375	1.193		
	Total	457.156	377			
The Ministry of Interior had clear policies and practices related to vocational education provision in municipality areas.	Between Groups	19.380	2	9.690	7.330	.001*
	Within Groups	495.763	375	1.322		
	Total	515.143	377			
The Department of Local Administration created knowledge and understanding and supported municipalities in vocational education provision.	Between Groups	20.483	2	10.242	7.712	.001*
	Within Groups	497.993	375	1.328		
	Total	518.476	377			

\* The mean difference is significant at the .05 level.

The results of focus group discussion in local education provision policies and local management with experts in order to find methods to promote learning process of municipalities to provide vocational education to develop careers for local people derived two methods. The first method was the method of municipality development so that the municipality was prepared to provide education process for career development of people in the locality. This method was derived from the awareness of importance of career development for local people. The second method was the method promote to promote learning process of municipalities for career development according to career development process which comprised of 1) the knowledge creation to analyze community so that the municipality could provide the vocational education that meet the needs of the community by using local wisdom and learning center in the community 2) education on the performance of each career of local

people so that the municipality could provide the education to develop local people to meet such necessary performances 3) and education on creativity development for local people so that people could apply it to career development.

### **Discussion**

For the trend in vocational education provision done in the form of vocational college by the municipality itself, it could be seen that town municipalities and city municipalities were large and had rather high amount of budget for operation, and their personnel were more ready. Therefore they were more likely to establish a college more than a sub-district municipality which was a small municipality. In addition, for the trend of participation level in education provision for career developments, it could be seen that the city municipality emphasized on career development by exploring the demand of labor in local market because the city municipality was large and had its own labor market to support the labor in its locality. The city municipality also prepared people in its municipality for ASEAN Economic Community as it saw the importance of providing education of foreign language for career development after the country entered into ASEAN Economic Community. The city municipality also arranged the exchange program for students with other countries in ASEAN Community to create career development that was in line with changing labor market. Then, the municipality should develop cooperative strategy of local administrative organizations in vocational education provision, for example, municipality should cooperate with private companies in order to provide internship location for students through network associated. (Ramwarungkura, 2013)

From the survey of municipality executives, it was found that one factor that affected vocation education provision of municipalities in the high level was the participation of municipalities with community in gathering local wisdom and education source. It could be seen that career development for people in locality needed to utilize the resources available in community, all of which were local wisdom, natural resources, and cooperation network of community people.

For the learning process promotion of municipalities for career development of local people, besides the method of creating awareness and knowledge to the municipalities, the Department of Local Administration needed to support the basic database that was necessary so that a practitioner could access the information to apply to career development in locality, and best practice guidelines so that the practitioner could see the concrete and clear operating method.

### **Conclusion**

The author of this study expect that trends in vocational education provision of municipalities and the establishment of proposed guidelines for enhancing municipalities' learning process to develop career in the community will not only strengthen local communities but also simultaneously support Thailand as a whole to withstand the dynamic of global changes.

## Reference

Department of Local Administration. (2013). *Number of local government in Thailand*. [online] Available from: <http://www.dla.go.th/work/abt/index.jsp> [Accessed: 30<sup>th</sup> August 2013]

Krejcie, R.A. and Morgan, D.W. (1970) Determining sample size for research Activities. *Educational and psychological measurement*, 30, 607 – 608.

Ngarmwitayaphong, O. (2006). *Learning Process in Thai Society and Changing: From Community to Modernization*. Bangkok: College of Social Management.

Office of the National Economic and Social Development Board. (n.d.). *Conclusion of Thailand Development in the Period of the 1st – 8th National Economic and Social Development Plan*. [online] Available from: <http://www.nesdb.go.th/Default.aspx?tabid=274> [Accessed: 1<sup>st</sup> September 2009]

Ramwarungkura, A.(2011). *Foundations of vocational education*. Bangkok: Kasetsart University.

Ramwarungkura, A.(2013). *The developmental co-operation strategy of local administrations in the provision vocational education*. Bangkok: Kasetsart University.

United Nations Development Programme. (2006). *Community-Based Microfinance: An Empowering Approach Towards Poverty Alleviation and Community Self-Reliance*. Bangkok: Keen Publishing (Thailand) Co., Ltd.

*Utilizing Junior High School Texts at the Japanese University Level For Large Non-English Major Courses*

Harry Carley

Matsuyama University, Japan

0795

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Abstract

Many non-English majors encounter extreme difficulty when it comes to writing in English. Most learners are perplexed when asked to produce sentences that are comprehensible and cohesive enough to form a paragraph. Items such as a topic sentence, connecting clauses and phrases may be unknown or long forgotten from their earlier schooling. Japanese junior high school texts offer a simple and easily understandable method of constructing rudimentary sentences and paragraphs. This in turn can guide students toward fashioning longer passages and eventually a modest paper consisting of a topic and conclusion. Subject matter included in the junior high school texts offer such themes as writing about historical places, world leaders, current pop stars and opinionated pieces that require student input on a personal level. Random selection of writing topics by Instructors can be detrimental to the overall process since some students are likely to only copy and paste from the Internet in order to complete their required assignments. Careful planning and visualization on the part of the teacher as to how learners might actually approach their writing tasks is necessary. Simultaneously, having sizable classes (over 100 students) also presents unique challenges concerning assignment collection, and review and grading. Additionally learner abilities may be so dissimilar that the class will have to be split into smaller groups based on student competence. Without these adjustments lack of student motivation can result in repeated class absences and ultimately failure of the course. The use of junior high English texts can help eliminate some of these issues. Throughout a 15 week course students can apprehend their own progress as tasks and assignments become larger and more specified. Students can progress on from the course confident that they have acquired Basic English writing skills that may become useful later on in the working world.

**Keywords:** education technology, efl, esl, Japan, higher education, large classes, tbl, university, writing

## Introduction

Instructing language learners to write in a second or third language is no easy task. If the class size is also large the impediments for success become only more laborious for the lecturer as well as the learners. For those engaged in teaching second language learners, what is needed is both a firm grounding in theoretical issues of first and second language writing and an understanding of a broad range of pedagogical issues that shape classroom instruction (Kroll, 1990). It is therefore recommended for the teacher to consider retracing the steps that the students have made to reach their current position in the language learning process. If students are non English majors this procedure can be highly beneficial; as in many cases the students most likely failed to grasp the essential points in their junior or senior high English courses. This is especially true for Japanese learners of English but could hold true where ever 2<sup>nd</sup> or 3<sup>rd</sup> languages courses are taught.

In the case of Japanese students who have already had 3 years of English language study in both junior and senior high school the wealth and depth of the material available for university instructors is invaluable. In non-English major courses the barriers to writing in English can be many. Limited vocabulary and almost nonexistent experience in writing are but just two. Some learners may not realize that the first letter is capitalized in a sentence, while others may not be aware of the fact that there is one space after a period ending a sentence. The formation of nouns and verbs, and their tenses are all part of the necessary knowledge that needs to be covered. The establishment of a topic sentence, supporting and concluding sentence are all vital. A quick refresher of the rules and roles that certain items play in the writing process is essential before the full commencing of any writing activities. These details can be easily covered and administrated through supplementary tasks that are readily available on the Internet is this global age of learning.

## Junior High Texts

Within junior high texts, the subject matter for future writing tasks covers a broad range of topics such as famous people, famous places or even global issues such as pollution or recycling. This allows for students who may have low writing abilities to inscribe on age appropriate topics. Student's personal views can also be conveyed through simple paragraphs.

A paragraph from the *Total English*, junior high school text displays not only a natural way of writing but also the components that may be involved. In this example simple and complex sentences are blended together to form a unified piece of writing.

Agnes was born in Macedonia in 1910. When she was still very young, she wanted to give her life to God. Agnes went to Calcutta, India and became a nun when she was 19 years old. She changed her name to Sister Teresa. Sister Teresa taught girls at high school. On the way to school, she always saw poor people. She could not forget them. One day Sister Teresa decided to help the poorest of the poor. She moved to the slums alone. (Total English 2, pp 8-9).

Additionally, paragraphs from junior high school texts may offer a topic that can inspire further debate among students; such as appropriate and future ways of travel.

Do you like traveling? Which do you like better, traveling by car or train? I like traveling by train better. We can relax on trains. Also they don't pollute the air as much as cars. And of course, to stop polluting the air, trains are better than planes. So

I like trains best of all. But if we can use cars with fuel cells in the future, we can travel without polluting the air. I'm sure that's the best way (Sunshine 2, p 76).

Other examples from school texts may offer more study and insight into the learners own customs, traditions and history further expanding their knowledge beyond the language writing environment. As the course progress's the depth and length of the writing assignments can be expanding from single paragraphs to more detailed topics. Another example from a Japanese junior high school texts expounds on the Japanese game of Go.

About a year ago I did not have any hobbies. But now I do. Last summer I went to a camp in Nagano. I made a lot of new friends there. We all had a good time together. But when everyone else talked about their hobbies, I could not join in. I really felt bad.

So I made up my mind to have some hobbies. Now I enjoy playing *go*. I am a member of the *go* club at our school. Do you know *go*? It is a very popular game in Japan. Two people play it. One person uses white stones, and the other uses black ones. If you get more "eyes" than the other person, you win the game. I think *go* is good training for the mind. Would you like to try it with me? (Sunshine 2, p 92)

As these examples are given to the learners, subsequently longer and more detailed writings can begin to take form. A further example describes the Japanese bullet train or Shinkansen.

The Shinkansen is one of the fastest electric trains in the world. The first Shinkansen began running in 1964, the year of the Tokyo Olympics. Before 1964, going from Tokyo to Osaka took more than six hours! But the Shinkansen was able to reach Osaka in about three hours. Some people thought the Shinkansen moves like a bullet. So they called it a "bullet train."

Now there are a lot of bullet trains in the world. France has the TGV. Germany has the ICE. But in the 1960's, only Japan had bullet trains.

Do you know the Shinkansen doesn't have any electric engines? Each car has it's own motor. In the 1960s, even the most powerful electric engine in Japan could not pull many passenger cars as fast as the Shinkansen. So motors in each car were more powerful than an electric engine.

On the other hand, the TGV is quite different from the Shinkansen. The TGV has two electric engines. The front engine pulls passenger cars, and at the same time the rear engine pushes them (Sunshine 2, p 93)

## Student Examples

Early in the course as a follow up to the text examples that were given, an assignment required to students to expound on a famous place in Japan. An example given below demonstrates how three learners responded to various assignments.

The Kinkaku-ji is a building in very famous Japan. It is in Kyoto. It is also called Rokuon-ji. Yoshimitsu Ashikaga set the residence of another which will inherit the mountain villa of the Saionzike in 1397, and it calls Mr. Kitayama. Yoshimitsu's postmortem and Rokuon-ji were named and it was considered as the temple.

It is in Kyoto. Present Kinkaku is what rebuilt what was burned down by the fire in Showa 25. It is a visionary building. A student often visits by a school trip. Although the construction specified as a national treasure or Fumi Kunishige does not have one in the building in Rokuon-ji, many tourists visit in Kinkaku which makes the Kitayama culture consider, and it registers with the World Cultural Heritage in 1994. (Student A, 2013)

Animal is so cute. I like animal. Because of There are many types of animal. There is dog, cat, lion and others. Lion and crocodile is eating meat. Pig and cock is eat plant. I can encounter an animal if I go to the zoo. Please us, and the animals heal it. An animal is my house. I keep a dog.my dog is pretty. I love animal. I am only in Japan , and there is the animal which is only the country. The panda is in Japan, too, but is only in few places . Therefore I have not yet watched a panda . It is interesting that there is the animal which I do not know more in the various countries. Because I have an immeasurable fun in an animal, I like it (student B. 2013)

Tokugawa Ieyasu

He is the first Tokugawa shogun.

He unified a nation in japan and started to Edo era. In 1542, he was born in Mikawa that is Aiti prefecture now. When he was six years old, he sent to Imagawa clan in his capacity as hostage. Because his parents are Imagawa's subordinate. But he was kidnapped by Oda on the way. Two years ago, he sent Imagawa clan by trade of hostage. In 1560, Imagawa was wiped out by Oda Nobinaga. With Yoshimoto dead, Ieyasu decided to ally with the Oda clan. When he was 20 years old, he subjugationed and unify to Mikawa. 1575, at the Battle of Nagashino, Ieyasu defeated Takeda clan with Oda. The end of the war with Takeda came in 1582 when a combined Oda-Tokugawa force attacked and conquered Kai province. Takeda Katsuyori, as well as his eldest son Takeda Nobukatsu, were defeated at the Battle of Temmokuzan and then committed seppuku.

After the death of Nobunaga, Ieyasu concluded with Hideyoshi who was Oda's subordinate. In 1591, Hideyoshi became top of japan. But in 1598, after the Hideyoshi was dead, Ieyasu was going to get to top. Hideyoshi's subordinate would enthroned the Hideyoshi's son. In 1600, Ieyasu won The Battle of Sekigahara and became shogun of the Tokugawa shogunate . (Student C, 2013).

Although fulfilling the assignment requirements, it is immediately obvious that there are some problems with how the tasks were accomplished. The advent of the Internet age has brought many benefits but also numerous challenges to those in the teaching field. In the student's work there are some signs of original work but there are also clear signs that the student's have most likely gone to Wikipedia or some other content area and grabbed the necessary details. By the conclusion of these assignments it was also evident that a considerable majority of learners had been

steered toward the same Internet sites and had simply copied and pasted the necessary material to accomplish the task. It is therefore imperative that the subject and topic material be carefully considered. That topic that is objective or based on personal experience offers learners the best opportunity to reflect and contribute their own work.

### **Ceasing Copy & Paste, Translate**

Once students discover the ease of simply searching for their topics writing assignment, copying and/or using translation software to finish the job, it is difficult for the instructor to choose the correct path to abolish the practice. One method is to demonstrate to the students the fallacy of such attempts by taking a text of English and using translation software to change it into their native tongue. In almost all instance the new version will be blatant with errors in grammar and word usage. It can then be explained to the students that when they do the same thing with their language and translate it into English; those same obvious mistakes can be easily spotted by the instructor.

Additionally, students may be given a warning by the instructor that subsequent attempts at copying and pasting or translating their way through future assignments may be met with a zero mark or requiring the student to re-do the assignment until the instructor is satisfied that the writing is original. In the future translation software will eventually reach a point where it will be almost impossible to desertion original from copied work. Thereafter, instructors will have to devise new strategies to work around the dilemma; until that time though, in the here and now instructors have to control the way assignments are completed. Students need to be per swayed as to that the goal of the course is not only about writing in another language but also developing the skills to do so. As the author DeSena states;

Students are natural economizers. Many students are interested in the shortest route possible through a course. That's why they ask questions such as, "Will this be on the test?" Copying a paper sometimes looks like a shortcut through an assignment, especially when the student feels overloaded with work already. To combat this cause, assign your paper to be due well before the end-of-term pressures. Remind students that the purpose of the course is to learn and develop skills and not just "get through." Writing a research paper helps to develop the skills of researching (hunting for something in the information universe), problem solving (the principal work of most people), writing (language is the most powerful weapon on earth), perseverance, and commitment. It follows that the more students learn and develop their skills, the more effective they will be in their future lives. (DeSena, 2007)

### **Specific Topics & Goals**

As displayed in the previous student examples, the choice of topics for students to expound on cannot be taken lightly by the instructor. Non-English majors may suffer from a lack of confidence and a shortage of vocabulary from which to construe their writing intentions. The free use of the Internet offers a Pandora's Box from which information can be easily seized. Thought and care needs to be taken by the instructor before assigning writing duties to the learners. To stimulate writing it is best to ask students to write about topics that they are already familiar with, these could be hobbies, sports, their family or school life. Assigning a complex obscure writing task only adds to the frustration and confusion for students with low language abilities. In most cases these types of assignments will not be completed satisfactorily or even at

all. When students become discouraged the problem of copying and pasting as outlined previously only becomes that more attractive.

To expand students writing abilities from just stating items that they are familiar with tasks such as those that require thought or debate may be introduced. Assignments asking “what would you do if...” or “how do you feel about...” are both introductions to expanded writing. Questions querying a reply from “which to you feel is better...or ...” can add contrast and debate to a simple assignment.

As in most cases with non-English majors who may be engineering, nursing, or in another area of study, the students may be proficient in a specific field of knowledge. For example computer engineering, it is the instructor’s responsibility to tie the two together; English and computers. In this fashion assignments hold meaning and purpose to the students while at the same time building writing skills that may be of use in their future careers.

Writing courses are more efficient and useful to learners when learner and curricular goals match. L2 students come to writing classes with their own ideas about what would be useful to them and not wanting to waste their time (or money). But when course goals do not match student goals, both teacher and learner have uphill battles (Leki, 2003).

### **Mixed Levels**

Regardless of the subject matter in large classes it would not be surprising to find learner abilities of vastly different levels. This is most often true in writing courses. The challenge lies in how to engage all learners in a meaningful writing process with attainable goals for each level. If the instructor plans activities that meet only the needs of the learners whose skills fall in the middle, those learners with lower skills may become frustrated and those with more advanced skills may become bored (Boyd & Boyd, 1989; Wrigley & Guth, 1992). The burden on the instructor may seem overwhelming for some instructors. Teachers face challenges in class preparation and classroom management (Mathews-Aydinli, & Van Horne, 2006). This is why the utilization of prior learning material can help ease the load on instructor’s shoulders.

### **Conclusion**

It can be accepted without debate that learning to write in a 2<sup>nd</sup> or 3<sup>rd</sup> language is an arduous effort. Writing, similar to speaking has separate rules that must be understood and utilized in their proper forms. If the rules and forms are not comprehended at an earlier stage then there is no discredit in going back and teaching them again. For university students though in a classroom with many members, new methods are required to emphasize the rudimentary fundamentals of writing. Junior and senior high English texts which the students are already familiar with offer abundant examples of the basics of writing form. Topic sentences, supporting sentences, complex and simple sentence structures can all be easily displayed and reviewed throughout a writing course.

The construction of a paragraph and how they can be linked together to produce a simple essay can all be conveyed through the use of texts from previous years. In a short time, students are able to generate literary compositions that state a point, give support, and finish with a conclusion.

While former texts offer a simple solution to instructing writing to second language learners as instructors we must realize the first language environment from which learners are coming from. As Kroll states;

As teachers, we must realize that for those engaged in learning to write in a second language, the complexity of mastering writing skills is compounded both by the difficulties inherent in learning a second language and by the way in which first language literacy skill may transfer to or detract from the acquisition of second language skills (Kroll, 1990).

While students in basic writing courses may never become true writers in their second language the understanding of the fundamental principles involved in the process can ease their burden when they may be called upon to contribute something in their chosen career. Through the application of texts from learners earlier years of study they can achieve a level of confidence and writing ability from which they never had before. This achievement while seemingly only classroom based in activities can benefit them later in life as they move into the working world.

