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The Asian Conference on Education

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The Asian Conference on Education

Conference Proceedings 2011

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***Teaching and Learning Road Map for Schools:
Global and yet Local!!***

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The main question:

What is a viable theoretical scheme that can guide school curriculum deliberations, maintaining both a global and a local quality OR which curriculum theory has the power of being adopted universally and the versatility of being adapted locally? Can the notion of “Glocal” coined in the field of sociology (2010) be regarded as a meaningful and relevant notion in the field of curriculum?

The genre of inquiry:

What is being discussed could be a candidate for a form of curriculum inquiry referred to as speculative essay by Short (1991). My reading of this genre of inquiry considers as candidates new or expanded schemes that can make additions to the conceptual asset of the field and contribute to its growth ,thereby, assisting the practitioners use more powerful lenses to see through and beyond the existing interpretations of curricular phenomena and to, thus, initiate leaps forward.

A point on the importance and originality of the subject of discussion:

Thus understood, the critical issue of curriculum globalization and localization enjoys and is supported by a theory that is not external to the field; ie: borrowed from disciplines such as economy, political science or cultural studies. Rather an internally formulated or indigenous theory, initiated and expanded in the field of education (curriculum studies) enters the scene and guides the deliberations in this rough uneasy road. This is a sign, also, of the living character of any field of academic study and its well being, indicating that the curriculum field, as a case in point, has not exhausted its potentials to offer solutions to new problems (Via Schwab, 1969).

The main argument:

The curriculum theory supporting the development of teaching-learning road map in the era of globalization is the focus of this paper. The author argues that there is a viable curriculum theory that can be applied both globally and locally in different societies or that can potentially cater to need for human beings that espouse global and local identities at the same time.

The theory being considered for this purpose is cognitive pluralism, first offered by Elliot Eisner (1994). **Cognitive pluralism** is based on a philosophical view about an essential human

characteristic. Human beings as homosapiens, distinctively capable of inventing symbol systems to facilitate meaning making and meaning sharing or to quench the never seizing thirst for understanding and communicating-offered by Suzane Langer (1976). The importance of symbol systems is also eloquently captured in phrase by Goodman (1978). He suggests that “there are as many worlds as there are ways to describe them”. Cognitive pluralism is also said to be consistent with a psychological view of human intelligence, namely multiple Intelligence or MI, espousing the existence of several talents or forms of intelligences comprising the whole of human intellectual capacities, all awaiting nourishment and enrichment through education - put forward by Howard Gardner(1983,1999).

This theory, it is argued, can provide a viable or defensible universal framework for macro curriculum decision making at the school level which at the same time also leaves a fair amount of discretionary space for local /cultural interventions when it comes to very significant micro level decisions that leads to actual curriculum products. The theory of cognitive pluralism, in other words, is the embodiment of the idea of curriculum being global and yet local. It must be noted that the author is not aware of any discussions put forward by Eisner with respect to cognitive pluralism that would cast this theory’s potentials within the framework adopted here, that is, globalization and localization of curriculum. This could be regarded as another aspect of the originality that might be attributed to this paper.

Further explanation:

The key concept here is suggested to be **forms of representation**, each embracing a particular form of thinking or being rooted in one such possible form of thought, meaning or understanding. Humans to be fully educated need to become indiscriminately and, of course, relatively conversant in all these forms of representation enabling them to engage in effective encoding and decoding within each mode.

What specifically are these forms of representation? There has been many attempts by educational theorists to classify them using different terminologies to be sure. The classifications are meant by each presenter to be inclusive and comprehensive, exhausting the known types. Therefore, they manifest a considerable amount of overlap. To name just a few by way of example, one could refer to the following three that seem to be the more famous and more widely circulated:

- Paul Hirst’s “forms of knowledge” (1969, 1972, and 1993): They are: Mathematics, physical/ natural sciences, humanities, history, religion, literature/art, philosophy and ethics.
- Elliot Eisner’s “ways of knowing” (1985): They are: Aesthetic, scientific, intuitive, interpersonal, narrative, formal, practical and spiritual.

- Philip Phenix's "realms of knowing" (1964): They are: Symbolics, empirics, esthetics, ethics and synnoetics.

What seems to the author to be a fair account that represent basic forms of representation are mathematical, empirical. Artistic/aesthetic, verbal, historical, moral and spiritual forms of representation.

Furthermore, it is argued, that schools are liable to move in this direction to fully discharge their educative responsibilities, otherwise fulfilling their obligations only partially leading to "**semi—literate**" **individuals** at best, hence another key term. Still another key idea is captured in the phrase that "**curriculum is a mind altering device**" (Bernstein, 1971). This critical phrase is meant to highlight the nature of curriculum as an effective cultural device or artifact, affecting the capacities potentially accessible to individuals throughout his or her entire life. It makes a great deal of difference, it is stressed, what mental or meaning making capacities they have been afforded and which ones they are deprived from or as the phrase signifies, how their mind is being altered by the education system. The affordances and deprivations literally define how his or her mind has been programmed which, then, directly determines the scope and the depth of meaning and experiences made available to the individual. Eisner has extended this argument to conclude that there is a strong political desire that ultimately determines this scope in every educational system. The term he uses is "politics of method" that could be safely translated here to mean "the politics of forms of representation".

The global façade of the theory:

Macro structure decisions defined as decisions immune to time and context specifications (Eisner, 1994) are suggested to be universally informed by the theory entertained here. Deciding, in other words, the shell of the curriculum or its overall architecture. This set of universal decisions call for respect and fair treatment of the full spectrum of modes of representation. It must be explained that such articulation of the global façade of the curriculum based on cognitive pluralism rests on the justification given for the proposition referred to earlier, that is, respect for the full spectrum of forms of representation. Because forms of representation are defined as the shared capital and a connecting thread of humanity. To state the same proposition in a different way, the curriculum theory in mind furnishes a more a less "global map of cognition" to guide curriculum development initiatives.

A Caveat is in place though. Contrary to what appears to be the case, the theory does not foreclose or predetermine the general organization or the actual structure of the curriculum, usually discussed within the dualistic choices of integrated versus discipline based curriculum. The curriculum initiated on the proposal being argued here, can benefit from both structures. This aspect is one which in fact should be decided upon at the local level and is not an example of the macro, universally shared decision. Obviously if an education system opts for the integrated mode, that system is much more likely to come up with actual curriculum that enjoys

a higher degree of locality. A discipline based or a subject centered curriculum, on the contrary, represents a mode that if adopted will yield a structure very similar in different contexts.

The local façade of the theory:

Micro decisions defined as decisions sensitive to time and context (Eisner, 1994), including selection of purposes and content (Walker, 2003) or culture content (Beauchamp, 1975) and culturally informed teaching and learning methods. For example culturally decided arts programs, science programs, technology programs, moral and spiritual programs, language programs etc.. To state it more clearly, the “content map” as well as the “teaching map” are drawn locally with sensitivity to cultures and contexts.

Is cognitive pluralism the only theory with such potential?

There are a number of curriculum theories that have claims to that effect. For example “Rational Humanism”, calling for a liberal education argues that the framework is rooted on a view of the genuine needs of human species. The needs are universal and not culturally bound, but can be fulfilled through different choices of content selection and content organization that are more and less culturally determined (Adler, 1982 and Hutchins, 1953).

Still another example of curriculum theory with a rather sound educational basis is what is referred to as “progressivism” (Dewey, 1938) or experientialism (Schubert, 1996). This framework of thought considers reconstruction of experience in a never ending cycle of attaining worthwhile or educative experiences revolving around social problems as the essence of education and the main characteristic of an educated person.

The alternative theoretical frameworks, on one hand, indicate the richness and variety with which the field of curriculum studies is blessed with, manifested in a multitude of theoretical formulations that can be used as the basis of curriculum deliberation. On the other hand, however, the merits of each alternative is open to judgment through which the more viable and plausible option or combination of options identified. Such evaluation, needless to say, can differ depending on the criteria one employs for this purpose. The writer resorts to the following four criteria and suggests that cognitive pluralism is the more advantageous framework to treat the issue of global versus local character of curriculum.

- **Exigency**, a major portion of human civilization, subsumed under arts will be taken out of dark and placed under the light of education. Cognitive pluralism sheds vital light on this sphere
- **Feasibility**, relatively speaking, especially when compared to alternatives such as progressivism
- **Equity**, fair curriculum made responsive to individual and group differences, far more attentive to this requirement than alternatives like rational humanism.

- **Urgency, could also be called timeliness**, qualities such as imagination, ingenuity and creativity become highlighted, badly needed in a knowledge and technology driven societies literally pronouncing their survival or demise.

Final appraisal:

Is it a tall agenda or an impossible pursuit on the part of educators and education systems? The implementation is heavily dependent on devotion to quality education and corresponding stretch of efforts currently exercised and a stretch of resources currently spent by the education system. Nevertheless, since the proposed conception is rooted in a just and sound reasoning which is hard to negate, is certainly worth striving for. I see it as a fundamental moral obligation to the generation who's destiny is trusted to us too.

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Thailand

ABSTRACT

Collaborative team planning and teaching are recognized as challenges for teachers in schools today. It provides for teachers feedback in reflection of their teaching practice. This paper reports collaborative teaching practice at a small private school called Soonthonvittaya School, Ayutthaya, Thailand. The subjects in a trial study were three elementary teachers who were involved in a collaborative teaching model and were trained in a six-hour workshop on collaborative team planning particularly designed for them. The participating teachers were trained to work with partners in a team, and take a teaching-leading role in the framework of collaborative teaching in devising learning activities. The results of the trial study will be reported and discussed with regard to possible implementation of collaborative training and how teachers react to this type of teaching practice.

RATIONALE AND BACKGROUND OF THE STUDY

One of the teaching methods frequently reported in the context of elementary schools is collaborative instruction or team-teaching (Hudson & Glomb 1997, Boyle, While, & Boyle 2004, Fearon 2008, Johnson 2008, Smith 2008). Collaborative teaching was introduced in schools as early as the 1970s; it served as a strategy for mainstreaming students who were identified as having a learning disability (Hudson & Glomb, 1997). Teacher collaboration was later defined as the open communication between the participants and sharing responsibilities (Johnson 2008). To many researchers, collaboration will create the opportunity for authentic collaboration among teachers and effective learning activities in group work for young learners (Boyle, While, & Boyle 2004, Fearon 2008, Johnson 2008, Smith 2008).

Quite a few studies reveal that traditional approaches to professional development such as small workshops or conference attendance do foster teachers' awareness or interest in expanding their knowledge and skills. However these approaches to professional development appear insufficient to strengthen their knowledge of learning which primarily changes what teachers teach or how they teach (Johnson & Johnson 1998, ONEC 2002, Boyle, While, & Boyle, 2004, Ruamkid 2008, Smith 2008). Recent research has shown that professional development activities are now structured in the collaborative method (Johnson, Johnson, & Stanne 2000) which is to encourage teacher collaboration, peer coaching and contribute to lesson plans and the use of resources (Oakes & Lipton, 2003, Davies & Dunnill 2008). In addition to measurable student impact, teacher need to collaborate with people who teach the same subject who are responsible for the same outcomes and build common ownership of all students who are taking that subject together.

Since collaborative teaching has been widely recognized as a tool to provide teachers with feedback for their teaching practice, those responsible for teacher development in Thailand are also looking for ways how to implement it effectively (Khamanee 2007, Ruamkid 2008). Both researchers pointed out that teacher development should involve teachers in the subjects they teach, and help them develop communication and problem-solving skills among their colleagues and students (Office of the National Education Commission, 2002). They put forward that teachers should not be required to weigh memorizing facts in teaching particular subjects. On the contrary teacher professional development should focus on understanding subject matters. In other words, teachers must learn more about the subjects they teach, and how students learn these subjects (Boyle, While, &Boyle 2004, Lewis 2002).

OBJECTIVE OF THE STUDY

Considering the strengths of collaborative teaching as identified by earlier researchers (Lewis 2002, Boyle, While, &Boyle 2004, Khamanee 2007, Ruamkid 2008), the researcher therefore constructed a collaborative teaching model and had it trialed in a workshop for three elementary teachers. The purpose was to find out whether it would be possible to help elementary teachers understand and implement principles of collaboration in a workshop format to benefit their teaching. It was expected that they should learn to work in a team and reciprocate in providing feedback to increase their teaching efficiency

RESEARCH METHODOLOGY

The researcher has developed three steps in conducting the study:

- Constructed a collaborative teaching model based on the work of earlier researchers.
- Had the model implemented in a workshop as a trial for three elementary school teachers.*
- Secured teachers' reaction to their involvement in the collaborative teaching workshop.

ESSENTIALS OF CONSTRUCTED COLLABORATIVE TEACHING MODEL

Quite a few researchers endorsed basic considerations in implementing collaborative teaching (Oakes & Lipton, 2003, Tissanana Khamanee 2007, Krol, Slegers, Veenman & Voeten 2008, and Critical Elements for Collaboration 2008). The researcher has taken the following as essentials of a constructed collaborative teaching model. They are:

Principles of collaboration:

- All team members work together towards a common goal.
- A sense that all participants are valued.
- Unique perspectives of all team members.
- A strong sense of purpose.
- Trust and a sense of shared responsibility.

Key Assumptions:

- Teams must value diverse membership and ideas.
- Each member has expertise.
- Teams must have a common purpose.
- Team members need to trust one another.
- Trust allows members to share in decision-making and responsibility.

Five Essential Characteristics:

- Positive Interdependence
- Face-to-Face Interaction
- Interpersonal Skills
- Monitoring in developing time and methods for regular processing
- Individual Accountability

COLLABORATIVE TEACHING WORKSHOP

The researcher arranged for a six-hour workshop for teachers to familiarize themselves with the principles, key assumptions and elements of collaborative teaching. The participating teachers were trained by the researcher on (1) how to work with partners in a team, (2) take a teaching role in the framework of collaborative teaching, lead and support learners in devised learning activities, (3) provide feedback to teaching partners, and (4) use results of collaborative teaching evaluation to adjust or improve their collaborative teaching strategies.

The following are details of the workshop:

1. Introduction (on PowerPoint)
 - Purpose and expected outcomes of the workshop
 - Checking teachers' understanding of collaborative teaching
 - Ground rules (so be flexible and supporting each others)
2. Ice breaking Game
 - What makes a team?
3. What makes an effectiveness collaborative team? (on PowerPoint)

A common set of principles of collaboration:

 - Is based on a sense that all participants are valued.
 - Embraces the unique perspectives of all team members.
 - Is based on a strong sense of purpose.
 - Requires trust and a sense of shared responsibility.

Key Assumptions:

- Teams must value diverse membership and ideas.
- Each member has expertise.
- Teams must have a common purpose.