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## References

- Boyd, J. R., & Boyd, M. A. (1989). *Input-output teacher's manual*. Normal, IL: Abaca Books.
- DeSena, L.H. (1997). Preventing Plagiarism: Tips and Techniques. National Council of Teachers of English.
- Kroll, B. (1990). *Second Language Writing, Research insights for the classroom*. Cambridge University Press.
- Leki, I. (2003). Research Insights on Second Language Writing Instruction. CAL Center for Applied Linguistics. Retrieved from: <http://www.cal.org/resources/digest/0306leki.html> .
- Mathews- Aydinli, J. & Van Horne, R. (2006). Promoting Success of Multilevel ESL Classes: What Teachers and Administrators Can Do. Center of Adult English Language Acquisition (CAELA). Retrieved from: [http://www.cal.org/caela/esl\\_resources/briefs/multilevel.pdf](http://www.cal.org/caela/esl_resources/briefs/multilevel.pdf)
- Sunshine 2. Sunshine English Course 2. Kairyudo. 2010.
- Total English 2. English text for Japanese Junior High School Students. Gakko Tosho. 2010.
- Wood, D., Bruner, J., & Ross, G. (1974). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, 17, 89-100.
- Wrigley, H.S., & Guth, G. J. A. (1992). *Bringing literacy to life: Issues and options in adult ESL literacy*. San Marco, CA: Aguirre International.

*Problem Analysis of English Major Undergraduate Students on Internship:  
A Case Study of Burapha University*

Rinda Warawudhi

Burapha University, Thailand

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Abstract

Thailand may encounter both opportunities and crises when the ASEAN Economic Community is implemented in 2015 because newly graduated students are likely to face the difficulty in the use of English language in the domestic and international workforce. As language teacher, to prepare university students, especially those whose major were English is the mission of the department. This study, therefore, focuses on identifying the problems in using English language that the undergraduate students encountered while they were on internship with the entrepreneurs. 32 subjects were fourth-year students who enrolled *Practicum* course in the first semester of 2013. These university students were asked to complete the questionnaires to report the problems on their internship. In the first part, it can be reported that the majority of the students used English language at work mostly used their English with non-native speaker customers. They recognized their English ability at the intermediate level. Speaking and listening skills were the Very difficult frequently used skills while they rarely used writing skills at their workplace. However, students reported in Part Two that they perceived that speaking and listening skills were their first and second rank problems in their internship. Also, it was found that writing and reading skills were lesser used than the aforementioned skills in Part One and students rated these skills at the third and fourth place of their problems. The findings, hence, could be used as a basis in developing English courses for English major students in order to enable them to acquire higher English proficiency before internship.

**Keywords:** needs analysis, university students, EFL, AEC

## 1. Introduction

Producing efficient graduates to the workforce is the crucial responsibility of the higher education institute. The implementation of ASEAN Economic Community (AEC) in 2015 awakens universities and education institutes among the ASEAN countries to prepare their students to be able to encounter more competitive marketplace of employment, especially the use of English language (Jarupan 2013, Noom-ura 2013). Thai students are lack of opportunities to use English language apart from their classroom as English is the foreign language in Thailand. They can use English only in their classroom. Even the fact that English language has been a compulsory language subject in the curriculum of Thai primary schools. Before earning bachelor degree, students have studied English for at least sixteen years, six years in their primary school, six years in secondary school and four year in their university. As shown in many research currently about the competency of English users in Thailand, it was still found that the learners have the problems in using English for communication. (Jarupan 2013, Chuanchaisit & Prapphal 2009, Klaichim et al 2000, Noom-ura 2013, Somdee & Suppasetsee 2013).

Comparing with other ASEAN countries such as Singapore, Malaysia or the Philippines which English is their official language or their second language, Thai graduate might face a great barrier for the competitive in employment after the opening to the gate of AEC in 2015 (Noom-ura 2013). Hence, the situation of low English competency in Thai users must be improved. Noom-ura (2013) has classified the English-teaching problems in Thailand into five categories, that is, (1) problems involving teachers, (2) problems involving students, (3) problems involving curricular and textbooks, (4) problems involving assessment and (5) problems involving other factors. It was found in this study that students' lack of opportunities to practice English skills was the crucial problems. This also contribute to the lack of confidence in using language for communication.

Hence, providing appropriate proportion of contents and skills in each course is important for language teachers. To find out what skills students weaken and require to fulfil their language competency is the first task of the teacher. Needs analysis then can be employed as the teacher's instrument to find out what students really need and encounter with. The analysis on language use and skills on the internship is, thus, useful for teacher in order to revise courses for the students. This can help to meet the student's real requirement before students enter to the real workforce.

## **2. Background Information**

Bachelor degree in English (B.A. in English) providing by Department of Western Language, Faculty of Humanities and Social sciences, Burapha University is four-year curriculum. Students require to do an internship when they finish their third year. They are expected to use English language at work be on the work for a period of at least 200 hours.

Students can decide to work with cooperation they are interested in, such as airline industries, hotel, tour agencies or any government and private corporations. The internship will be during the summer semester but will be credited on the first semester of their fourth year.

One of the reason for having internship between year three and year four of the curriculum is for students to have one year for improving their English skills. After internship, students might realize their real English competency reflecting from the counterparts they have worked with during the internship, example, their customers and their supervisors, etc. They hence can spend one last year in the university fulfil their own requirement studying five elective major courses (three-credit courses). They can opt English for Professional courses such as; English for Airline Industry, English for Secretary, English for Hotel and so on when they found out their interest on these professionals. Or they can strengthen their language skill subject as well in English for presentation or things like that.

## **3. Literature Review**

Needs analysis or so-called problem analysis have been conducted for numerous research projects in order to investigate learners' needs and problems. Needs analysis enables the course designer or teachers to achieve two things: (1) to produce a detailed profile of what the learner needs to be able to do in English in an occupation or study for which he or she is being trained; and (2) to produce a specification of the language skills, functions and forms required to carry out the communication described in the needs profile (Hawkey 1980).

To access learners' attitudes, needs and problems, questionnaires, interviews and observations are commonly used. This is to make sure that courses provided to learners were not teacher-centered but truly learner-centered. Hence, a number of research articles, thesis, and books related to needs analysis and problems analysis in EFL and ESL contexts have been reviewed in this study. It can be summarized as can be seen in Table 1.

**Table 1: Lists of needs analysis and problems analysis in EFL and ESL contexts**

Author(s)	Settings	Findings/ Implications
Aunruen (2005)	The exploration of the needs and problems in English language of travel agents working in Chiang Mai, Thailand. Questionnaires were administered as the research instrument.	The most important skills was speaking and it was also the most encountered skill. However, the others skills such as listening, writing and reading were required in their jobs as well.
Bocher & Smalkoski (2002)	ESL students had difficulties in speaking and listening in a health-care setting. The use of interview, observations and questionnaires were applied to gather the information about the objective needs of students.	The course had been develop in the area of greatest difficulty: communicating with clients and colleagues
Hamra & Syatriana (2012)	Needs analysis was applied to improve teaching model and teaching materials for reading classes	Students' score improved after learning in the revised teaching model and materials.
Ibrahim & Rahman (2013)	Teachers' attitudes on the use of needs analysis in design writing materials in writing class was administered.	Teachers agreed in the use of needs analysis to find proper ESP/EAP material writings and they convinced that this can help the class succeed.
Klaichim et al (2009)	The questionnaires were employed to obtain the data from teachers and students to find the problems and needs in English teaching and learning at institutes of physical education in Thailand.	It revealed that there were many factors affecting problems in learning English, that is, students' behaviors, students' language skills, English language curriculum and course content, teaching material, teaching methods, teachers' performance and institutes' support.
Pawapatcharandom (2007)	Questionnaire was employed to Thai students to investigate their English language problems and learning strategies in the international problems at Mahidol University in Thailand	The most serious problems of the students was writing skills. They can finish writing task within the limited time whilst intercultural communication was the least problem.
Preechawat (2010)	Questionnaires were employed to explore the English language problems and needs of Thai officers in an international company.	The majority of the subjects agreed that writing skills were the most used skills and were perceived as the most difficult skills. However, they needed the improvement in speaking skills rather than writing skills.

Soruc (2012)	Questionnaires and interviews were conducted with ESL students to reflect the attitudes towards the study program in school in Istanbul	The language programs were revised to meet students' needs.
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There are various ways to access the needs of the subjects depending on the purpose of the analysis. However, as can be seen from Table 1, questionnaires have been the most popular method in need analysis studies whilst some research studies employed the combination of questionnaires and competency test or the combination of questionnaires and interviews. In this studies, the use of questionnaires were administered.

#### 4. Research Questions

This study, therefore, investigates and analyses the problems of English major undergraduate students while working with the entrepreneurs on their internship. So three research questions were addressed in the following:

- 1) *What are the language skills students used most on their internship?*
- 2) *What skills did students encounter the most on their internship?*

#### 5. Methodology

##### 1) *Subjects*

The subjects were 32 fourth-year English major undergraduate students who enrolled Practicum course in the first semester of 2013. They were required to be on the work in field using English language ability and skills in a government departments, government enterprises, or private corporations for a period of at least 200 hours. The period of internship may vary starting from the end of March 2013 to May 2013.

##### 2) *Instrument*

To construct and develop the questionnaires used in this study, a number of research studies related to problems and needs analysis for language teaching and learning were reviewed (Arunruen 2005, Ibrahim & Rahman 2013, Preechawat 2010, Soruc 2012). The questionnaires can be divided into two parts. The personal information and the skills frequently used while internship were asked in the first part. The second part was five-Likert-scale questions asking students to report their problems in four basic skills: listening, speaking, reading and writing.

The responses from students in the first part were calculated and arranged into order from the greatest to the least. The answers from second part were calculated to find the means. Then the most and the least using skills and skills students reported that they had the problems with while internship were analyzed and reported in Discussion section.

##### 3) *Data Collection*

Questionnaire was administered to obtain the data at the last week of students' internship. Teachers who came to visit students at workplace asked the students to complete questionnaires while the teachers had discussed about students' performance with their supervisors in order to get the feedback from the entrepreneurs informally. This consumed about one hour for one office. 32 fourth-year English major undergraduate students were selected with simple cluster sampling technique from 80 students. They can be divided into eight groups by the business type of their entrepreneurs: hotel, tourism, airline, duty free shop, government entrepreneur, private company, and press. At the end of visiting day, students returned the questionnaires to the teachers. The questionnaires then were calculated and analyzed as report in Results and Discussion sections. The students had an opportunities to report their problems while working on that day. The teachers and the students then discussed about the students' performance, progress and problems for about fifteen to thirty minutes.

## 6. Results

### 1) *What are the language skills students used most on their internship?*

According to the finding in Part One, 87.5% of students or 28 students rated themselves as the intermediate users of English language while only 4 persons or 12.5% considered themselves advanced English speakers. During the internship, 46.87% of students used English all the time and 50% of them reported that they sometimes used language. However, only one person rarely used language at work. They also reported that they Very difficultly used their language with customers (81.25% or 26 from 32 students). They rarely used English language with their supervisor and their colleagues (15.62% and 12.5% or 5 and 4 from 32 students, respectively).

Additionally and interestingly, as can be seen in Table 2 below, the findings from Part One showed that among six English skills: listening, speaking, reading, writing, grammar and vocabulary, the majority of the students or 29 from 32 student often used speaking skill when they were on the job. The second-ranked skill was speaking, it earned 26 votes from all students. Then the lower ranks were vocabulary, reading, writing and grammar, respectively.

**Table 2: Frequency of Language Skills Used on Students' Internship**

<b>General Information</b>	<b>Frequency</b>	<b>Percent</b>
<i>Level of English proficiency</i>		
Beginner	0	
Intermediate	28	87.5
Advanced	4	12.5
<b>Total</b>	<b>32</b>	<b>100.0</b>
<i>People the students contacted using English language</i>		
Foreign customers	26	74.29
Entrepreneur/ supervisor	5	14.29
Colleagues	4	11.42
<b>Total</b>	<b>35</b>	<b>100.0</b>
<i>Rank of language skills and elements which the students used Very difficult</i>		
Speaking	29	29
Listening	26	26
Vocabulary	18	18
Reading	15	15
Writing	8	8
Grammar	4	4
<b>Total</b>	<b>100</b>	<b>100</b>

2) *What skills did students encounter the most on their internship?*

In Part Two of the questionnaire, students were asked to rate their problems in English use that they encountered in four basic skills - listening, speaking, reading, and writing - on five Likert scales that can be interpreted as follows:

<b>Scale</b>	<b>Problems of English skills</b>	<b>Mean Range</b>
1	Very difficult	1.00-1.80
2	Difficult	1.81-2.60
3	Fairly difficult	2.61-3.40
4	Not very difficult	3.41-4.20
5	Not difficult	4.21-5.00

**Table 3: Students' Problems of Listening Skills on Their Internship**

<b>Problems in Listening</b>	<b>Mean</b>	<b>S.D.</b>	<b>Meaning</b>
Listening for details from foreign customers	3.56	.804	Not very difficult
Listening for opinions	3.63	.907	Not very difficult
Listening to telephone conversations	3.66	1.153	Not very difficult
Listening for gist in business	3.69	.965	Not very difficult
Listening business conversations	3.88	.833	Not very difficult
Listening for basic instructions	4.19	.780	Not very difficult
<b>Total</b>	<b>3.77</b>		<b>Not very difficult</b>

It is obviously shown from Table 3 that the students did not have difficulty in listening to foreign customers, as seen from the total means of 3.77. It can be interpreted as 'Not very difficult'. However, the most difficult aspect in listening English for them was *listening for details from foreign customers* (mean = 3.56) whilst the least problem in listening aspect was listing for basic instructions (mean = 4.19).

**Table 4: Students' Problems of Speaking Skills on Their Internship**

<b>Problems in Speaking</b>	<b>Mean</b>	<b>S.D.</b>	<b>Meaning</b>
Speaking on the telephone	3.41	1.122	Not very difficult
Speaking for negotiation	3.65	1.066	Not very difficult
Speaking to express opinions	3.69	.821	Not very difficult
Speaking for asking and giving information	3.81	.859	Not very difficult
Speaking at the meeting	3.88	1.157	Not very difficult
Basic conversation with foreigners	3.91	.893	Not very difficult
<b>Total</b>	<b>3.72</b>		<b>Not very difficult</b>

From Table 4, the students encountered some difficulties in speaking English with foreign clients at not very difficult level in overall or at the mean of 3.72. The hardest speaking aspect for them was speaking on the telephone (mean = 3.41) whilst the easiest speaking sitting for students was basic conversation with foreigners (mean = 3.91).

**Table 5: Students' Problems of Reading Skills on Their Internship**

<b>Problems in Reading</b>	<b>Mean</b>	<b>S.D.</b>	<b>Meaning</b>
Business reading for gist	3.84	.884	Not very difficult
Reading online information	3.84	.884	Not very difficult
Reading general document	3.93	.871	Not very difficult
<b>Total</b>	3.88		Not very difficult

According to Table 5, the study on students' problems of reading skills revealed that the students dealt with reading on their internship with not very difficult level. They encountered with business reading for gist and reading online information with the similar means of 3.84 while they can read general document more comfortable comparing with the other two reading pieces at the mean of 3.93.

**Table 6: Students' Problems of Writing Skills on Their Internship**

<b>Problems in Writing</b>	<b>Mean</b>	<b>S.D.</b>	<b>Meaning</b>
Writing brochure and advertisement	3.72	1.023	Not very difficult
Summarizing a conclusion	3.72	.924	Not very difficult
Writing essays	3.75	1.047	Not very difficult
Writing business letters	3.78	1.157	Not very difficult
Writing business memo	3.91	.928	Not very difficult
Writing emails	3.91	.963	Not very difficult
<b>Total</b>	3.80		Not very difficult

It can also interpret from the findings from Table 6 that students encountered difficulties in writings at not very difficult level in overall with the mean of 3.80. The hardest writing tasks for them were writing brochure and advertisement and, summarizing a conclusion with the same mean of 3.72 whilst the most comfortable tasks of writing were writing business memo and writing emails with the means of 3.91.

All in all, when considered the means of all four basic skills of language (Table 3-6) it was found that speaking skills were the most difficult skills whilst reading skills were the most comfortable skills for students on their internship with the average means of 3.72 and 3.88, respectively.

**Table 7: Comparison of the most used skills and the skills which the students encountered problems Very difficult**

Language Skills	Rank of most used skills	Rank of most problem-encountered skills
Listening	2	1
Speaking	1	1
Reading	3	3
Writing	4	2

Regarding to the findings from Table 2 to 6, it can be summarized as can be seen in Table 7 that the majority of students ranked speaking as the skills they used most in their job while they were on the internship whilst it was speaking skills that the same group of students reported that they had encountered most with together. As listening skills were the skills that students rated that it was their first ranked problems on their job, these skills were at the second rank of the most used skills from the first part of the questionnaire as well. In addition, it can also be indicated that reading skills and writing skills were the skills that students use lesser as well as they were skills that they had problems lesser comparing with the others.

## 7. Conclusions and Discussions

As can be seen from Table 2, the most used skills of the students on their internship gaining from Part One of the questionnaire was speaking. Then the lower ranks were listening, reading and writing, respectively. It was also obviously shown from Table 3 to 6 that students realized that listening and speaking skills were their most difficult skills when they really used them on their jobs.

Regarding to the findings in this study, the implication might be further for three stakeholders; (1) students, (2) English teachers, and (3) curriculum administrators. For (1) English major students who are preparing themselves, they would learn that speaking was the most used skill when entering to the workforce, they then can practice to boost this skill beforehand. As well as the students who finished the

apprenticeship, still they have a time to be fluent in their weak language skills and be keen on their strength. Also, (2) English teachers can adjust their courses in according to the most used skills and the problem skills the students encountered with most. For (3) curriculum administrators, to ensure that they can provide the proper curriculum to suit the workforce. The more the newly graduates are prepared to get ready for their future career and the opening to the gate of AEC in 2015, the more advance they can grow up in the world of employment.

Additionally, for the researcher herself, with the concerning of AEC in 2015, the data earning from this study will be applied for a curriculum development of the subjects she taught in Burapha University. To further this study, the questionnaires employed in this study will be used to develop the major subjects in English business track.