- Team members need to trust one another.
- Trust allows members to share in decision-making and responsibility.

Five Essential Characteristics:

- Positive Interdependence
- Face-to-Face Interaction
- Interpersonal Skills
- Monitoring in developing time and methods for regular processing
- Individual Accountability

4. Collaborative Teaching

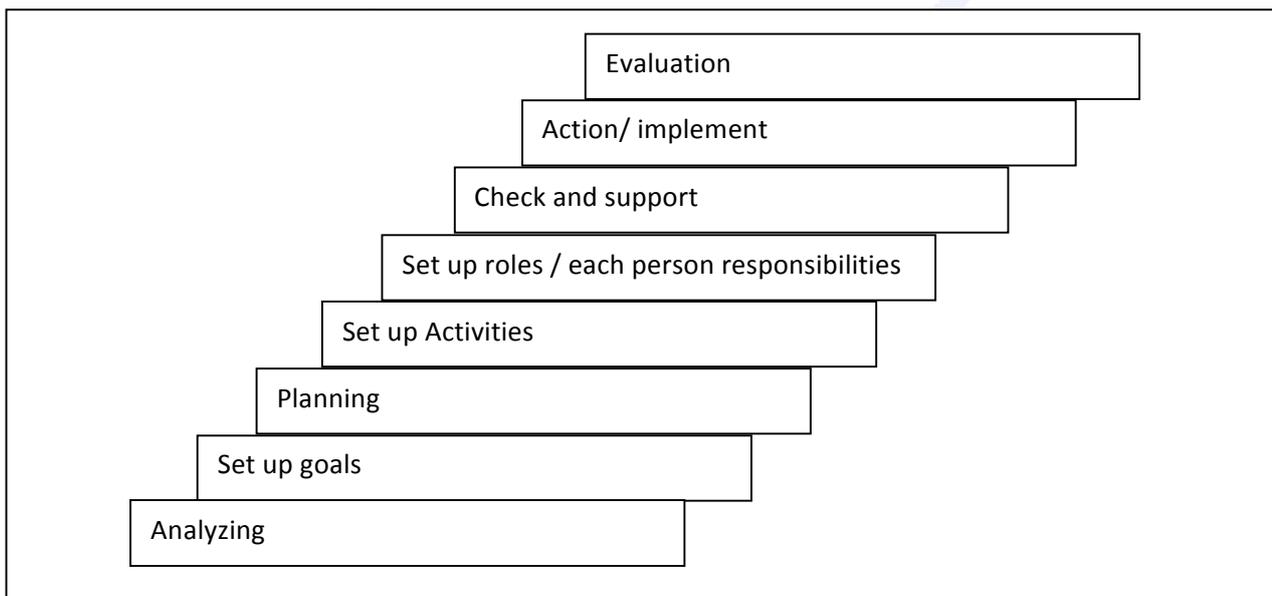
- Clip Videos
 - Teachers collaborative teaching
 - Students collaborative learning
- Collaborative team planning
 - Plan schedule for collaborative meeting time
 - Plan before the classroom with a specific goal in mind
 - Bring an open mind to the table. (Share, listen and learn from the group)
 - “How things are going in particular subject area?”
 - Find out how others might teach the same topic
 - Find out different ways to motivate students
 - For Discussion: Great source of professional development
 - Assess, plan and stick to the week lesson so everybody is on the same pace

5. Lesson Plan activities

- Teachers make a lesson plan together
- Role play of the created lesson plan
- Discussion in sharing teaching experience

6. Closing the workshop

7. Teachers’ feedback or evaluation



EVALUATION OF IMPLEMENTED COLLABORATIVE TEACHING WORKSHOP

The researcher constructed a rating-scale evaluation form of 1 (low) to 5 (high) to secure feedback from the participating teachers in four parts: (1) Content delivery in seven items, (2) Facility in two items, (3) Satisfaction in four items, and (4) open-ended questions in two items. The evaluation form is given as an appendix in this paper.

RESULTS OF THE STUDY

The researcher found out that the participating teachers showed keen interest and enthusiasm in learning and implementing the key assumptions of collaborative teaching. From observation by the researcher and one school executive, the teachers appeared to enjoy working together on a lesson plan and were willing to share their experience in bringing about the best possible lesson plan for each team member to try later on. It was fun for them as seen the results of their evaluation at the level of 4-5 as overall satisfaction. It should be noted that the teachers, as they said, would need more hours in a repeated workshop on different lesson plans on their selected topics.

PEDAGOGIC IMPLICATIONS OF THE STUDY

As shown earlier, the workshop on a constructed collaborative teaching model at the elementary school level (Grades 1-3) can be implemented with teachers without experience with teaching collaboration. They can certainly apply what they have learned to work in a team on other subjects' topics as desired. It should be noted that in bringing in any change in teaching methodology, the school needs to train teachers and provide resources and support for them. Those parties concerned should be aware of the fact that it takes time for trained teachers to be fully receptive to the proposed teaching method and gain confidence in the newly adopted teaching method. Positive feedback through systematic evaluation can help teachers travel on the professional road towards mastery with greater confidence in their teaching career.

END NOTES

**** Selected school for the trial study***

The researcher selected three subjects in a trial study and would later on work with about five to ten more teachers in the main study.

The school selected for the trial study is a small private school of P 1 to M 3 located in a city of Ayutthaya, Thailand. The school has envisioned quality teaching delivered by local teachers to

facilitate the learning process in a friendly, enjoyable and supportive manner. It should be noted that some teachers still use traditional methods emphasizing memory and passive learning in a teacher-centered mode.

As for professional development programs provided by the school, teachers have regular training on teaching methodology, learning activities and lesson plan preparation. However, from the researcher's observation, teachers seemed not to be enthusiastic to experiment with new teaching methods or learning tasks. Their lack of enthusiasm toward what they have learned from the provided training program could have stemmed from the fact that they had to work in isolation, with limited resources and without the benefit of feedback and support from peers. In view of these limitations, the researcher therefore would like to introduce collaborative teaching to teachers at this school and put it on trial to see whether it could support both the teachers in their teaching environment as well as their students in a more friendly and enjoyable learning process.

ACKNOWLEDGEMENTS

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APPENDIX

Training Workshop Evaluation Form

Directions: For each statement, please check your perception/ satisfaction with the given items by using a rating scale from 1(low) to 5 (high).

Specifications	Check your response 1 Low to 5 High				
Content Delivery					
The goals of the workshop were clearly defined.					
The topics covered were relevant.					
There was sufficient opportunity for team work and interactive participation.					
The workshop allowed me to work with the other participants.					
The workshop was too technical and difficult to understand.					
The training experience will be useful in my work.					
The schedule for the workshop provided enough time to cover all of the proposed activities.					
Facility					
The meeting room and facilities provided a comfortable setting for the workshop.					
The location for the workshop was convenient for me.					
Satisfaction:					
The goals of the workshop have been met.					
I am satisfied with learning new things in the workshop.					
I was satisfied with the collaborative teaching method.					
I was satisfied with the overall training program.					

How do you hope to change your practice as a result of this training? _____

What additional training would you like to have in the future? _____

End of Paper

Biodata

I am doing a doctor of education program in educational studies at Faculty of Education, Rangsit University, Thailand. Educational Background, I received my Master of Education in Bilingual Education, Rangsit University, Thailand and Bachelor of Education in Teaching and Learning in Early Childhood, College of Education University of Canterbury, New Zealand.



Teaching *Lingua Franca* Correctly: Motivation as a Key Factor in English Language Teaching – a Case Study in Hambantota, Sri Lanka

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Abstract

This paper attempts to examine the role of ‘motivation factor’ in Language teaching in the context of teaching English language for rural students in Sri Lanka. Since English can be used as a *Lingua Franca* (link language) for communication among different ethno-linguistic groups, it is highly important to look at the English language teaching methodologies adopted in different countries. In teaching English as a second language for the students in Sri Lanka, initiatives are taken by both the private sector and government sector institutes. For this research, a case study was selected from an English language training program conducted with private and public partnership in a rural area; at Tissamaharama electorate in Hambantota district. The method of this research was participatory observation. The research was launched to examine current practices of English language teaching and identify successful methods of language teaching. Incompetence of rural student population of the country manifests clearly the failure of English language teaching, the study mainly concerned with problematizing as to why the rural student population was weaker in English language skills. Among several other variables that can have a greater impact on the English language acquisition, the ‘motivation factor’ was recognized at the beginning and the research was designed in a manner to measure its impact on language acquisition and successful teaching. The study established that the influences of several significant motivation factors such as environmental changes, humor, changing class room settings, and using voice skills can enhance the language acquisition to a greater extent.

Key word: motivation, language acquisition, voice skills, second language, *lingua franca*.

Background

English language teaching was started in Sri Lanka by the British colonizers. After Sri Lanka was annexed to the British Empire, the entire education system underwent changes; particularly the medium of instruction became English in the missionary schools. Therefore, there was no particular requirement to make conscious efforts to teach English for the students by applying highly advanced methods. Also the usage of English was only confined to blue blooded people who represented the highest social class in those days. On the other hand, the patriotic movement worked against the British Empire. And also they used native language, culture, religion and so on as national symbols. Because of these generally observed socio-political environments, the language teaching and learning were not associated with technically developed methods, which nowadays have been a very influential fact.

Today, English is an essential requirement for all who interact in the national and international environments since almost everything is communicated through English.

Particularly, post-war Sri Lanka requires a *Lingua Franca* in order to build up social harmony among ethnicities. The process of building up social harmony in the country was a continuous failure due to the influences and decisions made by the majority. It started with several acts enacted in the history with reference to the language policy. One of the important turning points was the setting up the Official Language Commission in 1951 and its

recommendations suggested using one language as the official language instead of English in 1953. This came to the utmost stage at the general election campaign in 1956 and S. W. R. D. Bandaranaike (The prime minister of Sri Lanka) promised to make the Sinhala language as the only official language at the election campaign. It was realized by him in June 1956 by creating a critical dilemma. With this historical background and current post war condition which seeks ways to build up social harmony, we have been pushed to find a *Lingua Franca*. In order to minimize the issues that might occur among ethnicities, the identified *Lingua Franca* is English which should properly be taught to all Sri Lankans, so that we need to have successful methodologies to do this.

Eminent linguist, David Crystal recognizes ten domains in which English has become pre-eminent in this century, namely, politics, economics, the press, advertising, broadcasting, motion pictures, popular music, international travel and safety, education, communications (Crystal D., 2005, p-11)

Most of the international political establishments deal in English. The 'League of Nations' was the first among many modern international alliances to allocate a special place to English in its proceedings. Now this can be observed everywhere including the biggest setting; the UNO.

The linguistic realization of the economic imperialism was English. As David Crystal points out 'money talks' was the chief metaphor: the language in which it was talking was chiefly English. In the current world, approximately, 2000 million people speak English in different capacities as their mother tongue, second language or foreign language. In some certain countries this has become a *Lingua Franca*. The English language has become very influential due to all above mentioned reasons so that we were inspired to research successful teaching methodologies of this language in the Sri Lankan context.

There are so many scholarly works on this subject area in the universal context, but when it comes to Sri Lanka, we do not have that much of studies on this particular topic. Very particularly, this study draws attention to the fact that whether the methodologies are successful or not in this sample with special reference to motivation. "*How Languages are learned*" (Year is unknown) by M. Lighbown and N. Spada is a very considerable study in teaching and learning languages with special reference to motivation. The authors of this study explain very clearly how motivation interferes into English language teaching and four important other factors are also discussed. Even some certain micro factors are also discussed: for instance, they have discussed the alcoholic influences of the English speaking tendency in people. In addition to the motivation factor, they also have taken into serious consideration of four more factors viz; aptitude, personality, intelligence and learner preferences which are very important in language teaching and learning.

C. J. Dodson's (1974) "*Language teaching and the bilingual method*" contributes a lot to our study but the issue is, his study had been done in 1974 which is very old comparing to the current research works. Nevertheless the findings of this research still contain a considerable value. The most important finding of this study is applying a new teaching method which is based on all positive points of the known methods. His study does not put the teaching methods into a particular corner. It suggests applying eclectic method rather than using only one unique method.

Motivation has been taken into serious consideration by researchers in the process of English language teaching to a greater extent. "*Motivation: What Teachers Need to Know*" (1990) by A. Carole Ames, "*Intrinsic Motivation and the Process of Learning*" by J. Condry and J. Chambers, (1978) "*Motivational Considerations in the Study of Instruction*" by R. Mark (1988), "*Enhancing Student Motivation*" by L. Martin and Midgley Carol (1991) are among the major contributors in this field. Out of all the other factors effective on the English

language teaching and learning process, motivation has been given the prominent place by most of the researches.

“Methods of Research on Teaching the English Language Arts” is a latest piece of research work which was compiled by James Flood (2005), Diane Lapp, James R. Squire, Julie Jensen which contains most modern methodologies. This is an undergraduate and graduate level guidance to research works in English language teaching, but this research work cannot be bounded by a particular language even though it concerns about English language teaching. This is the study which contributes a lot towards theoretical concerns of our research in search of successful applications of English teaching.

In general, all the research works on English language, or else language teaching methodologies have been focused to prove a particular hypothesis. Otherwise, they have been done with special reference to other languages apart from English. Looking at the findings of research works; in some certain cases, they are culturally or else theoretically bounded. What we expect from our piece of research work is a broader view in going beyond the mentioned limitations.

Research Question

How does motivation work in second language teaching with special reference to English languages teaching in Sri Lanka?

Technical Terms

Lingua Franca - a language which is used for communication between groups of people who speak different languages but which is not used between members of the same group.

Motivation - enthusiasm for doing something, the need or reason for doing something.

Cognitive skills - skills connected with thinking or conscious mental processes

Framework of the study

This study lies in the scope of applied linguistics which is considered as a sub-stream of linguistics. To confine the framework of this study very specifically, applied linguistics has several study areas such as translatology, language therapy and language teaching. This study truly deals with language teaching.

Research Methodology

This empirical research was conducted at Tissamaharama electorate in Hambantota (Sri Lanka) with the participation of 60 students; 30 males and 30 females. They had joined the English language programme at the completion of either O/L or A/L. This particular language program initiated with the public and private partnership as a pilot project to test the feasibility of training students in an artificial English speaking environment with a month long program. The researcher participated as a participant observer of the program and interacted with them on several occasions. Also special attention was given to the teaching methodology which had given much space for motivating them to use the language freely. The age of the participants of this program was between 17-25 years and the number constituted both male and female. The researcher was totally engaged during the period with necessary observations, and information was recorded by research assistants. Data collection was done through daily observations and through formal and informal methods. At the first meeting participants were given an oral proficiency test in order to understand their oral proficiency upon the programme entry and then during 32 days they were tested in four continuous assessments to understand the gradual progress.