### **8. Acknowledgement**

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## 9. References

- Arunruen, R. 2005, *Needs Analysis of English for Travel Agents in Chiang Mai*. M.A. Thesis in English for Specific Purposes. Kesetsart University.
- Belcher, D. 2006, 'English for Specific Purposes: Teaching to Perceived Needs and Imagined Futures in Worlds of Work, Study, and Everyday Life', *TESOL QUARTERLY*, vol. 40, no.1, pp. 133-156.
- Bocher, S. & Smalkoski, K. 2002, 'From Needs Analysis to Curriculum Development, Designing a Course in Health-care Communication for Immigrant Students in the USA', *English for Specific Purposes*, vol. 21, no. 1, pp. 59-79.
- Chan, V. 2001, 'Determining Students' Language Needs in a Tertiary Setting', *Forum*. vol. 39, no. 3, pp. 16-27.
- Chuanchaisit, S.& Prapphal, K., 2009, 'A study of English communication strategies of Thai university students', *MANUSYA: Journal of Humanities*, special issue, No. 19, pp. 100-126.
- Hamra, A. & Syatriana, E. 2012, 'A Model of Reading Teaching for University EFL Students: Need Analysis and Model Design', *English Language Teaching*, vol. 5, no.10, pp. 1-11.
- Ibrahim, H. & Rahman, A. 2013, 'Perceived Views of Language Teachers on the Use of Needs Analysis in ESP Materials Writing', *English Language Teaching*, vol. 6 no. 3, pp. 11-19.
- Jarupan, S., 2013, 'The English Oral Communication Competency of Thai Engineering Students', *International Journal of Scientific and Research Publications*, Vol. 2, No. 3, pp. 1-9.
- Klaichim, S. & Charumanee, N. & Laohawiriyanon, C., 2009, 'Problems and needs in English teaching and learning at the institutes of physical education, Thailand', *Proceeding of the Internaltional Conference on Graduate Students' Research Work: A Joint Conference between the Faculty of Liberal Arts, Prince of Songkhla University and the Malaysia National Writers Association (PENNA)*, pp. 1-15.
- Noom-ura, S., 2013, 'English-Teaching Problems in Thailand and Thai Teachers' Professional Development Needs', *English Language Teaching*, Vol. 6, No. 11, pp. 139-147.
- Orr, T. 2001. 'English Language Education for Specific Professional Needs', *IEEE Transactions on Professional Communication*, vol. 44, no. 3, pp. 207-211.
- Pawapatcharodom, R., 2007, 'An investigation of Thai students' English language problems and their learning strategies in the international program at Mahidol University', M.A. Thesis in English for Business and Industry. King Mongkut's Institute of Technology North Bangkok.

Preechawat, T. 2010, '*Needs Analysis of Thai Officers' English Language Use at an International Company*'. M.A. Thesis in Language and Communication. National Institute of Development Administration.

Soruc, A. 2012, 'The Role of Needs Analysis in Language Program Renewal Process', *Mevlana International Journal of Education*, vol. 2, no. 1, pp. 36-47.

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*The Developmental Co – Operation Strategies of Local Administration Organizations  
in the Provision of Vocational Education*

Anuchai Ramwarungkura

Kasetsart University, Thailand

0800

The Asian Conference on Education 2013

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Abstract

The objectives of this research were to 1) study states and problems 2) study cooperative factors and 3) determine cooperative strategies in vocational education provision. This research was divided into three phases. The first phase was to study states and problems of education provision for all of 7 vocational colleges. The data were collected from 845 students and 132 teachers by using questionnaire. The statistics used in this phase were mean and standard deviation. The second phase was to study cooperative factors of vocational education provision by using the opinions of 2 groups of executives derived from simple random sampling comprising of 276 government sector executives and 370 private sector executives. The questionnaire was used as a tool for collecting data. For data analysis, t-test and factor analysis, and orthogonal rotation (Varimax), was employed as the statistical tools. The third phase, the cooperative strategies in vocational education provision were to determine from the consensus of a focus group discussion of 37 purposively selected experts.

The research findings revealed that the study of states and problems of vocational education provision of local administrative organizations found that the overall education provision states and problems were in the high level , medium level respectively. 646 executives for government sector and private sector about 20 cooperative factors of vocational education provision by using t-test, were found to be statistically insignificant ( $p$ -value  $> .05$ ). The factors could be classified into four aspects ( $KMO = .940$ ). And cooperative strategies in the field of vocational education provision of local administrative organizations from focus group discussion. It was found that the cooperative strategies appropriate to the vocational colleges under municipalities comprised of five strategies. Such cooperative strategies would be able to make vocational education management of vocational college become successful in the future.

**Keywords:** Co – operation strategies, Local Administration Organizations, Vocational education

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## Introduction

The Constitution of Thailand B.E. 2550 prescribed the government to decentralize to local administrative organizations to support themselves and make decisions in local activities by themselves especially the education provision in order to have the development in education in the forms of education training and professional training. (Constitution Drafting Commission, Constituent Assembly, 2007) As such, the local administrative organizations entitled to provide education training and professional training as they deemed appropriate and according to the needs in locality. This was consistent with Section 41 of the National Education Act B.E. 2541, amended in B.E. 2545 stating that ***local administrative organizations had the right to provide education in any or all levels according to readiness, suitability and requirements within locality***. Education provision of local administrative organizations at all levels must have a state agency which referred to the Department of Local Administration, the Ministry of Interior, to promote, govern and monitor education quality in order to meet the standards. (Office of the National Education Commission, 2003)

A municipality is one form of local administrative organizations. The Municipality Act prescribed the mission of education that could be provided from early childhood through to vocational education. Municipality education provisions were mainly basic education while the vocational education provisions of the municipalities focused on professional development according to the needs of the community (Barlow, 1965; Thomson, J. K. 1973; Evan and Herr, 1978). The consistent of vocational education on creativity development for local people could apply it to career development. (Rakkusol, N, 2013) The three-year local education development plan from the year B.E. 2555 to B.E. 2557 determined 5 strategies to improve vocational education as follows: 1) to foster the links and transfers of formal, non-formal and informal vocational education, 2) to develop the form of vocational education provision, 3) to promote study and experimental research to find methods for vocational education provision, 4) to raise the standard of vocational education provision, and 5) to promote the development of vocational learners image. (Department of Local Administration, 2011)

The establishment of the vocational education colleges under the municipality was performed for the first time in the year B.E. 2549. However, until B.E. 2556, there were only 7 establishments where the two of them were under the city municipalities, which were Nakhonpathom Municipality Vocational College and Omnoi Municipality Vocational College. Five of establishments were under the town municipalities, which are Phraputthabat Municipality Vocational College, Sriracha Vocational College, Nasan Town Municipality Vocational College, Kamphaengphet Town Municipality Vocational College, and Lomsak Municipality Vocational College. It could be regarded that vocational education provision was new in the education at municipality level, which was different from the original mission done in the past in the form of basic education.

Therefore, the creation of cooperation was required for education provision at this level, since the vocational education provision would be efficient if and only if there was a real practice in establishment. From the said reasons, the researcher was interested to study the cooperative strategies of local administrative organizations in order to provide vocational education.

## Objectives of research

This research has objectives to

- 1) Study and problems of vocational education provision of local administrative organizations,
- 2) Study cooperative factors of vocational education provision of local administrative organizations, and;
- 3) Determine cooperative strategies in vocational education provision of local administrative organizations.

## Results of the study

In this research, the results of the research were divided into three phases as shown in Figure 1.

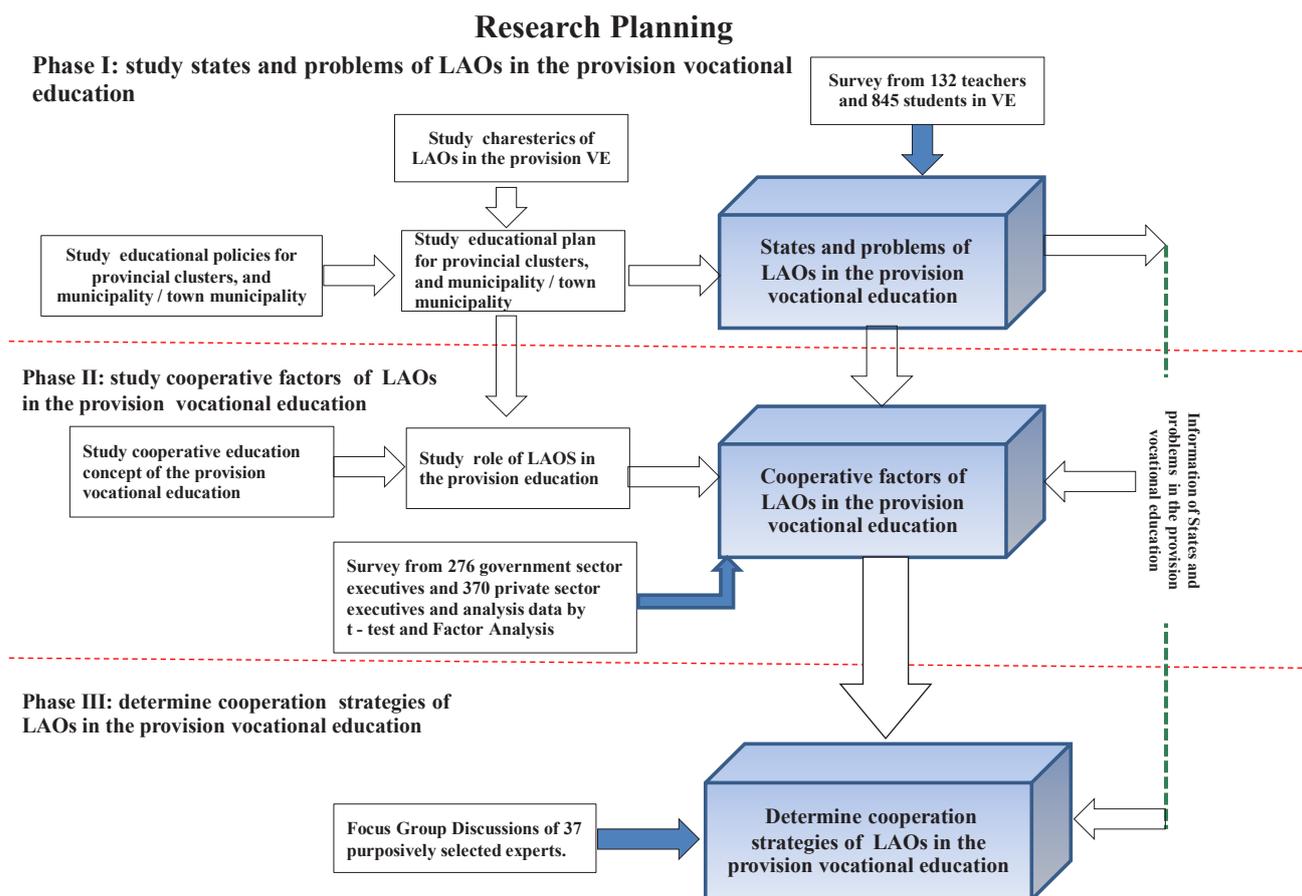


Figure 1: Research planning of the developmental co – operation strategies of local administration organizations in the provision vocational education.

The first phase was to study conditions and problems of vocational education provision of local administrative organizations. The tool used in this phase was 5-rating-scale questionnaire. The content validity for experts was found IOC value in the range of 0.80 to 1.00. The reliability was found by using alpha-coefficient of Cronbach for the questionnaires of both teachers and students and the results were 0.914 and 0.880 respectively. The data was collected from teachers and students, which were 132 out of 159 teachers, or 83.02 percent, and 845 out of 1,385 students, or 61.01 percent. The statistics used in data analysis was descriptive statistics which were mean value and standard deviation.

The researcher studied the states of vocational education provision of local administrative organizations and divided them into three aspects, which were 1) academic matter and learning process, 2) general administration and 3) community network, private sector, and local administrative organizations. The overall results of the questionnaire in all three aspects were in the high level. After analyzing conditions of education provision in each aspect, it was found that the three highest average values in academic matter and learning process aspect were teachers who were experienced and skilled to teach things that could be done in practice, real practice with organizations, and concrete internship system. The three highest average values in general administration aspect were the vision and mission specified by vocational colleges that were consistent with community education provision, concrete personnel promotion and development system from vocational colleges, and systematic recruitment system. In community network, private sector, and local administrative organizations aspect, the last three dimensions in the medium level were the establishment of alumni network to strengthen vocational development, resource center to provide academic services to the community, and resources mobilization for vocational education provision with both domestic and international networks, as shown in **Table 1**.

**Table 1: States of vocational education provision of local administrative organizations municipalities**

<b>1. Academic matter and learning process</b>	<b><math>\mu</math> (<math>\sigma</math>)</b>	<b>Meaning</b>	<b>2. General administration</b>
1.1 Vocational colleges had teachers who were experienced and skilled to teach things that could be done in practice	4.01 (.860)	High	2.1 Vocational colleges determined vision and missions that were consistent with community education provision.
1.2 Vocational colleges had real practice training rather than internship.	3.88 (.878)	High	2.2 Vocational colleges had concrete promotion and development system for vocational educational personnel.
1.3 Vocational colleges had systematic internship system	3.87 (.881)	High	2.3 Vocational colleges had systematic recruitment system for vocational educational personnel.
1.4 Vocational colleges had competency-based curriculum that was consistent to the needs of locality.	3.78 (.777)	High	2.4 Vocational colleges had welfare and benefit system for personnel and students.
1.5 Vocational colleges had systematic internal quality assurance.	3.77 (.915)	High	2.5 Vocational colleges had efficient preparation of budget plan and resource.
1.6 Vocational colleges had concrete extracurricular activities for career development.	3.75 (.899)	High	2.6 Vocational colleges had concrete management monitoring and evaluation system.
1.7 Vocational colleges organized consultation that concretely supported students.	3.71 (.851)	High	2.7 Vocational colleges had procurement system for supplies used in vocational education
1.8 Vocational colleges supported students' innovations and inventions.	3.69 (.924)	High	2.8 Vocational colleges had information technology system in vocational education management
1.9 Vocational colleges arranged the teaching environment to resemble that of actual works.	3.57 (.946)	High	2.9 Vocational colleges had risk management system within the institutions
<b>Average value for academic matter and learning process aspect</b>	<b>3.78 (.614)</b>	<b>High</b>	<b>Average value for general administration aspect</b>

**Table 1 (Continued)**

<b>3. Community network, private sector, and local administrative organizations</b>	<b><math>\mu</math> (<math>\sigma</math>)</b>	<b>Meaning</b>
3.1 Vocational colleges cooperated with community, private sector, and local administrative organizations in vocational education provision.	3.63 (.936)	<b>High</b>
3.2 Vocational colleges cooperated with the community to used local wisdom and learning resources.	3.62 (.950)	<b>High</b>
3.3 Vocational colleges had cooperative management with community, locality, and industry.	3.61 (.937)	<b>High</b>
3.4 Vocational colleges had identity accepted by the community	3.57 (1.004)	<b>High</b>
3.5 Vocational colleges created cooperative network for vocational education provision with other local administrative organizations.	3.56 (.955)	<b>High</b>
3.6 Vocational colleges had professional training in the form of short courses with other local administrative organizations.	3.55 (.977)	<b>High</b>
3.7 Vocational colleges had establishment of alumni network to strengthen vocational development.	3.33 (1.092)	<b>Medium</b>
3.8 Vocational colleges had resource center to provide academic services to the community	3.29 (1.030)	<b>Medium</b>
3.9 Vocational colleges had resources mobilization for vocational education provision with both domestic and international networks	3.28 (1.067)	<b>Medium</b>
<b>Average value for community network, private sector, and local administrative organizations aspect</b>	<b>3.49 (.729)</b>	<b>High</b>

Remark: For reference of meaning, the average of 1.00-1.80 means Lowest, 1.81-2.60 means Low, 2.61-3.40 means Medium, 3.41-4.20 means High, and 4.21-5.00 means Highest.

For the problems of vocational education provision of local administrative organizations, the researcher divided into 4 aspects comprising of teacher aspect, teaching aspect, participation of education institution aspect and administrator and policies of education institution aspect. It was found that in every aspect the respondents were in the medium level. After considering in each aspect, the first problem regarding teacher aspect was that the teacher had too many practical teaching works, and the second was that the teacher had too many descriptive teaching works. For teaching aspect, the first problem is insufficient practicing supplies to the number of students in practical section, and the second was that the size of lecture room did not meet the prescribed standards. For the cooperation creation of education institution aspect, the first problem was the lack of cooperation of education institution with institutes of professional qualifications and the second problem was the lack of establishment of internal cooperation commission. For the administrator and policies of education institution aspect, the first problem was the lack of establishment of concrete alumni in vocational colleges, and the second problem was that administrators did not have joint policies of education management with provinces, as shown in **Table 2**.

**Table 2: Problems of vocational education provision of local administrative organizations in municipalities**  
(n=997)

<b>1. Teacher aspect</b>	<b><math>\mu</math> (<math>\sigma</math>)</b>	<b>Meaning</b>	<b>2. Teaching aspect</b>
1.1 Too many teaching works in practical material for teachers	3.39 (.931)	Medium	2. 8 Vocational training plant did not provide the development of students' skills.
1.2 Too many teaching works in descriptive material for teachers	3.38 (.975)	Medium	2. 9 Vocational training plant did not provide safety system for students.
1.3 Too many advising works for profession project	3.37 (.952)	Medium	2.10 Libraries in vocational colleges had few books.
1.4 Too many other works for which teachers were responsible	3.37 (1.006)	Medium	<b>Average value of teaching aspect</b>
1.5 Too many required academic works for teachers to do	3.29 (.928)	Medium	<b>3. Cooperation creation of vocational colleges aspect</b>
1.6 Education backgrounds of teachers were not relevant to their field of teaching	3.04 (1.264)	Medium	3.1 Vocational colleges were lacking cooperation with Thailand Professional Qualification Institutes
<b>Average value of teacher aspect</b>	<b>3.30(1.009)</b>	<b>Medium</b>	3.2 Vocational colleges were lacking establishment of internal cooperation commission
<b>2. Teaching aspect</b>	<b><math>\mu</math> (<math>\sigma</math>)</b>	<b>Meaning</b>	
2.1 Insufficient practicing supplies to the number of students in practical section	3.33 (1.070)	Medium	3.3 Vocational colleges were lacking cooperation with Vocational Education Commission.
2.2 Size of lecture room did not meet the prescribed standards	3.32 (1.012)	Medium	3.4 Vocational colleges were lacking cooperation between municipalities.
2.3 Equipments in students' practicing packages were not current	3.32 (1.102)	Medium	3.5 Vocational colleges were lacking cooperation with Sub-district Administration Organization
2.4 Vocational lab was not sufficient to the number of students	3.27 (1.072)	Medium	3.6 Vocational colleges were lacking coordinator to deal with the network concretely.
2.5 Competency based curriculum was not in accordance with students' needs	3.24 (1.068)	Medium	
2.6 Insufficient internship locations for students	3.20(1.051)	Medium	
2.7 Number of students were not proportionately in accordance with the prescribed standards	3.23 (1.012)	Medium	

**Table 2 (Continued)**

<b>3. Cooperation creation of vocational colleges aspect</b>	<b><math>\mu</math> (<math>\sigma</math>)</b>	<b>Meaning</b>
3.7 Vocational colleges were lack of cooperation with Provincial Administrative Organization	3.14 (1.062)	Medium
3.8 Vocational colleges were lack of cooperation with universities	3.11 (1.132)	Medium
<b>Average value of cooperation creation of education institution aspect</b>	<b>3.18 (1.088)</b>	<b>Medium</b>
<b>4. Administrator and policies of vocational college aspect</b>	<b><math>\mu</math> (<math>\sigma</math>)</b>	<b>Meaning</b>
4.1 Vocational colleges were lack of establishment of concrete alumni.	3.35 (1.104)	Medium
4.2 Administrators did not have joint policies of education management with provinces.	3.23 (1.101)	Medium
4.3 Vocational colleges had high student turnover rate.	3.22 (1.080)	Medium
4.4 Vocational colleges were lack of participation in competency-based curriculum development for Students	3.19 (1.023)	Medium
4.5 Vocational colleges were not independent in the management of vocational education	3.19 (1.151)	Medium
4.6 Vocational colleges had insufficient budget allocation for personnel development.	3.19 (1.127)	Medium
4.7 Vocational colleges insufficiently supported the budget for teacher's invention, innovation and creation works	3.16 (1.130)	Medium
4.8 Personnel remuneration was not sufficient to the current cost of living	3.15 (1.067)	Medium
4.9 Administrators did not create understanding about progress of career path of personnel	3.15 (1.102)	Medium
4.10 Personnel remuneration was not appropriate to the amount of designated work.	3.14 (1.098)	Medium
4.11 Administrators did not understand the vocational education of Vocational colleges.	3.13 (1.173)	Medium
4.12 Education institution's education provision policies were not in accordance with municipality policies.	3.10 (1.098)	Medium
4.13 High personnel turnover rate in the last year	2.96 (1.214)	Medium
<b>Average value of administrator and policies of education institution aspect</b>	<b>3.17 (1.113)</b>	<b>Medium</b>

Remark: For reference of meaning, the average of 1.00-1.80 means Lowest, 1.81-2.60 means Low, 2.61-3.40 means Medium, 3.41-4.20 means High, and 4.21-5.00 means Highest.

The second phase was to study cooperative factors of vocational education provision of local administrative organizations. The tool used in this phase was 5-rating-scale questionnaire. The content validity for experts was found IOC value in the range of 0.80 to 1.00. The reliability was found by using alpha-coefficient of Cronbach for the questionnaires of both teachers and students and the results were 0.903. The data was collected from executives of 7 provinces that were the location of vocational colleges under municipalities by using simple random sampling. The samples included 276 government sector executives and 370 private sector executives from the total of 28,500 persons (Yamane, 1967) Data analysis in this phase adopted Independent Sample t-test and factor analysis by using Varimax perpendicular rotation axis was performed. According to table 3, it could be seen that after surveying both government sector executives and private sector executives for 646 executives about cooperative factors of vocational education provision by using Independent Sample t-test, were found to be statistically insignificant in 20 factors (p-value > .05). After that, the factors were grouped by using factor analysis, Principal Component Analysis and orthogonal rotation (Varimax) where the conditions of factor analysis required measure of sampling adequacy by using Kaiser-Meyer-Olkin value and the relationship was tested by using Bartlette's test. Tested KMO value was equal to .950 and higher than .5 and the relationship was significant at .000 less than .05. This meant that each factor was related between each other and was appropriate for factor analysis. After analyzing factors by using orthogonal rotation (Varimax) of 20 factors, it was found than the researcher can group cooperation factors into 4 aspects. The first aspect was the cooperation of vocational colleges with outside agencies, with Eigenvalues equal to 10.747 and Factor Loading in a range of .794 - .494. The second aspect was the cooperation of municipalities with private sector and local administrative organizations, with Eigenvalues equal to 1.761 and Factor Loading in a range of .788-.494. The third aspect was the ability of educational institution administrators, with Eigenvalues equal to 1.357 and Factor Loading in a range of .848-.726. The fourth aspect was the promotion of education provision policy, with Eigenvalues equal to 1.021 and Factor Loading in a range of .830-.757.

The third phase was to determine cooperative strategies in vocational education provision of local administrative organizations. The data was collected by using focus group of 37 experts derived by purposive sampling, involving mayors, mayor clerks, directors of the Department of Education, representatives from private sector, directors of vocational colleges under municipalities, and assistant directors of vocational colleges under municipalities. The tool used in this phase was focus group and content analysis was used to analyze the data. The focus group determined cooperative strategies in vocational education provision of local administrative organizations for 5 strategies as shown in **Table 3**.

The first strategy was the development of academic matter / profession of teacher and educational personnel. This strategy focused on the development of education institution's personnel, especially the urgent development of creativity, innovation or invention in the form of Memorandum of Understanding (MOU) with universities to develop project-based learning and MOU in the characteristics of mentoring system with vocational colleges under the Vocational Education Commission to create vocational education project.

The second strategy was the development of vocational education curriculum for the vocational colleges under municipalities that adhered to the vocational

education provision as per Vocational Education Act. There must be a strategy for **formal** vocational education provision in the form of competency-based curriculum development. The cooperation must be made with vocational colleges under the Vocational Education Commission in the form of Memorandum of Understanding (MOU). For **informal** vocational education, the education should be provided in accordance with community's needs by arranging short courses for career with the community and provide a career learning center for the community. Such cooperation should be in the form of network associate and Memorandum of Understanding (MOU) done with the community.

The third strategy was the development of educational quality assurance system. As the internal educational quality assurance system had no clear indication from the Department of Local Administration, vocational colleges under municipalities should cooperate with vocational colleges under the Vocational Education Commission or private vocational colleges in the form of Memorandum of Understanding (MOU) in mentoring system. The objective of this strategy was to study the indicator of vocational education of both types of vocational colleges to create educational quality assurance system within the Vocational colleges to allow external quality assessment.

The fourth strategy was the development of students. This strategy focused on developing students to have competency that was in accordance with the demand of labor market. From the research, the results showed that vocational colleges under municipalities should cooperate with private companies in order to provide internship location for students. And there should be cooperation with vocational college in the area to develop students' profession projects or inventions through network associated and Memorandum of Understanding (MOU). Furthermore, the vocational colleges should cooperate with the community to find additional learning resources for students as well.

The last strategy was the development of dual system of vocational education. This was the education provision that emphasized on real practices with organizations. Vocational colleges under municipalities had cooperation with vocational colleges under the Vocational Education Commission in the form of mentoring system or with private sectors to meet the needs of manpower of industries in the form of Memorandum of Understanding (MOU) or contract done with organizations.

All 5 cooperative strategies in vocational education provision of vocational colleges under municipalities had objectives to develop the provision of teaching of educational system which were formal, informal and dual system. The agencies that had cooperation with colleges in vocational education provision were the vocational colleges under the Vocational Education Commission, universities, organizations, Department of Local Administration and communities. Most cooperation was in the form of Memorandum of Understanding (MOU), network associates, and so on.

**Table 3: Cooperative factors of factor analysis by using Principal Component Analysis and orthog**

Factor analysis	Independent	
	$\bar{x}$	SI
<b>Factor I : Cooperation of vocational colleges with outside agencies</b>		
1.1 Vocational colleges had academic cooperation with private sector and other vocational colleges to develop personnel.	3.20	1.06
1.2 Vocational colleges received funding for research, creation, innovation or invention of teachers and students from the private sector and local administrative organizations.	3.03	1.09
1.3 Vocational colleges had collaboration with the foreign network to produce the curriculum to support ASEAN Community (AC)	3.09	1.11
1.4 Vocational colleges produced curriculum with the private sector, their own municipality and local administrative organizations.	3.26	1.07
1.5 Vocational colleges received funding to improve facilities, training plant and lab from private sector and local administrative organizations	2.95	1.12
1.6 Municipalities formed a committee of vocational education at municipality level with vocational colleges.	2.93	1.18
1.7 Vocational colleges formed a committee in collaboration with the private sector and local administrative organizations to determine the direction of the vocational education in the future.	3.31	.903
1.8 Vocational colleges administrators well understood the management context of local administrative organizations of vocational education provision.	3.21	.933
<b>Eigenvalues</b>		
<b>Variance (percent)</b>		
<b>Factor II: Cooperation of municipalities with private sector and local administrative organizations</b>		
2.1 Municipalities had collaboration with other local administrative organizations regarding the vocational education provision	3.06	1.07
2.2 Municipalities were involved in supervision and monitored the operation of vocational colleges.	3.10	1.11
2.3 Municipalities planned manpower plan in collaboration with vocational colleges to match workload.	3.06	1.11
2.4 Municipalities had cooperation with private sector in the provision of media support and learning resources for vocational colleges.	3.33	.976

**Table 3 (Continued)**

Factor analysis	Independent	
	$\bar{x}$	SI
2.5 Vocational colleges were funded vocational education teaching media from private sector and other local administrative organizations	3.16	1.0
<b>Eigenvalues</b>		
<b>Variance (percent)</b>		
<b>Factor III: Ability of educational institution administrators</b>		
3.1 Vocational colleges administrators had knowledge about the management of vocational education in line with the participation of local administrative organizations.	3.36	.95
3.2 Vocational colleges administrators had policies to manage vocational education in accordance with the development plan of their municipality.	3.20	.95
3.3 Vocational colleges administrators created the vocational education network associates of private sector and local administrative organizations.	3.40	.88
3.4 Vocational colleges administrators can work in participation with local administrative organizations relating to vocational education provision.	3.36	.87
<b>Eigenvalues</b>		
<b>Variance (percent)</b>		
<b>Factor IV: Promotion of education provision policy</b>		
4.1 Municipalities were involved in the promotion of academic affair in the personnel development of Vocational colleges.	3.07	1.0
4.2 Department of Local Administration had a clear policy for vocational education according to decentralization plan.	3.19	1.0
4.3 Department of Local Administration established the vocational education committees in conjunction with public and private sector to formulate policies for vocational education of local administrative organizations	3.13	1.0
<b>Eigenvalues</b>		
<b>Variance (percent)</b>		
<b>KMO and Bartlett's Test</b>		
Kaiser- Meyer – Olkin Measure of Sampling Adequacy	.940	Bartlett's Test of Sphericity : Approximate df Sig.

## **Discussion**

According to the results of the development of cooperative strategies of local administrative organizations in vocational education provision, the researcher had three issues of discussions as follows.

1) The conditions of vocational education provision of vocational colleges under municipalities were in the high level especially with the condition of academic matter and learning process that the colleges had experienced and skilled teachers to teach to create real practices. This was consistent with Prosser (1974) which stated that vocational education will be effective in proportion as the instructor has had successful experience in the of the skills and knowledge to the operations and processes he undertakes to teach such as business administration and technical education. Mobilization of resources for vocational education provision with both domestic and international networks in the future was necessary for career development in the community.

2) The cooperative factors of vocational education provision comprised of 4 aspects. The first aspect was the cooperation of Vocational colleges with outside agencies. The second aspect was the cooperation of municipalities with private sector and local administrative organizations. The third aspect was the ability of educational institution administrators. The fourth aspect was the promotion of education provision policy. These factors were the education provision of municipalities could be driven by the cooperation within municipality, between municipalities, between provinces and between communities. (Auewong, K, 2010)

3) The cooperative strategies in vocational education provision were determined to have five strategies which were 1) the development of profession of teacher and educational personnel 2) the development of vocational education curriculum 3) the development of educational quality assurance system 4) the development of students and 5) the development of dual system of vocational education. Determining the cooperative strategies in vocational education provision was still regarded as a new matter in education provision of municipalities. They were consistent with Barlow (1974) showed vocational education that it is planned and conducted in close cooperation with business and industry.

## **Conclusion**

The author of this study the cooperative strategies appropriate to the vocational colleges under municipalities from Prosser's sixteen theorems as a basis for sound and successful programs which have made a substantial contribution to the administration and instruction of vocational education. And cooperative strategies, business and industry, would be able to make vocational education management of vocational college become successful in the future.

## References

- Auewong, K, 2010. Evaluation of Municipalities Education Provision. Bangkok: Prikwan Graphic Co., Ltd.
- Barlow, M. L. 1974. The Philosophy for Quality Vocational Education. Washington D.C.: The American Vocational Association Inc.
- Calhoun, C.C. and A.V. Finch . 1976. Vocational and Career Education . California: Wadsworth Publish Inc.
- Constitution Drafting Commission, Constituent Assembly. 2007. Constitution of The Kingdom of Thailand, B.E. 2550 (2007). Bangkok: Bureau of Printing Services, The Secretariat of the House of Representatives.
- Department of Local Administration. 2011. The three-year local education development plan (B.E. 2555 - 2557). Bangkok: Plan and Budget of Local Education
- Evan, R.N. and E.L.Herr. 1978. Foundation of Vocational Education. Ohio: Merrill Publishing Company.
- Finch, C. R. and J. R. Crunkilton. 1993. Curriculum Development in Vocational and Technical Education Planning, Content, and Implement. 4th ed. Massachusetts: Allyn and Bacon Inc.
- Office of the National Education Commission. 2003. National Education Act B.E. 2542 (1999) and Amendments (Second National Educational Act B.E. 2545 (2002)). Bangkok : Pimdeekarnpim Co., Ltd.
- Prosser, C.A. and T.A. Quigley. 1949. Vocational Education in a Democracy. Chicago: American Technical Society. pp 217 – 232.
- Rakkusol, Nalinrat. 2013. Trend in vocational education provision of municipalities in Thailand. Bangkok: Kasetsart University.
- Thomson, J. K. 1973. Foundations of Vocational Education. New Jersey: Prentice – Hall Inc.
- Yamane, Taro. 1967. Statistics, An Introductory Analysis, 2nd Ed., New York: Harper and Row.

*The Effects of Language Learning Strategies on the Students' Learning Achievement*

Hao Yuan Cheng\*<sup>1</sup>, Nai-Ying Chang\*<sup>2</sup>

\*<sup>1</sup>Tzu-Chi College of Technology, Taiwan,

\*<sup>2</sup>Hsiu-Ping University of Science and Technology, Taiwan

0811

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## **Introduction**

It is important to recognize the effectiveness of language learning strategies on the language learners' achievement. In the EFL learning situation, students relies memorization strategy for learning vocabulary, phrases and grammatical rules (Wu, 2010). However, it could be hard for language learners to apply their knowledge to proper settings in terms of the usage and the common expression of the language. Furthermore, it is challenging for language learners to acquire a language merely based on grammatical relative memorization strategies. Wu (2010) pointed out that communicative approach has become the most favorable English teaching and learning. This strategy creates the needs of communication in the learners' target language and communicative teaching style has been adopted to facilitate the class discussion. The foci of the communicative approach are grammar, discourses, function, sociolinguistic characteristics, and strategies. This approach is to develop the students the skills to cope with the communication for general purposes. One of the important benefits of applying the communicative teaching style is that the learners will be given opportunities to recognize their own learning process through the development of self-favored autonomous learning strategies.

Successful language learners have been reportedly adopting certain strategies to help themselves overcome with their problems in their learning process (Zhou, 2010). There is a positive connection between the learners with higher proficiency and the use of their learning strategies. Yang and Dai (2011) have pointed out that learning strategies can also be heavily influenced by culture and education. The curriculum implementation has developed Asian students certain efficient methods to cope with a great deal of information in order to pass the exams. Asian students perceive that vocabulary learning is the most unmanageable component in learning a language. According to Yang & Dai, memorization strategy is considered the most frequent strategy applied to language learning. For most Chinese students, learning English means memorizing a vast number of words.

Moreover, there are more strategies focus specific tasks. These strategies rely on the learners' use of their cognition. This process of mental capacity breakthrough emphasizes the learners' ability to organize the information and involves the learners' perception (Asgari & Mustapha, 2011). The strategies focus learners' planning and monitoring their process related to meta-cognitive strategies. According to Abed, the majority of higher achievement students applied more meta-cognitive strategies (2011). There are other strategies related to language learning. Based on Oxford (2001) classification with the purposes of developing the learners' communicative

competence, there are categorized as cognitive, meta-cognitive, memory-related, compensatory, affective and social strategies.

Learning strategies are tools for learners to develop their learning patterns and to facilitate their learning with the reflection of their behavior and thoughts ( Abed, 2011). Learners who are aware of their favored learning patterns could be easier to cope with their learning tasks.

The main investigation of this study aims to answer two questions.

1. Is there any significant different between the students who are aware of learning strategies and utilizing them with those who do not use any strategy and are not aware of learning strategy?
2. What are their favorite learning strategies?

### **Literature review**

For some researchers, language learning strategies were used to facilitate their communicative competence. The second language learning strategies that were structured by Oxford (2001) meant to develop for communicative purposes. There are 2 main sessions under her framework; direct and indirect. There are 6 categories lies underneath these two sessions.

Cognitive strategy refers to the learners' mental process for accomplish certain goal for performing specific tasks. Metacognitive strategies mean knowing how about thinking. It refers to the learners have the ability to examine their brain process in learning. Memory related strategies are about learners establishing their mental linkage which link all the information through images, sound, words or numbers. Compensatory strategy indicates that learners know what they already knew and utilize their acquired knowledge to fill in the gap of unknown information by guessing the clues from the context. Affective strategies refer to learners managing their emotion during the stages of learning. Social strategies are learners' relationship with their peers and their collaboration in learning (Abed, 2011).

### **Methodology**

The participants in this study were all non-English major freshmen sampled from the general English course implemented by general education center at Tzu Chi college of technology. There are three levels of general English courses; beginning, intermediate, and advanced. These freshmen students took a pretest prior to their first lesson. The pretest and posttest were the basic level of General English Proficiency Test (GEPT) mocking test designed by ETS. The participants were also taking a posttest in the end

of semester in order to assess whether their general English proficiency has improved. The samples are extracted from the beginning level students. The language learning beginners are considered having higher learning anxiety than the learners with higher language proficiency (Wu, 2010). Therefore, the students with lower achievement with the use of their learning strategies were the core investigation in this study.

The population of this study consisted of 34 students. The instrument for data collection was using Oxford's Strategy Inventory for Language Learning (SILL). There are five numbers of options in this questionnaire. The corresponding numbers from one to five are strongly agree, agree, undecided, disagree and strongly disagree. The students were being tested prior to the course started and a posttest was also given to the students at the end of semester. The result of the participants' pretest and posttest and their scores of the SILL questionnaire were being compared and discussed.

There was a pretest given to the participants before the investigation. The test is a GEPT (General Education Proficiency Test) beginning level mocking test for listening and reading comprehension. It has totally 120 points for each section. The scores were converted to 10 percentages due to the grades of the test accounted for 10 percent of their midterm exam. The posttest was also using the GEPT beginning level mocking test with different questions. The scores were converted to 10 percentages due to the test accounted for 10 percent of the participants' final exam. The mean score for the pretest score was 3.08 and the mean score for the posttest score was 3.36. However, there was not a significant difference found from the analysis of variance. The students' pretest and posttest did not indicate a significant progress. Despite the insignificant difference, the participants' favor learning strategies still could be analyzed and discussed.

Oxford (1990) has suggested a criterion for measuring the frequency of the learning strategies being used. Since the scale in this survey is from 1 to 5; strongly agree to strong disagree. Therefore, a mean of 1.0-2.4 indicates high level of strategy use, a mean score of 2.5-3.4 for medium use of the strategy, mean of 3.5-5.0 for low frequency use of the strategy. The highest frequency used strategy was the question 25 in the compensatory section "when I can't think of a word during a conversation in the SL, I use gestures". There are other higher frequency responses scored below 3.4 mostly in memory related, cognitive strategy and meta-cognitive section. This finding corresponded with Oxford's studies in which the language learners usually adopt compensatory strategies (1990). Moreover, learning strategies portraying the process

of learners coping with their learning, based on the mean scores in the questionnaire, showing the participants in this investigation favored cognitive strategies. According to the studies of learning strategies corresponded to learners' anxiety and learning efficacy, learning strategies could be cultural and the learners could be influenced by their traditional value on the effectiveness of learning styles (Abed, 2011; Bonyadi, Nikou & shahbaz, 2012; Wu, 2010 ).