Discussions and Conclusions

Among several factors, motivation was the key to successful language acquisition and speech according to the findings of this research. As a percentage 90% of the sample was able to freely communicate after completion of this boot camp and it was found that they had mistakes with grammar when they speak but the level of self confidence and using the language even with mistakes was very notable.

As the data speak for the success of the methodology with much emphasis on motivation, let us explore the nature of motivation and its key result areas that had been applied in the training here onwards as our findings.

Motivation has been taken into serious consideration by researchers in the process of English language teaching to a greater extent. In *"Intrinsic Motivation and the Process of Learning"* by J. Condry and J. Chambers, *"Motivational Considerations in the Study of Instruction"* by R. Mark, *"Enhancing Student Motivation"* by L. Martin and Midgley Carol explore the theoretical foundations and the empirical success of the motivation factor in language teaching.

The research found that there were several motives which made a huge impact on the teaching and learning process. The prominent pattern of motivation of this research was *exogenous*, but it does not convey that *endogenous* motivation was not important and worked at the research. The following are major areas of students' motivation which were deployed and had become successful as identified at the research.

1. Environmental changes: This is not a new application of language teaching since this has been deployed by teachers who practiced communicative approach, but it is difficult to see this practice in Sri Lankan English teaching convention as a genuine practice. This research based English Camp was executed in a free, unruffled and solitary environment in the dry zone. The environment had been changed totally in order to create an artificial English environment where students can interact throughout the day with English. For instance, the whole learning premises had been covered with English statements, sentences, songs and other language relevant stuff. As participants had positively commented and reacted with the environment this has become a major motive for them to cope up with the language.

2. Humor: *"Humor"* has been defined in many ways in terms of different subject areas but we prefer to introduce and use the definition as *"Humor is surprise without threat or promise."* This is a very critical way of motivating students which should be applied very consciously. In our study it had been proved that, since the participants were very young and

energetic, humor was a must to keep them enthusiastically with undivided attention throughout the programme and it had absolutely accomplished set goals as a factor of motivation.

Also humor had been practiced as a gradual and continuous practice in this boot camp, among these humor practices English stories had played a major role of learning while enjoying.

3. Avoidance of boredom and monotony: The other important factor which had made the learning process a success was diversifying the lessons by avoiding boredom and monotony. Culturally, everything had been adapted into the context of Sri Lanka as a motive which found as a factor of success, and success stories of learners of English language in different levels stimulated as a gradual practice. It was identified through initial ground observations of Hambantota; the fear of language is immense so that simplifications of the language in this project had been a very successful application. Some sort of locally adopted activities such as translations from English to Sinhala and vice versa in activities had helped a lot to avoid the boredom and monotony.

4. Student Appraisal: Among the other findings of the research show understanding students' personal characteristics, strengths and weaknesses by the lecturers, striving strength towards success and addressing weaknesses with positive notes had become important motivational factors for students. Appraising students' each and every individual and team effort by empathizing with them using the most common techniques for praising them with the words such as good, very good, well-done, excellent, superb etc. had created a huge impact. Identifying team leaders and motivating them to share their strengths with others and identifying backward students and popularizing them among the other students are the unique practices. Understanding cultural aspects and dealing with them while treating equally without marginalizing any student was the next significant concern which has been identified through observation.

5. Teaching in a mixed group (Boys and girls): Using gender differences as a driven motivational fact to learn languages had never been used in the history of English language teaching as far as our knowledge is concerned. However, it had become a more prominent motive in this research project. Students had placed in the class in mixed rows respectively girl and boy and also their positions had changed every three days as they requested and looking at the knowledge level and cognitive skills which had become a very successful practice.

6. Changing the class room settings: Changing the class room settings including students' seats arrangements taking into consideration cognitive abilities and personal traits, and motivating students towards punctuality by examples are the strategic moves and understanding boredom and changing the techniques of teaching with continuous undivided attention without sticking into one particular teaching technique and promoting learners' initiatives and involvements are successful psychological approaches which had played a major role in the process of motivation.

7. Use of voice skills: Use of voice skills (pitch, pace, articulation, clarity, stress and intonation - here the most influential fact is intonation which is considered as the music of language) to retain the attention of students and enthusiasm are linguistics motivational approaches which had been consciously applied by trainers in this training programme. On the other way around this conscious effort helped to avoid monotony as well.

8. Ad - hoc planning for required activities: time management and student management have been highly important to retain students' trust towards the ultimate goal and they also obtain a considerable portion in the total process of motivation.

9. In applying second order application theories to develop the curriculum with a logical and methodical relationship of lessons have helped immensely to understand and develop students' language developmental sequences and to feed them.

10. Eventually among other several minor factors which contributed as helpful motives; understanding traditional classroom drudgery and taking students to outdoor gears had been a very successful way to keep students with their contentment and also it had become a matter of diversification of the steadiness of traditional classroom settings.

Recommendations

This research recognizes *continuous-multiple-motivation* as a key factor of second language teaching for the students in non-native language speaking communities such as rural areas, and recommends for future teachers to employ motivation in a considerable manner with the motivational strategies to achieve their teaching objectives of oral proficiency in students English as a foreign or second language.

We further recommend specifically to apply motivational strategies which were recognized through this research work such as environmental changes, humor, avoidance of boredom and monotony, student appraisal, teaching in a mixed group, changing the class room settings, use of voice skills, ad - hoc planning for required activities, applying second order application theories to develop the curriculum with a logical and methodical relationship, understanding traditional classroom drudgery and taking students to outdoor gears to have a successful second language teaching experience.

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Lifelong learning in Australian academic libraries: Exploring a personalised approach

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Introduction

I am a librarian and I also consider myself a lifelong learner, thus in combination these aspects have shaped the genesis of the research, which informs this paper. Encouragement to experiment, explore, learn and share has always appeared to me to be commonplace, effortless and desirable. I have learnt that informed opinions should be met with respect, and respectfully challenged without hesitation. This has motivated me to take on a diverse and dynamic body of formal and informal learning. It has also given me an enthusiasm not to miss opportunities. This approach has developed over my lifespan, punctuated by learning opportunities, experiences and sharing with like-minded people. Within this frame of reference, in the company of formal and informal educators, I have learnt to enrich, assess and prompt my own learning experiences through collaboration. It is from this foundation of values that I conduct my professional tasks and was motivated to undertake this study, with the goal to enrich my own learning and the learning experiences of others.

Across my lifespan, in the best of company with educators and learners, I have always held the greatest respect for those who share their knowledge. I have witnessed that shared knowledge can confirm, contest and inspire new knowledge. I have become aware that despite great professional and personal challenges, individuals nevertheless remain motivated in pursuit of their information and learning needs, as they aspire and actualize a more fulfilling life. A library also shares knowledge, gently and quietly, however with immeasurable resonance. Throughout my career in librarianship I am reminded that the library can be a quiet space and in this quietness every opinion is heard.

To me, the library represents the arena in which we can examine the sum of who we are and who we can become. These prospects can be elevated by opportunities, provision and support for lifelong learning. I am of the ardent belief that a library is, and should continue to be, an all-encompassing environment that can accommodate a diversity of age, gender, faith, race, physical ability, socio-economic circumstances and education. Moreover, whilst the library is a welcoming space, when an adequate foundation for lifelong learning has been introduced, encouraged, challenged, enhanced and maintained, the library can exemplify social participation and equity at its best.