The mean score for the participants' overall use of the learning strategies is 3.1. This number indicates the medium frequency of the application of certain strategies among the participants. From descriptive statistic analysis, those participants who scored averagely below 3.4, have higher mean scores in the posttest than those low frequency learning strategies users.

### **Conclusion**

The results of this study revealed that most low English proficiency learners favored memory related strategies. Although a small number of participants in this study resulted in the challenge of reaching the significant p-value in the t-test analysis, we could still observe the mean scores of those who scored higher in the posttest favoring memory, compensatory and cognitive strategies. This finding consistent with several studies related learners' strategies and their achievement (Abed, 2011; Bonyadi, Nikou & shahbaz, 2012; Dai, 2011; Ghonsooly & Longhmani, 2012; Zhou, 2010). From the data of the questionnaire, it seems that most EFL students prefer direct learning strategies as opposed to the studies of Iranian students' favored learning strategies which are mainly indirect. These pieces of empirical and literature evidence indicates that learning strategies are influenced by culture and the students' language proficiency is strongly correlated with their use of learning strategies. Furthermore, the students' proficiency level is related to not only repetitive practice but only their ability to link information together and filling the gap of unknown by analyzing the context. Further study could focus learners' anxiety and their strategies in coping with reading or vocabulary learning. In addition, the investigation of the social interaction and the benefits of incorporating those strategies into teaching methods could bring the inspiration to EFL teachers and learners.

## References

- Abed, A. Q. ( 2011). Teachers' awareness of second language learning strategies adopted and used by their students: A questionnaire. *Theory and Practice in Language Studies, 1*(3), 205-218.
- Asgari, A. & Mustapha, G. B. (2011). The type of vocabulary learning strategies used by ESL students in university Putra Malaysia. *English Language Teaching, 2*(4), 84-90.
- Bonyadi, A., Nikou, F.R., & shahbaz, S. (2012). The relationship between EFL learners' self-efficacy beliefs and their language learning strategy use. *English Language Teaching, 5*(8), 113-121.
- Ghonsooly, B., & Longhmani, Z. (2012). The relationship between EFL learners' reading anxiety level and their meta-cognitive reading strategy use. *International Journal Linguistics, 3*(4), 326-344.
- Oxford, R.L. (1990). *Language learning strategies: What every teacher should know*. Boston, MA: Heinle & Heinle.
- Oxford, R.L. (2001). *Language learning styles and strategies: Teaching English as a second or foreign language*. Thompson International, 359-366.
- Wu, K.H. (2010). The relationship between language learners' anxiety and learning strategy in the CLT classrooms. *International Education Studies, 1*(3), 174-191.
- Yang, W. & Dai, W. (2011). Rote memorization of vocabulary and vocabulary development. *English Language Teaching, 4*(4), 61-64.
- Zhou, Y. (2010). English language learning strategy use by Chinese senior high school students. *English Language Teaching, 3*(4), 152-158.

*Advanced Level Curriculum: Speech Acts*  
*–What to say and how to say it–*  
*With implicit culture behind language*

Yumiko Kawanishi, Mayumi Ajioka  
University of California, Los Angeles, USA

0472

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## 1. Introduction

Several scholars have pointed out that research in pragmatics is an indispensable area in the field of second and foreign language teaching and learning. As Yule (1996) claims, with pragmatic knowledge, learners can function more appropriately in the context of the target language settings. It is clear to all that merely learning some linguistic forms in a language is not enough, and that learners should study the pragmatics of how these forms are used in regular patterns by social insiders. Knowledge of grammar and vocabulary does not suffice on its own; cultural knowledge is also essential for language learners in order to be able to interact appropriately with native speakers.

Adapting these useful ideas from pragmatics, the current paper will propose a model curriculum for an advanced Japanese language course. Within the domain of pragmatics, our central interest is on speech acts, because speech acts can frequently be difficult to perform appropriately without knowing the undefined social and cultural ways behind the words. It is critical that language curricula pay closer attention to “invisible” culture: ways of thinking, and ways of communicating, which are mutually complementary to “visible” culture: festivals, pop-culture, etc. This study proposes what to include in curriculum for enhancing advanced Japanese skills, based on our analyses of materials from printed textbooks and on-line resources for practicing speech acts in Japanese. More specifically, we would like to stress that the following two concepts should rigorously taught in advanced Japanese language teaching: (1) what to say, and (2) how to say it. The “What to say” aspect suggests the use of formulaic expressions, and non-lexical tokens of particular prefacing words (such as *a*, and *e*), and discourse markers (*de* for example). The “How to say it” aspect suggests the uses of expressions for showing hesitation and consideration to the interlocutor within recurring patterns as communicative strategies.

## 2. Speech acts as spoken language

Speech Acts are actions performed by the use of utterances to communicate, and they include such acts as: apology, complaint, compliment, invitation, promise, or request (Yule 1996). The website CARLA (Center for Advanced Research On Language Acquisition by University of Minnesota) has asserted that there is a tendency among second language learners to struggle with speech acts, both understanding the intended meaning communicated by them, and producing them using appropriate language and manners in the target language and culture. Speech acts are deceptively easy; learners may think that merely memorizing and reproducing the language of the target speech act expression is enough. As we will see, speech acts are a little more complex than that; it should be treated with a wider perspective. CARLA researchers have found that classroom instruction on speech acts can be beneficial for learners to improve their performance of speech acts, leading to more problem-free interactions with native speakers.

It is because of the interactional nature of speech acts, that learners find them so challenging. Interactions with others are by their nature two-way speaking behaviors (National Standards in Foreign Language Education Project 1999). In a more unidirectional situation, such as making a presentation, or giving a speech, learners have an easier time in a sense, since they can prepare what to say in advance to certain degree. Speech acts require a more flexible attitude in order to cope with whatever kind of response or reaction comes from the interlocutor. Learners need to

be able to react to the speaking environment appropriately, and to be able to express their understandings of the target culture while they are interacting with their interlocutors.

It is important to note that speech acts belong to spoken language. Chafe (1994) points out that in spoken language, speakers use language in order to cope with the circumstances and their needs in a contextual manner. This means that the speakers need to produce language while paying attention to their circumstances, contexts, and while reacting to their speaking environments-including their interlocutors and their utterances.

Unlike written communication, spoken communication has distinct sets of communicative properties in multiple ways. Spoken communication includes a certain number of intrinsic variables and elements, such as non-lexical tokens, formulaic expressions of phatic communions, tone of voice, speed of utterance, pauses, hesitations, repetitions, overlaps, volume, and so on. These convey not only meaning but feeling and emotion. Despite the best efforts of textbook authors and editors, some of these features can not reproduced or presented in textbook dialogues, which are unavoidably confined to the written format. Because of the limitations inherent in the written word, there are some missing crucial elements and perspectives that we can and should make efforts to include in teaching materials.

### 3. Analyses of materials

In recent years, the quantity of teaching materials specifically designed for advanced interpersonal speaking skills in Japanese have been on the rise. We would like to analyze some of these materials and discuss some areas where they fall short in teaching spoken language. In an actual speaking environment, there are so many factors to consider. Some of which can be represented using written language and some of which cannot. Elements such as tone or speed of utterance, for example, are difficult, if not impossible to notate in written course materials. Be that as it may, we would like to suggest some possible ways to improve the current curriculum. For the current paper, we would like to show how much more we are able to provide to learners.

For the purposes of our research, we have analyzed materials from four sources, in order to confirm recurring patterns of speech acts. These sources included three textbooks and one website which provides resources for improving speaking skills for advanced speakers of Japanese. The textbooks include, *Formal Expressions for Japanese Interaction* (Inter-University Center 1994), *Live from Tokyo* (Asano 2009), *Advanced Japanese: Communication in Context* (Ishihara and Maeda 2010), and the CARLA Japanese Speech Acts website (Ishihara and Cohen 2010). *Advanced Japanese* and CARLA website share the same audio materials. All of these resources focus on speech acts, and are aimed at learners of advanced spoken Japanese. They are designed to help learners produce natural and authentic interactions for real communication.

We have selected these particular materials for our present research, because the wordings in the dialogues are all the speakers' and are not scripted. The Japanese speakers are given only scenarios without any specific wording or lines. These

recordings provide us with some interesting insights into tendencies or patterns of communication when native-speakers perform speech acts.

The materials are very helpful in the sense that they provide the most natural spoken interactions possible for each speech act. However, there are some missing and unfocused elements in the explanations that accompany the materials. In this study, we would like to point out that the usage of formulaic expressions of phatic communions, non-lexical tokens, and discourse markers are not sufficiently brought into focus as essential elements in performing speech acts.

In the performance of speech acts, there are many formulaic expressions that are essential. Much current research points out that speakers rely heavily on prefabricated formulaic expressions (e.g. Wray and Perkins 2000, Pawley 2009, Corrigan et al. 2009). In speaking, speakers have to deal with multiple tasks concurrently, such as organizing thoughts, producing utterances, and paying attention to social relationships with the interlocutors. It is beneficial for speakers to utilize formulaic expressions as they can lessen their burdens of dealing with multiple tasks concurrently, as engaging ideational operation while talking. As asserted by Pawley and Syder (1983), ‘formulaic expressions create native-like naturalness in speech, and allow for a smooth production of utterances.’ In Japanese language education, also, we would like to emphasize the benefits of using formulaic expressions so that learners can learn and practice how to be native-like.

As for non-lexical tokens, and discourse markers, even though they are actually included in the four teaching materials we examined, their significance and vital roles in speech acts are overlooked. As Hayashi (2009) claims, *e* in Japanese is a non-lexical response token that prefaces questions, responses to assessments, or inquiry. *A* is another non-lexical response token that prefaces many crucial elements for performing speech acts. Also, *de* is an important discourse marker used in some speech acts that marks when a speaker moves or returns to his/her main point in interactions (Schiffrin 1987, Kawaguchi 1992). Both non-lexical tokens and discourse markers signal what the speaker is doing to the interlocutor and thus, they are essential in speech acts.

In order to deal with speech acts in language education, we instructors need to expand our views to have a more holistic view that incorporates the forms and the settings for speech acts. As for forms, we should include formulaic expressions and other non-lexical expressions or discourse markers, and not only the target expressions speech acts. As for the setting or the situation, we should include a greater variety of settings to illustrate range of interaction between native adult speakers.

#### 4. Model curriculum for an advanced speaking course in Japanese

In this section, we would like to introduce and discuss a proposed curriculum that we have designed for an advanced speaking course in Japanese. We have created this curriculum, adding the pragmatic and interactional elements that are usually missing or not being emphasized in most learning materials for speech acts. The primary difference in the curriculum is that it includes the “what to say” and “how to say it” so that learners can perform speech acts more successfully.

The curriculum was created for a ten-week course. However, by adding or subtracting the number of speech acts, it can easily be adjusted to accommodate longer or shorter courses. The sample curriculum has three components: Stage One, Two, and Three: Stage One is for weeks one and two; Stage Two for weeks three to nine, and Stage Three for week ten. Stage One introduces key concepts for the course, and provides general key elements for interactions in Japanese. This stage also includes some simple speaking practices as warm-ups and preparatory activities for the next stage. Stage Two is the time for learners to practice actual speech acts using the key elements from Stage One. Stage Three is the final stage for learners to integrate all knowledge and information from the earlier stages. Most of the traditional materials only deal with Stage Two contents, the very part of the speech acts. However, we would like to emphasize Stage One as the critical foundation-building element in this string of speech act instruction, because it provides the key concepts and key expressions.

**Table 1:** Weekly schedule for ten-week course

week	content of class	target expressions
W1	Introduction - Speech acts, formulaic expressions	<i>a</i> , and all
W2	Phatic communions - Meeting people, leave taking	<i>a</i> , <i>ano</i> , <i>e</i>
W3	Expressing gratitude - Gift giving/receiving	<i>a</i> , <i>aa</i>
W4	Giving / responding to multiple complements	<i>a</i> , <i>ano</i> , <i>e</i>
W5	Making a request	<i>a</i> , <i>ano</i> , <i>jitsuwa</i> , <i>de</i>
W6	Accepting / refusing a request	<i>a</i> , <i>ano</i> , <i>e</i> , <i>hontooni</i>
W7	Discussing the terms of a request	<i>a</i> , <i>ano</i> , <i>aa</i> , <i>jitsuwa</i>
W8	Offering help	<i>a</i> , <i>ano</i>
W9	Accepting / declining an offer	<i>a</i> , <i>aa</i> , <i>hontooni</i>
W10	Making a request to write a letter of recommendation and having expanded conversations	<i>a</i> , <i>ano</i> , <i>jitsuwa</i> , <i>de</i>

Week one is for the introduction of speech acts and formulaic expressions. During this first stage, for the actual practices, we ask learners to use a non-lexical token *a* in order to have effective and native-like interactions. Week two is practicing for greetings as phatic communions. The practice situations include meeting people and leave taking. Again, the usage of *a* is emphasized for these tasks. Learners acquire basic expressions and strategies during these weeks. They are expected to utilize the learned phatic communions in the next stage exercises.

Stage Two is for actual speech acts, based on the knowledge imparted during Stage One. During weeks three through nine, learners will practice different kinds of speech acts as advanced speakers, using non-lexical tokens (*a*, *aa*, *e*, and so on) and discourse markers (*de* and others.) We put speech acts in order, from simple or basic to more advanced. Expressing gratitude in week three, for example, can be used with some

other speech acts, such as responding to complements, after making a request, and accepting offers.

Stage Three is for wrapping up activities, which integrate all the tasks learners have learned up until week nine. We suggest the task of meeting a learner's instructor, making a request to write a letter of recommendation, and having expanded conversation with him/her. This is because it is the most authentic and practical for learners, who have the distinct possibility of encountering such a situation sometime in the future.

#### 5. Some details for the curriculum

This section takes a more detailed look at the curriculum. Stage One lays the foundation for the course, introducing some basic linguistic concepts, and some basic strategies for performing speech acts in Japanese.

Among the basic linguistic concepts introduced in this course are functions of language, types of communications, and phatic communions. At the outset, the course will clarify the functions of language in general, in order to broaden learners' concepts regarding the uses and goals of language. Even though the field of linguistics identifies more than two functions, the proposed course is for language learners, hence it is only necessary to focus on two functions: ideational formation and interaction. In other words, language can be used not only to convey information, but also in order to establish and maintain social relationships with interlocutors through interaction, which is crucial for performing speech acts.

Two types of communications are also introduced during Stage One: presentational and interactional communication. The purpose of the course is interpersonal communication, and speech acts. As speech acts are performed within actual interactions, the course also places emphasis on phatic communions so that learners are able to have a holistic picture for each speech act. Speech acts do not happen in isolation but with opening and closure of interactions. In the opening and closure of interactions, phatic communions are observed. Along with these introductions, the benefits of using formulaic expressions of phatic communions should be explicated.

In terms of basic strategies, we put emphasis on the "what to say" and "how to say it." The "what to say" aspect introduces the use of non-lexical tokens as a part of formulaic expressions for speech acts. The "how to say it" aspect introduces the use of hesitations, and the expressions of consideration towards the interlocutors in order to show politeness and propriety. Some of these elements have already been mentioned in traditional teaching materials. Our curriculum, however, will show the ideal timing of showing hesitation and consideration toward the interlocutors by providing model patterns for speech acts.

In order to visually convey the ideal timing, the proposed curriculum provides tables and color-coded conversation models which graphically show the timing of the key elements of speech acts within some patterns. In this way, the curriculum is able to support learners' comprehension visually. The tables and colored conversation models show how much and how often a speaker will utter non-lexical tokens, express his/her consideration to the interlocutor, as well as the ideal timing for such utterances.

The data shows that a non-lexical token *a* prefaces many important interactional components: such as addressing terms when a speaker is getting the attention of the interlocutor, greetings at the beginning of some interactions, or other speech acts of thanking / apologizing, or providing background information for an invitation, an apology, or a request. The data also shows that *a* is used with other interactional expressions such as *soo desu ka* ‘is that right’, or *ano / anoo* ‘umm’ or ‘well’ in the situation of many speech act contexts. *Ano* or *anoo* is observed when the native speakers hesitate in performing speech acts.

(1) Expressions with *a* in the data

- a* + addressing terms
- a* + greetings
- a* + thanking
- a* + apologizing
- a* + providing background information for an invitation,  
 an apology, or a request
- a* + *soo desu ka* ‘Is that right?’
- a* + *ano / anoo* ‘umm’ or ‘well’

In the data, *a* is used as an attention getter, a reactive token, just like ‘umm’, ‘uh’, and ‘oh’, depending on the situations. The utterances with *a* mostly appear at the beginning of the turn. This small token makes each utterance very naturally and native-like. Without the token *a*, the utterances would convey different impression; rather abrupt and not polite enough. We should teach this minimum token to help learners benefit from this great effect of making utterances native-like. The traditional teaching materials have not put on emphasizes of the usage of *a*, but highlight the expressions uttered after *a* listed above in (1).

The proposed curriculum also provides a list of useful expressions other than *a* for various essential functions in speech acts contexts. These expressions include discourse markers. Just like *a*, these make utterances native-like if they are used appropriately. These expressions are short and easy to remember, but the effects are great as they make utterances more effective and native-like.

(2) Samples of useful tokens and expressions for the context of speech acts

- |                               |   |
|-------------------------------|---|
| <i>ano, anoo</i> ‘um’, ‘well’ | = showing hesitation                              |
| <i>e</i>                      | = showing surprise, or showing hesitation         |
| <i>de</i> ‘and then’, ‘and’   | = getting or coming back to the main point        |
| <i>jitsuwa</i> ‘actually’     | = getting an attention to the following utterance |

In sum, the “what to say” aspect places emphasis on saying the key elements: non-lexical token such as *a*, and other expressions of discourse markers in order to make utterances for speech acts native-like.

The “how to say it” element in the proposed curriculum provides the procedure of speech acts. The key notion of the procedure is showing consideration to the interlocutor during the performance of speech acts. Culling the data, this study has categorized utterances for showing consideration to the interlocutor by type, as seen in the following table:

(3) Types of utterances for showing consideration to the interlocutor:

- (a) mentioning something about the interlocutors' state and conditions,
- (b) modifying utterances considering the interlocutor's perspective, such as downgrading the imposition of the request by use of certain phrases and pronouncing utterances emphatically,
- (c) uttering something interactional, such as thanking, or apologizing, and
- (d) expressing hesitations to the interlocutors, by saying *ano* 'um', or *a*.

During the performance of speech acts, the native speakers from the data use such expressions listed above with great frequency. Let us take the speech act of making a request as an example. The following table shows the frequency and the timing with which speakers showed consideration to their interlocutors in the data. Using this kind of table, we can indicate when, and how often to show consideration to the interlocutor, and graphically represent to learners in order to reinforce their understanding of the procedure of speech acts. This way, learner can visually comprehend how frequently they need to verbally show consideration to the interlocutors.

**Table 2:** "How to say it": showing consideration to the interlocutor  
 --- The process of making a request

Concerning the interlocutor	Purposes of the utterances	Concerning the speaker
✓	Attention getting	
✓	Asking availability	
✓	Noticing that the speaker has a request	✓
✓	Offering background information for the request	✓
✓	Mentioning the interlocutor's situation	
	Making a request	✓

We have created this table, incorporating strategies from Ishihara and Cohen (2010), that lists the necessary steps in the request-making process, based on actual request-making performances of native speakers. It breaks down the process for 'making a request' step by step, based on what the native speakers are doing. Native speakers actually perform some, or all of these steps shown in this chart before making the actual request. The data reflect the cultural reality that speech acts for making a request do not merely consist of the particular portion where the request is made, but that the pre-'making a request' parts are not only important, but necessary.

The center column lists the order of the procedure for making a request. The left column shows the timing of showing consideration towards the interlocutor. The right column shows when a speaker makes an utterance concerning his/herself. In this

process of making a request, speakers do not start the procedure by talking about their own matters.

In this table, we can see that some of the utterances concern both the interlocutor and the speaker. This is because there is a case where the main part of the utterance concerns the interlocutor's needs, but the speaker still expresses consideration to the interlocutor by starting with *ano* 'umm' to show hesitation. By adding the "what to say" data from Table 1 into Table 2, we get the following table.

**Table 3:** "What to say" + "How to say it": for making a request

Concerning the interlocutor	Purposes of the utterances	Expressions	Concerning the speaker
✓	Attention getting	<i>a</i>	
✓	Asking availability	<i>a</i>	
✓	Notifying that the speaker has a request	<i>ano, jitsuwa</i>	✓
✓	Offering background information for the request	<i>ano, de</i>	✓
✓	Mentioning the interlocutor's situation	<i>ano</i>	
	Making a request		✓

The third column of expressions shows what kind of actual expressions are appropriate to use in the process. By utilizing *a*, *ano*, or *de* at the right moment as indicated in the table above, learners will have smoother and more effective speech acts within this model procedure.

The table below describes what the native speakers do after making a request speech act. This is the procedure for after the interlocutor's acceptance of the request. It shows "what to say" and "how to say it" after the process of Table 3. Table 4 does not provide the fourth column as the focus after making a request is all towards the interlocutor.

**Table 4:** “What to say” + “How to say it”  
 after the interlocutor’s acceptance of the request

Concerning the interlocutor	Purposes of the utterances	Expressions
✓	Confirming the acceptance	<i>a, or e</i>
✓	Expressing a gratitude	<i>aa</i>
✓	Apologizing for taking time	<i>aa, hontooni</i>
✓	Offering compensation in the future	<i>ano</i>
✓	Leave taking	<i>a, jaa</i>

The above table is important as it shows what to do after making a request. It reveals that native speakers, following these steps, continue to utter even after making his/her request. This is truer in cases where the request is more burdensome to the interlocutor or the social distance between the speaker and the interlocutor is greater. This means that if a request is a small one and would not be a burden to the interlocutor, native speakers skip some steps. The speech act of offering compensation in the future is also performed depending on the relationship between the speaker and the interlocutor. Together with Table 3, Table 4 shows that there are pre- and post-speech act utterances.

Exercising phatic communions are helpful to teach learners to have a wider perspective of interaction. Many phatic communions are formulaic expressions, and appear especially at the beginning and at the end of encounters. Through practicing phatic communions, learners will get used to the ideas of utilizing set phrases or expressions at the appropriate moment, rather than trying to create a new utterance from scratch.

After the above key concepts and strategies are introduced, learners will start to practice speaking in week two. The following is what to practice using the proposed formulaic and other useful expressions with a variety of settings or situations. The focus here is to practice how to greet people in both encountering and taking leave situations. In order to prepare learners to function as mature speakers, it is recommended to provide a wider variety of settings. So, for meeting people, the curriculum should include more than everyday encounters at school, but also meetings with acquaintances after one week or one month, and meeting with their former teachers. For leave-taking, again the curriculum should not just include daily settings, but also situations where the speaker has not seen the interlocutor for a while. It is also important to teach advanced learners that *sayonara*, unlike *goodbye* in English, is not very versatile, and that there are some restrictions for usage governed by the relationship with the interlocutor, and the situation. By providing a wide variety of situations, learners will be ready for authentic situations.

(4) With more extended situations for phatic communions

Task 1: Meeting people

Situation 1. With classmates, teachers, friends (everyday)

Situation 2. With acquaintances (one week after)

Situation 3. With former teachers (after graduation, some years later)

Task 2: Leave taking

Situation 1. With classmates, teachers, friends (everyday)

Situation 2. When speaker does not see interlocutor for a while

Situation 3. When interlocutor is a sick person

Starting from week three, learners will start to practice a variety of speech acts. Throughout the course, adding color to the sample dialog will be beneficial by offering a visual aid to learners. The color-coding method colors the lines of dialog depending on the nature of the utterances. The following is a sample speech act of making a request during week five. In this conversation, K makes a request to Y. The yellow parts indicate where K shows consideration to Y. The gray parts show where K provides background information for the request, and the blue parts are actual speech act. The data shows the structure of speech acts for making a request have a common pattern: first, the requester expresses consideration to the requestee. These are the yellow highlighted parts shown below. Then, the requester provides background information and reasons for the request, which are shown in the grey shaded parts. Finally, the requester gets into the actual request utterance which are highlighted in blue. Note that even after the requestee accepts the request, the speaker keeps producing utterances that convey her consideration towards the interlocutor's state, expressing gratitude and apologies, and even offering compensation in the future. The conversation is in English translation with key expressions in Japanese.

(5) K is making a request to Y (Yamada senpai) from Ishihara and Cohen 2010 Rq11-2

1. K: A, Yamada senpai.
2. Y: Yeah?
3. K: A, do you have a second?
4. Y: Sure.
5. K: ANO, I JITSUWA 'actually' have something to ask you.
6. Y: Okay.
7. K: ANO, you are busy the day after tomorrow, aren't you?
8. Y: The day after tomorrow? Well, I'm not sure yet.
9. K: ANO, JITSUWA 'actually',
10. Y: Maybe I'll play mahjong with my friends.
11. K: Is that so, AA is that so, JITSUWA there is a movie I really want to go to,
12. Y: A movie?
13. K: Yes, DE 'and' a friend of mine gave me a ticket.
14. Y: I see, with your boyfriend?
15. K: No, not with him.
16. Y: I see.
17. K: ANO, DE 'so', I really want to go to see the movie ANO, with my friend, and
18. I was wondering if you could ANO, cover for me the day after tomorrow.
19. Y: I see, okay, then I'll cover for you, my dear clubmate.
20. K: A, really? ANO, I'm sorry. ANO, I'll cover for you ANO, when you're busy.
21. Y: I'll count on you in that case.

22. K: Yes, thank you.  
23. Y: Yeah.

In this excerpt, the non-lexical tokens (*a* and *ano*) and discourse markers (*jitsuwa* and *de*) appear throughout the conversation. These expressions come at the beginning of utterances. *A* is used at the beginning of the procedure of making a request conversation (lines 1 and 3). *Ano* is used when K was getting a pre-commitment from Y in line 5. In line 9, K uses *Ano jitsuwa* when she begins to provide background information, or reasons for making a request. K utilizes *de* in order to come back to the points she wants to make (lines 13 and 17) after Y's interruptions (line 12 and 16). Also, K uses *ano* multiple times (line 20) when she offers compensation in the future.

Having this pattern of pre-speech act and post-speech act is not specific to this particular conversation but common with many other speech acts found in the teaching materials we mentioned earlier. Speech acts in Japanese are not just the part of target speech act but they include pre-speech act and post-speech act utterances. We would like to point out that there are consistent tendencies in performing speech acts in Japanese. If we use this color-coding method, the procedure is visually clearer. It shows amount of such utterances and timing of them within the pattern for the speech act.

Practicing this current pattern with a variety of speech acts will prepare learners to perform the final task of the curriculum in week ten at the Stage Three. Learners will have opportunities to make use of the material they have practiced in a reinforced setting. The task for the wrap-up activity is meeting a Japanese learner's instructor, making a request to write a letter of recommendation, and having an expanded conversation with him/her. Learners are ready to use non-lexical tokens, discourse markers, phatic expressions, with pre- and post-speech act utterances. This final activity will make learners ready to encounter such a situation sometime in the future.

## 6. Summary

This paper, adapting pragmatic views, proposed a model curriculum for an advanced Japanese language course for speech acts. The ten-week curriculum focuses on "what to say" and "how to say it," which the published materials tend to overlook. By examining the data found in some advanced speaking teaching materials, this study showed that there are some crucial elements Japanese instructors should include: (1) the use of non-lexical tokens and discourse markers, such as *a*, *ano*, *de*, and (2) the use of pre-, and post-speech act utterances. This paper points out that merely learning linguistic forms in speech acts is not enough, and that learners should study the pragmatics of how these forms are used in regular patterns by mature speakers of Japanese.

The step-by-step approach found in our curriculum will prepare learners to perform smoother speech acts in Japanese settings outside of classroom. We hope the proposed curriculum will contribute practical course ideas to the body of advanced speaking education for Japanese language education.

## References

- Asano, Yoko. 2009. Live from Tokyo. Tokyo: The Japan Times.
- Chafe, Wallace. 1994. Discourse, consciousness, and time. Chicago and London: The University of Chicago Press.
- Corrigan, Roberta, Hamid Ouali, and Kathleen Wheatley. 2009. *Formulaic Language*. Volume 2: Acquisition, Loss, Psychological Reality, and Functional Explanations. Typological Studies in Language. Amsterdam and Philadelphia: John Benjamins.
- Hayashi, Makoto. 2009. Marking a 'noticing of departure' in talk: Eh-prefaced turns in Japanese conversation. *Journal of Pragmatics*. 41. 2100–2129.
- Ide, Sachiko. et. al. (eds). 1992. *Kotoba no mozaiku*. Tokyo: Futaba Kobo.
- Inter-University Center. 1994. Formal Expressions for Japanese Interaction. Tokyo: The Japan Times.
- Ishihara, Noriko and Andrew Cohen. 2010. Center for Advanced Research On Language Acquisition by University of Minnesota. Available at [www.carla.umn.edu](http://www.carla.umn.edu)
- Ishihara, Noriko and Magara Maeda. 2010. Advanced Japanese: Communication in Context. London: Routledge.
- Kawaguchi, Yoko. 1992. Disukoosu maakaa to shite no 'de' no kinoo. (Functions of *de* as a discourse marker). In Ide, Sachiko, et. al. (eds).
- National Standards in Foreign Language Education Project. 1999. Standards for Foreign Language Learning in the 21<sup>st</sup> Century. New York: National Standards in Foreign Language Education Project.
- Pawley, Andrew. 2009. Grammarians' language versus humanists' languages and the place of speech act formulas in models of linguistic competence. In Corrigan et al. (eds.).
- Pawley, Andrew and Frances Syder. 1983. Natural selection in syntax: Notes on adaptive variation and change in vernacular and literary grammar. *Journal of Pragmatics*, Volume 7, Issue 5, November Pages 551–579.
- Schiffrin, Deborah. 1987. *Discourse Markers*. Cambridge: Cambridge University Press.
- Wray, Alison and Mick Perkins 2000. The functions of formulaic language: an integrated model. *Language and Communication* 20 (1): 1-28.
- Yule, George. 1996. *Pragmatics*. Oxford: Oxford University Press.

*Formulaic Language Patterns in Social Science and Natural Science Research  
Papers: A Corpus-Based Study*

*Yen-Yu Lin, Siaw-Fong Chung*  
National Chengchi University, Taiwan

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Phraseology is a general term used to describe the tendency of words, and groups of words, to co-select frequently in some environment than in others to achieve a certain meaning. (Hunston, 2011, p. 5). A great deal of research has focused on the recurrent continuous sequence of words using a wide range of terminology such as semantic sequences (Hunston 2008), n-grams (Cheng et al. 2006, Forchini & Murphy 2008), and lexical bundles (Biber et al. 1999, Biber, 2009, Biber & Barbieri 2007, Biber et al. 2004, Nesi & Basturkmen 2006). In EAP (English for Academic Purposes), these studies are mostly discipline-based and have revealed the existence of linguistic differences across genres. For instance, Hyland (2008), by exploring the forms, structures and functions of 4-word bundles in a 3.5 million corpus of four disciplines, found that there was disciplinary variation. Some other scholars examined the use of phraseological patterns in specific section of research articles: Hsieh (2005) compared two corpora of 50 published journal articles and 50 non-native conference papers to shed light on the differences of the use of lexical bundles and functional moves in the abstracts; Lin (2006), in a similar vein, explored frequent continuous sequences of words and their rhetorical functions in the introduction section of research articles in the field of computer science.

There are also other studies on phraseology that have paid attention to discontinuous sequences of words. These studies focused on the recurrent sequences of words that form a frame containing several slots (e.g. Biber 2009; Cheng et al, 2011; Marco 2000; Römer 2010; Renouf & Sinclair 1991, Stubbs 2007); the choice of the words enclosed within the frame is determined by the elements of this frame (Eeg-Olofsson & Altenberg, 1994). Renouf and Sinclair (1991) examined seven specific collocational frames (e.g. *a \* of*) investigating the common fillers that occur in each framework. Biber (2009) and Marco (2000) followed a similar approach to investigate the formulaic frames in academic writing: Biber (2009) identified four high-frequency frameworks with similar constructions (*in the \* of, to the \* of, on the \* of, at the \* of*) selecting different sets of fillers. For example, *at the \* of*, as the most distinctive frame, co-occurs frequently with the fillers *end, time, beginning, level, expense, start, center/centre, top, and base*, while *in the \* of* takes several high frequency fillers, such as *case, absence, form, context and process*. Marco considered three frames in a corpus of medical research papers. The results showed that two of the most common frames are: [*the NOUN of*] and [*a NOUN of*]. [*The NOUN of*] tends to be used in expressing the construction of nominalizations (e.g. *the administration of, the measurement of*); [*a NOUN of*] is frequently applied to describe the process of quantifying and categorizing (e.g. *a number of, a period of*). Another important finding is that the frames are likely to precede or follow the collocates belonging to

specific semantic classes. For example, *the effect/results of* are followed by a noun naming a drug or by a nominalization expressing an action in the treatment. This study echoed Halliday and Martin's (1993) analysis on scientific texts which suggested that nominalization is crucial in structuring scientific knowledge in a static, synoptic representation of reality. In addition to those mentioned above, a number of studies also indicated that the formulaic sequences in academic writing are parts of noun or prepositional phrases and end with prepositions (e.g. *the nature of the, the end of the, in the case of, on the basis of*) (e.g. Biber, 2009; Biber et al., 1999; Corte, 2004; Hyland, 2008). In sum, the studies reviewed demonstrated the prevalence and significance of the discontinuous sequence -- [PREPOSITION *the* NOUN *of*] -- and exemplify that it is selective in terms of the words as fillers. Marco's study on medical research papers further reflected the fact that each discipline may prioritize different phraseological patterns and thus shows variety in the use of the discontinuous sequences. We can anticipate that each discipline might have its own distinct phraseological profile. To the best of our knowledge, the cross-discipline comparison of the realization of a specific formulaic sequence like [PREPOSITION *the* NOUN *of*] has rarely been done. Lin and Chung (2012), in her study on [VERB *from the* NOUN *of*] in the field of commerce elucidated that the verbs preceding this prepositional framework may also have impact on what nouns can co-occur. Accordingly, the present study targeted at the formulaic sequence [VERB *from the* NOUN *of*] and investigates the distributions of different lexical items in the slots (in capitals) based on the assumption that different disciplines are distinctive in their preference for the filler terms in this common formulaic pattern.

### **Methodology**

British National Corpus (BNC) was adopted for the present study. BNC is a 100 million word collection of text of written and spoken English from a wide range of sources and genres. In this study, the data was retrieved through the *BNCweb*, a web-based interface for searching data from BNC. Strings of constructions were extracted under the restriction of written – academic prose. A search string was applied to query for the target construction, as illustrated in (1):

(1) *\_V\* from the \_N\* of*

After keying in the syntactic pattern as our search string and restricting the query in written text, the interface returned the instances along with the pattern. Figure 1 below illustrates the query result page of natural science as an example.

Your query " \_V\* from the \_N\* of" restricted to "Derived text type: Academic prose and Genre: W:ac:nat\_science" returned 143 hits in 33 different texts (1,121,666 words [43 texts]; frequency: 127.49 instances per million words) (displayed in random order)

No	Filename	Hits 1 to 50	Page 1 / 3
1	<a href="#">B2J 1333</a>	Vuggy porosity <b>resulting from the leaching</b> of replacement anhydrite, in the middle carbonate member of the Z1 Anhydrite of Tonder-2, southern Denmark; (A) core slab (scale bar 2 cm), (B) photomicrograph (scale bar 1 mm).	
2	<a href="#">GW6 1587</a>	The existence of a Jovian magnetic field was established in the 1950s by radio-telescope observations, which detected radio waves that seemed to <b>arise from the motion</b> of charged particles in a magnetic field and were certainly non-thermal (section 2.2.1).	
3	<a href="#">EV6 1249</a>	Oocytes in Mill can be <b>collected from the ampullae</b> of the fallopian tubes following ovulation.	
4	<a href="#">AMM 402</a>	This species is <b>from the Eocene</b> of Belgium; related species are very widespread.	
5	<a href="#">H9R 1639</a>	The species studied does not have to be chiral: the <b>differential absorption comes from the effect</b> of the magnetic field on degeneracy.	
6	<a href="#">AMM 1193</a>	Presumably these sites were <b>protected from the kinds of influence</b> that normally destroy fish remains, such as the activity of scavenging animals that disarticulate the skeletons, or currents.	
7	<a href="#">HRG 97</a>	We can make use of regular solution theory to obtain an expression for $\Delta H_M$ where this change in energy is assumed to <b>arise from the formation</b> of new solvent-polymer (1-2) contacts on mixing which replace some of the (1-1) and (2-2) contacts present in the pure solvent, and the pure polymer components respectively.	
8	<a href="#">EVW 231</a>	Laterally the clypeus may be <b>delimited from the sides</b> of the head by the clypeogenal sulci.	
9	<a href="#">E9X 291</a>	The apparent paucity of copper may <b>result from the emplacement</b> of relatively anhydrous granites into tectonised and anhydrous metasediments, especially in the Dalradian and Moinean sediments of Scotland which were metamorphosed during the Ordovician Grampian orogeny and the later Caledonian event.	
10	<a href="#">H9S 1487</a>	Many sandstones with overgrowth cements exhibit little solution compaction at grain-to-grain contacts (Fig. 5.26c, d), the source of silica in such sediments can only partially be derived from the solution compaction and may largely <b>result from the dissolution</b> of opaline silica.	
11	<a href="#">GU5 642</a>	Additionally, global sea level would be expected to rise by 0.2 to 1.6 metres during the twenty-first century because of the thermal expansion of the seawater with increasing temperature as well as from water being <b>added from the melting</b> of mountain glaciers and polar ice sheets.	