The 'boutique library service model' (Priestner & Tilley 2010) explored in this conference paper is understood as a refined approach to library service with an arrangement of *centrally managed activities*, *collaborative activities* and *boutique library services*. 'Boutique library services' are specifically reshaped for and determined by the characteristics of individuals and groups of like-minded people whom the library supports. Attention and consideration to the identified needs of individual academics, learners, researchers and students enhances a librarian's perspective from

which they are capable of adapting services to collective library members that retain their usefulness to each person. From this premise boutique library services have the capacity to 'personalise' library services.

The value and importance of creating a *boutique* and *personalised* approach to library services in higher education has laid the basis for the development of an international community of research and practice in collaboration with Cambridge University UK, London School of Economics UK, Oxford University UK, Northampton University UK, Providence College USA and University of London UK. Librarians from a range of different appointments, institution types, responsibilities and priorities have gathered together to support each other as we endeavour to reshape services and support our academic staff and student library members.

This paper aims to illustrate the personalised approaches and roles that libraries and librarians might play in supporting academics as lifelong learners to meet the changes and challenges of the evolving information resources and systems of access defined by their work. A discussion of the research findings presented propose to identify strategies within a boutique library model of collaborative and productive personalised modes of working to emphasise and support the lifelong learning needs of academic staff.

Review of the Literature

The literature explored illustrates the relationship between libraries and academic staff in higher education, particularly in the context of learning opportunities that complement an academics capacity for lifelong learning. In doing so, the context, mode and content of learning opportunities are examined for their utility for the undertaking of the evolving characteristics of academic work. The role of academic library services and resources aspire to support the teaching, learning and research requirements of all academic staff. For academics who engage with the library, they do so from a diverse foundation of experiences, knowledge and skills. The conditions from which libraries demonstrate their capacity to provide learning opportunities, that might be adapted to an individual's initial and ongoing positions, shapes the extent to which the short- and long-term goals of academic work are achieved across an academic's lifespan.

Lifelong learning, and the provision of opportunities to support learning across one's lifespan, is foremost personal to the individual learner. Individual lifelong learners accrue the abilities which in turn shape their personal, civic and occupational participation and proficiency. Watson (2004, p.4) believes that these individuals "must have the *motivation* and *capacity* to learn, in any type of setting, with any type of teacher, or simply by themselves". These vital characteristics of a lifelong learner might also be described as independence and ownership. One's independent commitment to lifelong learning is of the utmost importance to the individual's contribution to achieving the aspirations of a learning society, comprised of a highly skilled workforce, a democratic and inclusive society, and a more personally rewarding life (Chapman & Aspin 1997). In order to better support individuals seeking to attain these qualities of fulfillment (Chapman, Cartwright and McGilp 2006; Longworth 2003) it is essential to examine their conceptions and expectations, personal interests and motivations, and ownership of learning opportunities across their lifespan (Longworth 2003; Skilbeck 2006). In the context of libraries and the work of academics, the aim is for libraries to acknowledge the independence of learners

and their ownership of the ways in which they accrue capacity. It is proposed that they embrace “the concept of education and training that responds to individual needs” (Watson 2004, p.16).

The qualities of independence and ownership in the pursuit of lifelong learning are advocated within the profession of librarianship in Australia. ALIA, the Australian Library and Information Association, encourages practitioners in the sector to develop and implement “lifelong learning that is unique to you” (ALIA 2008a, 2008b cited in Mayfield & Mitchell 2009, p.5). Library and information-based professionals who recognise the significance of individual ownership of learning opportunities have a positive influence upon the educational role of libraries (Mayfield & Mitchell 2009). The learning strategies of library staff, accordingly, impact upon a library’s capacity in this endeavour. ALIA (2008a) emphasises independence in professional development in order to “develop new skills, knowledge and confidence to ensure you have a successful and rewarding career”. The learning program of library professionals, informs the learning opportunities that libraries are able to provide, which in turn shapes the capacity of libraries to support the lifelong learning needs of individuals. This evolving educational role is dependent upon the relationship between librarians themselves, their beliefs in lifelong learning, the values of the institution and of the library. Learning strategies developed, undertaken and supported, both formal and informal, need to be established in such a way that they are able to evolve and complement other capabilities accrued (ALA 2008a, 2008b; ALIA 2002, 2006; Bundy 2004; Information For All Programme (IFAP) 2000; International Federation of Library Associations and Institutions (IFLA) 2006). To respond to the changing nature of work and life learning needs, shaping personalised opportunities for this continuum of learning is essential (Bryce 2006; Longworth 2003; Skilbeck 2006).

Within the context of higher education the provision of opportunities is enhanced when they are structured to acknowledge *know-how*, the expertise to support work-life, and *know-who*, the work-life networks to support and supplement capabilities (Taylor 1999, p.112). Moreover, the practice of academic work is increasingly characterized by the specific technologies utilised, which necessitate a complementary evolution of skills for the technological systems and applications (Longworth 2003; Rymarz 2006; Tamarkin & The 2010 EDUCAUSE Evolving Technologies Committee November/December 2010, p.36). Within this context it is imperative for individuals and institutions to assess learning strategies with consideration for professional and personal aspirations, both present and future (Aspin et al. 2001; Chapman et al. 2006; IFLA 2006; Longworth 2003; Skilbeck 2006).

It has become important to actualize lifelong learning conceptualizations and aspirations within the dynamic workplace of higher education institutions (HEIs) (Bradley et al. December 2008, p.xii). Lifelong learning is indispensable for tertiary educators as they prepare their students in the timely fashion in a range of competencies needed to achieve their individual, civic and professional aspirations (Bryce 2006; Chapman et al. 2006; Connaway, Dickey and OCLC Research 2010, p.37; Longworth 2003; Moyle & Owen 2009, p.43). Students look within universities and to their employees for both learning role models and role models for lifelong learning (Bryce 2006; Candy 2000). The lifelong learning attitudes and values demonstrated by staff and informed by the HEI context, affect the likelihood of students becoming lifelong learners (Candy 2000). For academic libraries providing learning opportunities that engage with the needs of academic staff, general staff and students, the underpinning learning of lifelong learning values are fortified and embedded across the ever diminishing boundaries of educator-learner (Carnaby 2010, p.20; Doskatsch 2003, p.111; Jordan 1998; Secker 2004, p.62).

Academic libraries and librarians are well positioned to observe and respond to the needs of individual's reclaiming their agency within working, learning, teaching and research patterns (Coyné 2010, p.105; Haynes & Kent 2010, p.141). Facilitating the modification and personalisation of library services, resources and learning opportunities required to charter the increasing complexity and volume of information relevant to academic work is of increasing demand (Bundy 2004, p.3; McKnight 2010, p.204; Neal & Jaggars 2010, p.55). Complementary to these endeavors by academic libraries, is their continuing role as one of the key providers of the underpinning skills for work-life and lifelong learning, namely information literacy and its contemporary counterpart e-literacy (ALA 2008a, 2008b; ALIA 2002, 2006; Bundy 2004; Dudfield 1999; IFAP 2000; IFLA 2006; Law 2010, p.10; Longworth 2003; McSwiney & Parnell 2003; Nelson 2002, p.ix cited in Doskatsch 2003, p.112; Research Information Network & Research Libraries UK [RIN & RL UK] March 2011, p.6; Secker 2004; Tamarkin & The 2010 EDUCAUSE Evolving Technologies Committee November/December 2010, p.36)

Identifying approaches to the study of lifelong learning in Australian academic libraries

This paper is informed by research (McPherson-Crowie 2010), which is concerned to test the belief that the response of libraries to the changing environment of higher education has sometimes been to attend to the short-term goals of task completion rather than to the generation of lifelong learners. Such a task-based orientation, combined with the varying demands in universities in some settings, has led to library-facilitated teaching that is task-specific, whilst at the same time being learner-generic. In such an approach, one may discern a systematic depersonalisation occurring in academic libraries. This phenomenon may be perceived as limiting their learners' capacity for lifelong learning, rather than enriching learners' ownership and utility of learning opportunities.