Figure 1 The Query Result Page of BNCweb

We searched in two disciplines, namely, natural science and social science. The top row shows the number of hits returned from this query. The total number of words tokens, and the number of instances per million words could also be found. Table 1 summarizes the quantitative results of the BNC search results.

Table 1 Summary of the BNC Search Results

The Target Pattern	VERB <i>from the</i> NOUN <i>of</i>	
The disciplines	Social Science	Natural Science
No. of hits	431	143
No. of texts	114	44
Frequency (per million)	91.17	127.49

As can be seen, the results of [VERB *from the* NOUN *of*] in nature science returned 143 hits in 33 different texts, amounting to 127.49 instances per million words. Although the total number of [VERB *from the* NOUN *of*] is higher in social science, the frequency per millions words is a bit lower than that of natural science.

These retrieved results were then exported to text files and opened in MS Excel for the follow-up semantic feature analysis (see Figure 2).

	A	B	C	D	E	F	G	H	I
1	No.	Instance				Frequency	Percentage	Semantic Coding	
2	111	derived	from	the	activities	1	0.70%	activity	
3	30	follows	from	the	associativity	1	0.70%	association	
4	3	collected	from	the	ampullae	2	1.40%	body; organ	
5	40	emerging	from	the	mouth	1	0.70%	body	
6	120	formed	from	the	aftershafsts	1	0.70%	body	
7	43	innervated	from	the	ganglia	1	0.70%	body; organ	
8	118	move	from	the	lacuna	1	0.70%	body; organ	
9	20	moved	from	the	foot	1	0.70%	body	
10	45	radiating	from	the	ganglia	1	0.70%	body; organ	
11	26	transferred	from	the	cloaca	1	0.70%	body; organ	
12	107	determined	from	the	structure	1	0.70%	building	
13	116	result	from	the	alteration	1	0.70%	change	
14	31	originated	from	the	transposition	1	0.70%	change	
15	127	mapped	from	the	ability	1	0.70%	competence	
16	39	come	from	the	influence	1	0.70%	effect	
17	27	comes	from	the	effect	1	0.70%	effect	
18	12	dying	from	the	effects	1	0.70%	effect	
19	95	obtained	from	the	Doppler-shift	1	0.70%	effect; process	
20	112	calculated	from	the	enthalpy	1	0.70%	element	
21	60	derived	from	the	occurrence	1	0.70%	existence	
22	16	form	from	the	introduction	1	0.70%	existence	

**Figure 2 Encoding Format in the MS Excel File**

The nouns were categorized based on their similarity of semantic features. The aim of a semantic feature analysis was to decide whether an item is a member of a particular meaning group. It was hypothesized that the words that can appear in the same slot of the target pattern would share some similarities in semantic features. Most of the category names were generated by the researchers but some were borrowed from Marco’s study. Next, each category was counted and converted into percentage.

**Results and Discussion**

Based on the outcomes of the semantic coding, results such as the following Tables 2 and 3 were obtained. The two tables below display the semantic categories for the nouns in this pattern in the two disciplines, along with their frequencies and percentages. It should be noted that, since social science has much more noun categories in [VERN *from the* NOUN *of*], Table 3 shows only the distribution pattern of its top twenty semantic categories, which account for over the 62% of the total frequency. The finding shows that there are striking differences between the two disciplines. Table 2 first shows the results of natural science.

**Table 2 The Distribution of Semantic Groups of NOUNS in [VERB from the NOUN of] in Natural Science**

Semantic Categories	Raw Frequency	Percentage
1. 'location' (e.g. <i>surface, side, centre</i> )	34	23.78%
2. Nominalization expressing procedures (e.g. <i>distortion, rotation, melting, mixing</i> )	30	20.98%
3. 'object' (e.g. <i>ring, milk, pen</i> )	11	7.69%
4. 'a part of the body ; organ' (e.g. <i>mouth, foot, ganglia</i> )	9	6.29%
5. 'quantity' (e.g. <i>ratio, amount, sum</i> )	7	4.90%
6. 'lefts' (e.g. <i>rest, remainder</i> )	6	4.20%
7. 'existence' (e.g. <i>occurrence, introduction, presence</i> )	3	2.10%
8. 'time; period' (e.g. <i>history, Eocene</i> )	3	2.10%
9. 'relation' (e.g. <i>correlation, interaction</i> )	4	2.80%
10. 'path' (e.g. <i>orbit</i> )	3	2.10%
11. 'features' (e.g. <i>properties, characters</i> )	3	2.10%
12. 'effect' (e.g. <i>effect, influence</i> )	8	5.59%
13. 'investigation' (e.g. <i>study, analysis</i> )	2	1.40%
14. Others (e.g. <i>speech, trouble, factor</i> )	20	13.99%
<b>Total</b>	143	100.00%

From Table 2, we can see that, in natural science, the two most frequent semantic categories reach around forty percent of total, which represents a large proportion. The top group, which denotes different positions or locations on subjects (e.g. *end, surface, back*), accounts for 23.78% of the total frequency; the second biggest group, with a rate of approximately 21%, mainly deals with nominalization of natural processes (e.g. *erosion, dissolution, recrystallization*). The next two categories are concerned with something visible and parts of the body. The predominance of the above-mentioned four categories can be attributed to the essence of this discipline which tends to focus on concrete objects, the natural process of evolution, and the procedures of empirical studies. The result also shows that the quadruplets (e.g. from *the center of, from the distortion of*) including the items from the top two categories, which denote locations and nominalizations, tend to be preceded by the verbs expressing 'developing or coming from something else' (e.g. *grow, derive, arise*) in order to describe either where something originates or the process of formation. Example (1) and (2) illustrate this.

- (1) *The thermal tide may also be responsible for dim ultraviolet radiation observed to come from the middle of the night hemisphere.* (GW6 288)
- (2) *However, it is now considered to be an ironstone derived from the weathering of an exhalative, spessartine-bearing protore (Nicholson, 1987).* (E9X 984)

Example (1) shows a specific object starting to appear from a certain location (*the night hemisphere*); similarly, Example (2) displays that an ironstone, which is discolored and disintegrated, comes to exist through the process of exposing to the weather.

In contrast to the results of natural science, what was discovered in social science shows that the nouns in [VERB *from the* NOUN *of*] spread out over a wider and different range of semantic categories as the most frequent semantic category constitute merely 9.51% of the total number of nouns in this pattern (see Table 3).

**Table 3 The Distribution of Semantic Groups of NOUNS in [VERB *from the* NOUN *of*] in Social Science**

Semantic Categories	Raw Frequency	Percentage
1. 'view' (e.g. <i>idea, notion, perspective, viewpoint</i> )	41	9.51%
2. 'location' (e.g. <i>base, border, University, County</i> )	36	8.35%
3. 'something negative' (e.g. <i>limitation, failure, question, difficulties</i> )	25	5.80%
4. 'existence/non-existence' (e.g. <i>introduction, presence, absence</i> )	19	4.41%
5. 'use' (e.g. <i>use, application, implementation</i> )	14	3.25%
6. 'effect' (e.g. <i>effect, influence, impact</i> )	14	3.25%
7. 'standard' (e.g. <i>pattern, model, level</i> )	13	3.02%
8. 'lefts' (e.g. <i>rest, ashes, remainders</i> )	12	2.78%
9. 'object' (e.g. <i>ring, object, work</i> )	12	2.78%
10. 'investigation' (e.g. <i>study, analysis, research</i> )	11	2.55%
11. Nominalization expressing an activity (e.g. <i>identification, reordering, measurement</i> )	9	2.09%
12. 'record' (e.g. <i>history, record</i> )	9	2.09%
13. 'type' (e.g. <i>kind, type, category</i> )	9	2.09%
14. 'combination' (e.g. <i>integration, merging, composition</i> )	8	1.86%
15. 'creation' (e.g. <i>creation, invention, production</i> )	8	1.86%

16. 'action' (e.g. <i>action</i> )	7	1.62%
17. 'sharing' (e.g. <i>distribution, redistribution</i> )	5	1.16%
18. 'experience' (e.g. <i>experience</i> )	6	1.39%
19. 'field' (e.g. <i>domain, field</i> )	6	1.39%
20. 'feeling/desire' (e.g. <i>frustration, gloom, ambivalence</i> )	6	1.39%
<b>Total</b>	224	62.65%

As can be seen, the frequent collocates from the top four groups refer to people's point of view (9.51%) (e.g. *ideas, perspective, assumption*), followed by those denoting different location or institutions (8.35%) (e.g. *edge, end, University, Gulf*), bad qualities or unpleasant situations (5.80%) (e.g. *decline, problem, difficulty*), and the existence/non-existence of something (4.41%) (e.g. *presence, introduction, absence*). Except for the category denoting locations and nominalization expressing an activity, other noun groups in Table 3 are different from those occurring in natural science. Overall, these nouns seem to be mainly associated with people's perception/feelings and experience (see Categories 1, 18 and 20), the application/cause and effect of something (see Categories 4, 5 and 6), an average/normal quality or requirement (see Categories 7 and 13). This suggests that social science focuses more on the discussion about people's thoughts and feelings, the power to produce results, as well as the importance of principles and rules.

Regarding the question about what verbs precede the quadruplets (e.g. *from the view of, from the base of, from the limitation of*) with the items from the top four noun categories, our observation are as follows. It was found that the verbs such as *emerge, derive, and stem*, co-occurred frequently with the nouns from the 'view' group for the author to express where certain perspectives originate and the way in which someone understands information. Examples (3) and (4) show this.

(3) *The second point of similarity **emerges from the point of** his analysis where he talks of changing codes of conduct.* (CRU 245)

(4) *Our understanding of the vertical (as opposed to the horizontal) movements of the lithosphere during continental rupture is largely **derived from the interpretation of** the sediments laid down in passive margin basins.* (JOT 938)

These two examples show that the opinion (*the second point*) and the knowledge about how something works (*our understanding*) are established from a careful examination and observation of something.

The second biggest group of nouns, the ‘location’ noun category, which refers to positions in time or space, in this frame was found to follow the verbs related to movement or the action of starting and finishing as exemplified by Examples (5) and (6).

(5) *The responsibility for primary and secondary education (and related school matters) in Wales was **transferred from the Secretary of State for Education and Science to the Secretary of State for Wales.*** (H8D 598)

(6) *The coalowners’ response in most areas was to give notice that their workers’ contracts were **terminated from the end of the month...*** (FAW 676)

Example (5) shows that the responsibility for education was moved from one institution to another; Example (6), on the other hand, displays an abstract movement in time – the contracts was coming to the end of a specific month.

In some other conditions, the verbs (e.g. *arise, derive, result, suffer, escape*) commonly combine with the quadruplets including nouns denoting something unpleasant or unwanted to indicate cause-effect relations or the action of avoiding difficulties/hardships. (see Examples (7) and (8)).

(7) *After death there are two sets of emotions to be handled, one concerning the mourning **resulting from the loss of** a loved one, and the other arising from the unconscious hostility felt towards the dead person,...* (ECY 1019)

(8) *The theory of the global system based on transnational practices is an attempt to **escape from the limitations of** state-centrism.* (HTC 83)

Through the use of *resulting from the loss of*, Example (7) illustrates that, due to the deprivation from failure to keeping something, the great sadness occurred; Example (8) emphasizes the action of getting away from a bad situation.

Following that, as shown in Examples (9) and (10), the noun category referring to the (non-)existence of something has a high probability to co-occur with the verb *arise* when the author presents the effects of applying something or being deficient in certain aspects.

(9) *Further serious environmental consequences have **arisen from the introduction of** grazing herbivores (such as cattle, sheep, goats, horses, donkeys and mules) to which the Andean environment is not naturally adapted but which are the mainstay of modern Andean populations.* (BIE 487)

(10) *Consensus **arises from the absence of** any fundamental challenge for change in society; individuals judge what is in their best interests within a basic framework of laws.* (ALM 359)

More specifically, Example (9) describes that serious problems concerning environment destruction originate from breeding grazing herbivores. Example (10) expresses that the general agreement usually appears from the lack of intention of making changes in society.

In summary, it is interesting to find that, while the distribution pattern of nouns in [VERB *from the* NOUN *of*] are different in natural science and social science, the two disciplines share a trend, that is, the predominant verbs preceding this formulaic sequence are usually *derive, arise, result* and so on.

Table 4 displays the results of semantic classification of the verbs, some of which are in line with the finding presented above. Again, due to the diversity in terms of the verb categories in social science, only the top 12 categories, which constitute 67% of the total frequency, are shown in the table below.

**Table 4 The Distribution of Semantic Groups of VERBS in [VERB *from the* NOUN *of*] in Natural Science and Social Science**

Natural Science			Social Science		
Semantic Categories of the Verbs	Raw Freq.	PCT	Semantic Categories of the Verbs	Raw Freq.	PCT
1. 'appear' (e.g. <i>arise, come, emerge</i> )	37	26%	1. 'appear' (e.g. <i>arise, come, emerge</i> )	72	17%
2. 'get' (e.g. <i>obtain, acquire, derive</i> )	30	21%	2. 'get' (e.g. <i>obtain, receive, gain</i> )	70	17%
3. 'cause' (e.g. <i>result</i> )	18	13%	3. 'cause' (e.g. <i>result</i> )	32	8%
4. 'find' (e.g. <i>find, determine</i> )	7	5%	4. 'delete/reduce' (e.g. <i>detract, remove, eliminate</i> )	24	5%
5. 'separate' (e.g. <i>separate, isolate</i> )	7	5%	5. 'separate' (e.g. <i>separate, isolate, alienate</i> )	15	4%
6. 'study' (e.g. <i>calculate, collect</i> )	7	5%	6. 'bring/ take' (e.g. <i>draw, drag</i> )	12	3%
7. 'measure' (e.g. <i>estimate, compute,</i>	6	4%	7. 'move' (e.g. <i>move, shift, transfer</i> )	10	2%

<i>measure</i> )					
8. 'grow' (e.g. <i>grow, accrete, accrue</i> )	5	3%	8. 'investigate' (e.g. <i>view, see</i> )	10	2%
9. 'move' (e.g. <i>move, transfer</i> )	5	3%	9. 'undertake' (e.g. <i>undertake, suffer</i> )	8	2%
10. 'release' (e.g. <i>emit, radiate, emanate</i> )	4	3%	10. 'disappear' (e.g. <i>disappear, escape, flee</i> )	7	2%
11. 'mental processes' (e.g. <i>know, learn, infer</i> )	3	2%	11. 'grow' (e.g. <i>grow, develop, accrue</i> )	7	2%
12. others (e.g. <i>speech, trouble</i> )	14	10%	12. 'back' (e.g. <i>retreat, withdraw, recoil</i> )	6	1%
<b>Total</b>	143	100%	<b>Total</b>	279	67%

As can be seen, the top three verb categories of [VERB *from the* NOUN *of*] in both disciplines are the same: the verb group with the sense of appearing is ranked as the most frequent group, followed by 'get' verbs and 'cause' verbs. The prevalence of the verbs from these three groups suggests that [VERB *from the* NOUN *of*] is mainly concerned with tracing origins/sources. The origins can refer to either a concrete location (e.g. institutions, positions on subjects) or an abstract position (e.g. causes, effects).

Compared to the three main verb groups, the percentage of the other categories in the two disciplines are much lower – each of them constitutes no more than 5% of the total. The distribution of these verb groups shows that social science and natural science have distinct preferences. This confirms that the nature of discipline would influence word selection in a common formulaic frame (Groom, 2009). We can see in Table 4 from the column on the left hand that the verbs in natural science center on the activity of evaluating, researching, and getting to know something ('study', 'measure', and 'mental process' verbs). Some of them deal with physical movements and changes ('grow', 'move', and 'release' verbs).

In social science, some verbs are different from those in natural science. For example, certain items are associated with the action of getting rid of something (e.g. *eliminate, exclude*); some others relate to the tolerance of something unpleasant (e.g. *suffer, undertake*). On the other hand, similar verb groups in natural science, such as 'grow' and 'move' verbs can also be found.

In summary, in natural science, there is a strong tendency for nouns denoting locations and concrete subjects to occur in the frame; by contrast, the nouns referring to people's perception, unpleasant events, and the use of something are likely to appear in social science. The verbs such as *derive, arise, come, emerge*, which commonly occur with the preposition *from*, are also found to spread out in both disciplines. Our semantic analysis of nouns and verbs shows distinctive differences

across the two disciplines. However, some difficulties for categorization were encountered. It was sometimes difficult to define a clear boundary between categories. For example, in social science, the 'use' and 'combination' noun categories appear to overlap with nominalization expressing an activity. A more stringent criterion is therefore necessary for future work.

### **Conclusion**

Phraseology has been one of the most rapidly growing areas in corpus linguistics recently. Our study reveals that formulaic patterns or strings of words are pervasive in natural language use. The aim of this study was to explore the extent to which formulaic patterns contribute to the uniqueness of each discipline in academic writing. Through semantic analysis of NOUNs and VERBs in [VERB *from the* NOUN *of*], the findings show considerable variations across natural science and social science in the categorization of these words and their frequency. The two disciplines are characterized by their distinct preferences for the nouns and verbs. Natural science is concerned with empirical analysis and processes of growing and moving, while social science discusses much about the acceptance or rejection of point of view, the suffering and releasing from limitations and problems, and the effect of doing/not doing something. In other words, natural science investigates a variety of natural phenomenon; social science deals with the complex interaction among people, between gain and loss, as well as between separation and cooperation.

The finding has clear implications for pedagogic practice. It alerts us to pay attention to what disciplines our students are from and what kinds of text our students need to write. Moreover, the design of teaching materials can benefit from the findings of formulaic sequences in different disciplines, allowing instructors to focus on the specific ways of creating meanings appropriate to particular kinds of writing.