In this study I hypothesise that the current conceptualisation of learning opportunities in many academic libraries is influenced by their concentration on task-specific outcomes. I argue that task-specific library-related literacies and broader information-related literacies, whilst distinct, are complementary literacies and are better served when not taught, learned and used in isolation in higher education institutions and their libraries.

I argue that the library's provision of information and services has been negatively impacted upon by a combination in HEIs of the changing methods of management and the evolving nature of academic work. The development of learning opportunities in academic libraries has been challenged by the various categorisations and demarcations in a university's structural arrangements and infrastructure. Academic libraries have the potential capacity to develop, respond to and support learning opportunities for academic staff across their lifespan, complementary to their pursuit of lifelong learning and the demands of their academic work.

Research Methods

The data in my research project are designed along the trajectory of a mixed methods four-phase approach, with participation from academic staff at the Melbourne Campus (Victoria) of Australian Catholic University. The data collection sequence commenced with a series of preliminary interviews, as the first phase, with the intention to develop an appropriate scope, frame and pitch to the questionnaires used in the Delphi technique. Participants in these interviews were selected from various directorates and faculties of the university. They were held to represent the breadth of views significant to the concepts and context of the study. A modified Delphi method was used in the second phase of data collection, comprising a panel of twenty-five academic staff from the three faculties of Arts and Sciences, Education and Health Sciences. The modified Delphi Method is followed by two interdisciplinary focus groups were conducted, with participants identified from the preceding panel, to revisit, explore and elaborate upon recurring and correlating themes identified within the analysis of the questionnaire rounds. The collective discourse provided the participants with additional opportunities to detect and eliminate any contradictions between attitudes and behaviours identified in the findings. Data collection concluded with a series of interviews, as the fourth phase, to revisit, explore and elaborate upon correlating individual themes identified within the analysis of the preceding phases. From such data the emerging findings have been identified, interwoven and informed my practice, described in these cases, as a liaison librarian.

Discussion of the findings

Several themes recurred amongst responses of participants in the course of this multiphase research. These report three themes, which relate to the three case study university academic departments. The first of these I code as *learning opportunities*; these include the acquisition, development and maintenance of specific skills or literacies and the ways in which these learning opportunities are identified. The second is *service provision*, including the evolving demands of academic work and how this impacts upon staff members' relationship to both the services and resources of the library. The last addresses the notion of *networks of support*. These denote the infrastructure that influences an academic's conceptualisation and actualisation of lifelong learning within HEIs.

Data collected to inform this study indicate that formally structured learning opportunities within HEIs, including training, professional development and workshops, occurred not at convenient times in the academic calendar. The disparity between identification of needs, response implementation and the delivery of training, was believed by respondents to impact adversely upon the development of useful skills and lacked practical application. The 'one-size-fits-none' approach, in general, was noticeable in its lack of overall perspective of the demands of academic work, and more specifically the needs of individuals relating to their work context.

Reflecting on the needs and interests of a range of university providers of formal learning opportunities presented some challenges for staff. University providers of training or workshops included the faculty and/or schools, human resources, the IT department, learning and teaching units, research department, the online learning unit and the library. Several participants also identified professional associations and information vendors as directly promoting learning opportunities incorporating on-campus presentations, off-campus training events and online webinars. In response to their consideration of this range of formal learning opportunities participants noted an advantage to the learning opportunities which would be most useful, in

conjunction with being recognised as compliant with their annual professional development requirements measured during employee appraisals.

The last aspect of learning opportunities recurring in the data collected, is explored from the conceptualisations of *abstract* and *specifically defined* learning. Academic staff, when considering library-facilitated learning that could be of benefit to them across their lifespan, seemed to betray a significant lack of interest in and regard for the perceived importance of specially defined training. This outcome was particularly exhibited by recourse to and use of library, informational and technological jargon. Furthermore, the provision of a glossary or definition did not have a noticeable benefit for this phenomenon. In order for libraries the better to support learning opportunities that they provide, participants in this study identified a preference for the generic, in other words, for abstract concepts, general terms and uses of language, which also indicated the potential outcomes.

Participants in the research identified a range of what they saw as impeding factors relating to the context that conditioned their perception of library-related services and their experiences of them. Findings drawn from considerations of the environment of higher education were linked to a conceptualisation of the discrete elements that constitute the contemporary academic library. This perspective was brought into play by respondents who expanded their perceptions of libraries on the significant uncertainty surrounding the demarcation of responsibilities in HEIs, particularly with regard to computer-based or facilitated information resources. The majority of participants, regardless of academic discipline, cited either very frequent or daily use of electronic library resources as a requirement of their academic work. The interpretations of the participants of the idea of demarcation included factors related to both the electronic environment and the institution. For instance, when they are utilizing an electronic library resource and finding that an element of their interaction with it is unsuccessful or presents an unanticipated result, academics did not know from whom or where to seek support to resolve the problem. Individuals in such a situation considered that distinctions within the university or departments, such as the library, IT department, faculty or school technologist and online learning specialists, constituted the 'who' to go to. The second level of elements associated with the possible causes or sources of the unsuccessful or unanticipated result were identified as potentially including the computer itself, the network connection, internet browser or facilitating software, the database vendor and the specific dataset. The circumstances of this phenomenon were portrayed and deployed in relation to the nature and composition of academic work. For the majority, academic work was described as not being linear or 'step-by-step'; thus the task of 'backtracking' for problem solving was both difficult and involved a range of discrete aspects. The intertwined relationship of the requirements of academic work, the processes and procedures established, and the institution's administrative systems were discussed in the context of these observations.

The roles and standards of specificity in requirements and procedures in HEIs, also described as fragmentation, impact negatively on most facets of academic work and service-providing departments and work units. The nature of technology and technological systems add further complexity to this context. The time and skill set required to respond to these encircling challenges was identified by the majority of participants as shaping and conditioning their perceptions of the provision of library services and their experiences, especially with respect to electronic library services.

The need for the development of a network of individuals able to assist in the completion of academic work was affirmed by all participants. This network should be broad in character, comprising colleagues, peers, friends and students with a desirable combination of skills and knowledge applicable over a range of situations. Particularly noteworthy in participants' eyes were the networks that were formed or situated within the university or on campus. Individuals forming these networks were drawn from one's academic discipline, the library, IT, and people experienced in dealing with specific task-related needs. Participants also discussed the importance of individuals in their networks who shared and contributed to the common repertoire information on ways of learning, emphasising the significance of increasing knowledge and achieving this in an agreeable manner. These 'sharing' individuals were also described as sharing learning beliefs or values, being 'like-minded' and also offering sources of support. Several participants speculated that these individuals may not have been the most informed or expert in a given area; however the ease of interaction with them, their availability and their perceived shared experiences made these individuals preferred sources of support in the first instance and for the majority of situations.