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### **References:**

- Biber, D. (2009). A corpus-driven approach to formulaic language in English: Multi-word patterns in speech and writing. *International Journal of Corpus Linguistics*, 14(3), 275-311.
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman grammar of spoken and written English*. London: Longman.
- Biber, D. & Barbieri, F. 2007. Lexical bundles in university spoken and written

- registers. *English for Specific Purposes*, 26 (3), 263-286.
- Biber, D., Conrad, S. & Cortes, V. 2004. If you look at...: Lexical bundles in university teaching and textbooks. *Applied Linguistics*, 25 (3), 371-405
- Cheng, W., Greaves, C. & Warren, M. 2006. From n-gram to skipgram to conogram. *International Journal of Corpus Linguistics*, 11 (4), 411-433.
- Chung, Siaw-Fong, F. Y. August Chao, Tien-Yu Lan, and Yen-Yu Lin. (2011). Analyses of the Semantic Features of the Lexical Bundle [(VERB) PREPOSITION the NOUN of]. *Language Value*, 3(1), 138-152. Also presented at the Third International Seminar on Metaphor and Discourse: Verb-particle Constructions and their Underlying Semantic Systems. Universitat Jaume I, Castelló de la Plana, Spain. October 19-20.
- Cortes, V. (2004). Lexical bundles in published and student disciplinary writing: Examples from history and biology. *English for Specific Purposes*, 23, 397-423.
- Forchini, P. & Murphy, A. (2008). N-grams in comparable specialized corpora: Perspectives on phraseology, translation, and pedagogy. *International Journal of Corpus Linguistics*, 13 (3), 351-367.
- Hunston, S. (2008). Starting with the small words: Patterns, lexis and semantic sequences. *International Journal of Corpus Linguistics*, 13(3), 271-295.
- Hunston, S. (2011). *Corpus Approaches to Evaluation*. London/New York: Routledge.
- Hsieh, W. H. (2005). *Text analysis and online material development for EAP graduate courses: Teaching of abstract writing in the field of applied linguistics discipline*. Unpublished master thesis, Tsing Hua University, Hsin Chu, Taiwan.
- Hyland, K. (2008a). Academic clusters: Text patterning in published and postgraduate writing. *International Journal of Applied Linguistics*, 18(1), 41-62.
- Lin, Yen-Yu and Siaw-Fong Chung. (2012). The Use of "VERB from the NOUN of" in Published Writing in Commerce. Poster presented at the 6th Conference on Language, Discourse, and Cognition (CLDC2012). National Taiwan University, Taiwan. May 4-6.
- Marco, M. (2000). "Collocational frameworks in medical research papers: A genre-based study". *English for Specific Purposes*, 19 (1), 63-86.
- Nesi, H. & Basturkmen, H. 2006. Lexical bundles and discourse signaling in academic lectures". *International Journal of Corpus Linguistics*, 11 (3), 283-304
- Renouf, A. & Sinclair, J. McH. 1991. Collocational frameworks in English. In K. Aijmer & B. Altenberg (Eds.), *English Corpus Linguistics*. London: Longman, 128-143.
- Römer, U. (2010). Establishing the phraseological profile of a text type: The construction of meaning in academic book reviews". *English Text Construction*, 3 (1), 95-119.

*Imaginative Education within the Framework of Action*

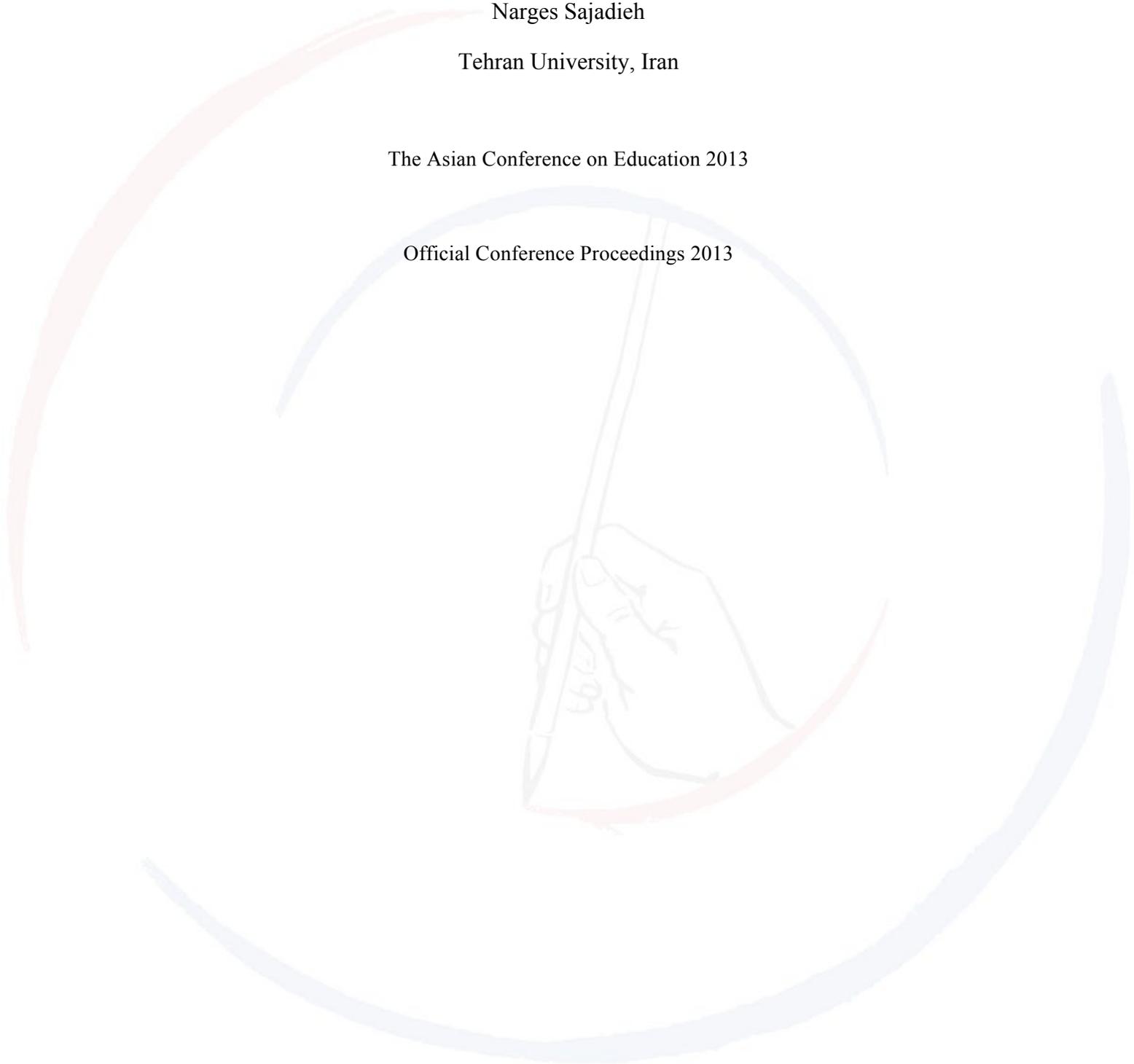
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## **Introduction**

Imagination is amongst important faculties of human mind that its definition plays a significant role in different areas of education. Educating imagination could be either an educational end itself or a mean to reach some other educational ends.

Why imagination is important in this time? We can consider this question from various view, first of all, we are living in a changing time. Every thing is becoming different from the previous and in every time we need to form new solutions for solving new problems (Singh & Nath, 2007). So, we can not repeat our old generation life style because it dos not work. We should think originally and make novel efficient life style. Imagination is an essential component of this kind of creative thinking.

On the other hand, our world is full of contingencies. We do not know what will happen in our future. We do not have cognitive dominance on our world and its events. In this contingent situation, we need to guess our future and its dimensions (Rorty, 1989). Imagination can help us to imagine our future and identify its elements.

In addition, our existential essence requires to our attempts. We, ourselves are making ourselves. Hence, we have to create ourselves every time in a new modified manner to become genuine (Garrison, 1998,). In the other words, we have to be self-creator. This self-creation involves human imagination to go beyond ourselves and sketch new frames (Foucault, 2000).

However, imagination has been ambiguous yet and we should identify it and its conceptual components to open those ways through which it become developed. Any ambiguity in imagination concept leads to a chaos and disordering in education.

Considering the significant role of imagination in our life and importance of its identification, we attempt to analyze its concept and identify it in this paper. This conceptual analysis has been done in an action-based frame work. First of all, we endeavor to elaborate this theory of action. Then, we use this view as our framework and try to redefine imagination upon it. Finally, we trace effects of this kind of imagination in the various areas of education.

### **1. Theory of action**

Regarding human action and its influences on human identity and environment surrounding her, imagination can be considered in a different way. Human being imagines something and then upon these imaginations, conceives the world in specific manner and appeals to particular dimensions of things, and acts specially. So, we can name imagination as a component of human action.

But what is the role of imagination in a specific human action? First of all, we have to response to this question: what do we mean from the word “action”? For this reason,

concentrate on a framework of action. In this framework, action is the essential component of human being (Bagheri, 2013). In addition, he (2013) holds that every human action is based on three foundations. It means that whenever we do an action, we have has three components in our selves. These foundations discriminate action from behavior.

At first, in very action, we know what we do. This knowledge can encompass some responses to some questions like these: why I want to do this action? Which needs this action relates to them? How should I do this action? Regarding these questions, we can speak about a kind of foundation, which can be named as cognitive. This foundation prepares a kind of knowledge about our action and via this, motivates us to do that action.

At the second step, we can concentrate on those emotions in ourselves which motivate us to do particular action. These emotions are influenced by our knowledge but should not be reduced to it. Considering these emotions and inclinations, we can understand why some time we do like to do an action or dislike to do it.

Finally, if we will not to do something, we do not it. It means that for actualization an action, knowledge and emotions are not sufficient. This foundation is related to human free will. Free will implies on human freedom to will this or nill that. This kind of foundation is different from emotional one too. While emotional foundations are blind and empty of judgmental aspects, human volition is a capacity for judging between emotions and power of action. Considering this capacity, it becomes possible to speaking about acceptance an option or ignoring it.

Whenever these triple foundations become complete in human being, the action becomes done. So, concentrating on these foundations and their content and status, we can study human action and be aware of essence of it.

## **2. Imagination and action**

We can identify imagination in term of action. In this view, imagination can be considered as an action with all of triple foundations. If human being does not need to imagination, does not it. So, we can say that all of our imaginations are consciousness. So, imagination is a conscious human action for some specific purposes. But what are the cognitive human endeavors constitute imagination.

First of all, in every imagination we need to manipulate some previous mental images, change them and invent some new images. So, we can infer this fact that previous mental images are necessary to every imagination. These images are primary content of imagination process and enactive that. But from where we attain these images? We can say: from our surrounding environment, our dialogues with others, our context which we live in, our dairy experiences and interactions. In these situations, we encounter with different realities and conceive them in various manners. We touch real facts, we hear them, we see them, and save much information about them in our

mind. Our sensation from real facts, sketch some images from them in our minds. When we see a horse, our sensors like ears, eyes and hands touch it in various ways, and transfer specific information to our brain. Then we have in our mind a synthetic realistic image of a horse.

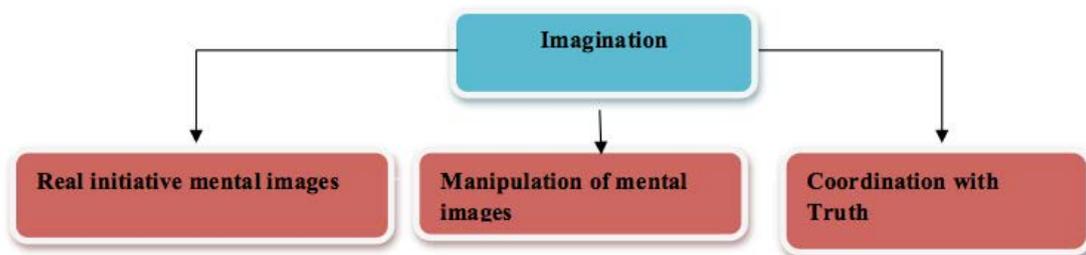
So, the first requisite of imagination is interaction with natural and human environments and touch (observe) real things. It means that without relationship with real world, we can not imagine any thing.

The second condition of human imagination is related to human capacity for invention. In the other words, if you do not change and manipulate your previous mental realistic images, you do not an imagination. Therefore, ordinary sensations can not be considered as imagination. In this step, emphasizing on her creative capacities, tries to manipulate these images and combine some parts of them with others. These kinds of combinations create some new images, which delineate new worlds and new worlds.

The third part of imagination process emergent in relating imagination to action. As van Leeuan (2011) argues, imagination can be semi-pretense or pretense. While pretense is connected to human action, semi-pretense is detached from it. If imagination will be a sort of semi-pretense, imaginer knows herself that her images are not real (Van Leeuwen, 2011). Oppositely, when we have a pretense we can relate it to our action. This kind of imagination forwards new possibilities for our action. For example you imagine about Ideal shooting personally and upon it, judge about soccer player's shoot. You imagine it but never want to be a soccer player and realize that shoot. This is a semi-pretense. On the other hand, you can consider A student always imagines to be a doctor; she sees herself as a doctor, she study hard to success in university exam and be a doctor. She endeavors to realize this imagination. This is a pretense.

But, which conditions should our imagination have for connecting to our action? If the distance between imagination and the real world is too much, this imagination can not purposes new real possibilities for our action. So, a kind of accompany with Truth is necessary for connection to our action. Hence, the connection between imagination and action, establish the third component of imagination. This component is alliteration with real facts and a kind of coordination with Truth.

Consequently, we can illustrate imagination as a construction of three concepts: 1) real mental images, 2) manipulation of mental images, and 3) coordination with Truth.



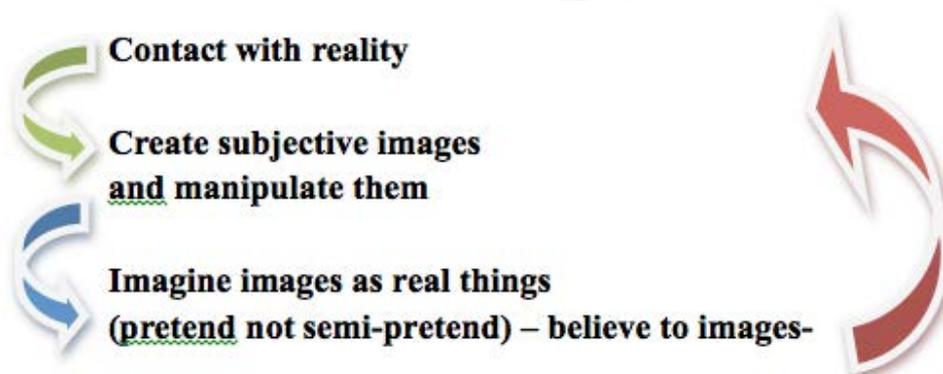
**Figure1- complete imagination**

### 3. Redefining imaginative education

Regarding previous concept analysis of imagination, we can say that in an imaginative education we should perform three enterprises. The first enterprise is connecting children to the real world. In this step we ought to enhance their sensors to catch dimensions of the real world as much as we can. The better they can conceive and touch the real world, the more real mental images they have. These images are initial content of children imaginations in next steps.

The second necessary activity of imaginative education is reinforcing children’s creativity to manipulate their mental images and create new images. The more they can change their mental images, the more they can forwards new possibilities in front of their actions and lives.

The third one is a kind of comparison and coordination between new images and the real world and Truth. In this step, we concern about the authenticity of our imagination and discriminate it from fantasy.



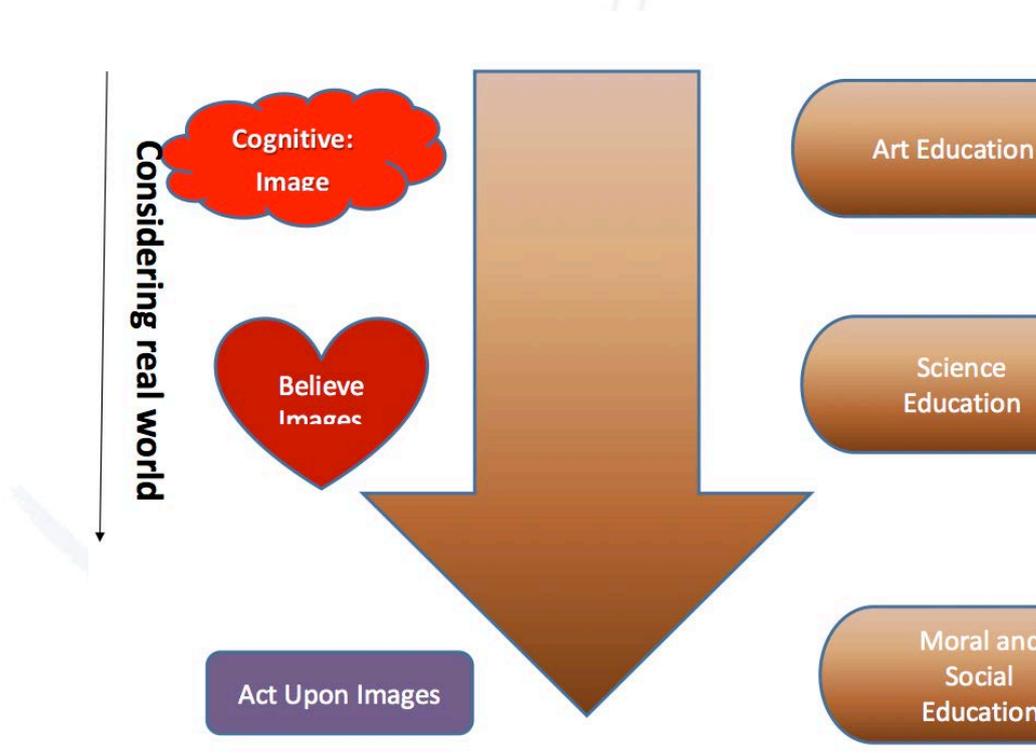
**Figure2 - the complete imagination**

On the other hand, we can apply imaginative education in different areas of education. The first step of imaginative process is the essential base of many kinds of education. Art education, science education and moral education imply on human imagination.

Regarding the identification of art, as human construct, we can consider imagination as a constructive component of art. Additionally, the first step we need in science education is relation to the facts and gathering some data from them (Bhaskar, 2008). So, contact with reality as the first stage of imaginative education is an essential requirement of science education. On the second step, we should make a hypothesis about reality and relate different relevant facts to one coherent system (Strenberg, 2001). In this step, human creation plays an important role and via that, imaginative education connects to science education.

Moreover, in moral education we need to imagination too (Johnson, 1993) and we can see that imagination as an essential conceptual part of moral literacy (Tuana, 2007). So, in this manner imaginative education can connect to the moral education.

Therefore, our imaginative education can be illustrated as Figure3:



## References

Bagheri Noaparast, K. (2013). Physical and Spiritual Education within the framework of pure life, *International Journal of Children's Spirituality* 18(1), pp. 46-61.

Bhaskar, R. (2008). *A realist Theory of Science*, New York: Taylor & Francis.

Foucault, Michel (2000). *Life: Experience and science*. In James D. Faubion ( Ed.), *Essential Works of Foucault, 1954-1984, Volume 2: Aesthetics, Method, and Epistemology* (465-478). New York: Free Press.

Garrison, Jim (1998). Foucault, Dewey, and Self-creation. *Educational Philosophy and Theory*, Vol. 30, No. 2, 111-134.

Johnson, M. (1993). *Moral imagination*. Chicago: University of Chicago Press.

Rorty, Richard (1989). *Contingency ,irony ,and solidarity*. Cambridge: Cambridge University Press.

Singh, Y. K. and Nath, R.(2007). *Teaching of general science*. New-Dehli: APH Publishing Corporation.

Strenberg, R. J. (2001). Giftedness as developing expertise: A theory of the interface between high abilities and achieved excellence. *High Ability Studies*, 12(2), 159-179.

Tuana, N. (2007). Conceptualizing moral literacy. *Journal of Educational Administration*, 45(4), 364-378.

Van Leeuwen, N. (2011). Imagination is where the action is. *CVIII*(2). Available at <http://www.journalofphilosophy.org/articles/108/108-2.htm> at 10.12.2013.

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