University-based informal networks of support were reported to have developed over time. These were maintained through formal work roles or responsibility developments. Participants also noted that, whilst staff were mindful of various divisions within HEIs, these 'sharing' individuals were regarded as the best 'human resource' in most situations. Desirable attributes of these individuals were highlighted, such as their knowledge, experience and understanding of the contextual challenges, demands, resources and modes of working. The work practices involved consistently and comprehensively centre on personal interaction, personal preference, and is generally informed by the personal experiences of individual academic staff. Moreover, this work practice is recognised as operating counter to the normative character of the infrastructure arrangements and procedures established in HEIs.

Academic libraries that endeavour to institute, develop and explore the application of a personalised approach to offering their services and resources have an opportunity to thoughtfully assess and meaningfully resolve their roles within the recurrent themes distinguished above. Provision of high-quality information resources, support services and learning opportunities that are attentive to the needs of individuals and academic disciplines, have the potential to strengthen partnerships between academic staff and librarians; this in turn may transform relationships between students and the library. A personalised library approach is able to fulfil an institution's requirements in the focusing of the efforts, services and the allocation of resources by librarians to respond to the most significant academic and institutional challenges of their members.

To adopt such an approach could contribute to reinforcing regard for notions about the role, place and value of libraries within the university. Boutique library services, when proficient, have the capacity to enable personalised learning opportunities to be offered to cater for academic staff needs; and, when of excellence, to contribute to the cultivation of a culture of lifelong learning for all individuals working and studying in universities.

Exploring a personalised approach to academic library services

From these recurring themes, the personalised roles that libraries and librarians might play in supporting academics as lifelong learners will be explored. The service model of Priestner and Tilley's (2010) 'personalised library approach' of *centrally managed activities*, *collaborative activities* and *boutique library services* have been examined within the context of the role and services facilitated generally by liaison librarians. The following tables and figures suggests ways in which this approach may be considered.



Figure 1. Identifying a personalised approach to academic library services.

Centrally managed liaison librarian activities may be classified generally as: internal communication, external communication and marketing, core library functions, and learning and teaching.

University Library, Liaison Librarians	
<i>Centrally Managed Activities:</i>	Attendance at subject-based liaison librarian committee meetings;
	Representing the role and requirements of liaison librarians on national standing committees, for example Research, Communications and Information Literacy;
	Providing feedback from academic staff in relation to degree and course acquisition requirements;
	Conveying requests for electronic resources, including specific software, datasets and subscription commencement, renewal and the acquisition of backfiles;
	Recommending content for mass communication via print, the website, blogs, Facebook and Twitter;
	Structuring services to support the University's

	Strategic Plans and the Teaching, Learning and Research Thematic Plans;
	Communicating the specific needs of discrete cohorts to centralised services;
	Servicing information and reference desks;
	Servicing Ask-a-Librarian (email enquiry) and Refchatter (instant message and sms enquiry) services;
	Participating and representing the library in Orientation week and Open Day events,
	Providing support for Endnote and RefWorks bibliographic software;
	Developing, delivering and evaluating information literacy and library skills workshops.

Collaborative liaison librarian activities may be organised by academic discipline or subject area, and these activities address generally the domains of internal communication, core library functions and learning and teaching.

Subject/Discipline, Liaison Librarians	
<i>Collaborative Activities:</i>	Supporting and collaborating with colleagues by sharing resources and knowledge, developing skills and assisting with high priority requests;
	Maintaining equity of service provision;
	Developing and maintaining subject libguides, resource guides by topic, on the library's website;
	Managing and developing the physical library collection, particularly the retention of historically significant resources and the consolidation of print periodical holdings;
	Provision of reading list materials;
	Developing, delivering and evaluating information literacy and library skills workshops.

Boutique library services provided by liaison librarians could be considered as having a prime responsibility to respond to the local needs of a specific School or department and context within which they learn, teach and research. This responsibility may entail the provision generally of core library functions, external communication and marketing, and learning and teaching.

School, Liaison Librarians	
<i>Boutique Library Services:</i>	Supporting reading list maintenance and development, with list checking, updating and suggesting new resources;
	Staff and student cohort orientation and induction;

	Course/unit information literacy classes and workshops;
	Collaborating with academic staff to prepare, embed and deliver information literacy within the course curriculum;
	Assisting University course accreditation, with the required documentation and reports;
	One-to-one consultations with postgraduate students and researchers;
	Presenting at Staff Development Days for the Faculties;
	Providing individual and group training or workshops for academic staff;
	Attending School and Faculty Committee meetings;
	Supporting school research forums and colloquia;
	Developing subject knowledge, an understanding of faculty research foci, staff preferences and keeping-up-to-date with regional and campus-based interests and concerns;
	Reshaping services to particular School, staff, student and campus requirements;
	Publicising library services in School newsletters, group email updates and one-to-one communication in electronic or print formats or in person, as is best received;
	Refining, delivering and evaluating information literacy and library skills workshops.



Figure 2. Identifying the context for a personalised approach to academic library services.

10 Conversations for starting a personalised library service

From this study, I have identified a range of recommendations for facilitating the partnership required to implement a personalised approach to academic library services. Today I would like to share a list of 10 items related to both the practice of the Academic Libraries that support your work and learning, and the practice of your Schools and Faculties. These recommendations outline a framework that acknowledges and values collegial cooperation, communication and collaboration for the shared benefits of lifelong and lifewide learning.

At a glance: Attributes of a personalised library	
<i>A library with a 'boutique service approach':</i>	1. Provides personalisation in their services
	2. Offers reshaped induction and orientation each semester/term and by-demand
	3. Supports your specific learning, teaching and researching needs
	4. Adapts their communication
	5. Inspires academic practice
	6. Is included by faculty
	7. Is informed of academic staff requirements
	8. Is invited to faculty events
	9. Collaborates with faculty
	10. Innovates with academic staff

1. Does your library provide *personalisation* in their services?
 - Is there an identifiable 'person' available at *your* point-of-need, either in person, by phone, email, Instant Message, SMS ?

2. Does your library offer *reshaped* induction and orientation each semester/term and by-demand?
 - Libraries have always been evolving collections reflecting their surrounding environment, is your library's reflection accurate?

3. Does your library support your *specific* learning, teaching and research needs?
 - Perhaps you work off-campus, co-ordinate large cohorts of online or distance students, or are undertaking research that has not previously been supported?

4. Does your library *customise* their communication?
 - Does your library make an effort to communicate what is important to you in a meaningful and understandable format?
 - This may be as simple as asking if we understand each other's acronyms?

5. Does your library *inspire* your practice?
 - I believe that librarians can share a unique perspective and skill-set to the new environment of higher education, in which we blend our traditional values and experience in knowledge management, knowledge transfer and knowledge preservation with emerging technologies.

6. Does your faculty *include* your library in internal communication?
 - Is the library aware of both the success and challenges of the Faculty as reported in internal newsletters or weekly updates?

7. Does your faculty *inform* your library of staff turnover?
 - Does your faculty communicate new appointments, promotions, honorary appointments, fellowships and retirements with the library?

8. Does your faculty *invite* your library to faculty events?
 - Is your library present at research seminars and presentations, book launches?

9. Does your faculty *collaborate* with your library?
 - Are you collaborating with librarians to better support early-career researchers and higher degree students, co-teach undergraduates and enhance the first-year-experience of students?

10. Does your faculty *innovate* with your library?
 - Within our shared campus environment we encounter similar challenges, yet from different perspectives and with different resources.

This conference paper's exploration of a Boutique Library Service, particularly examining a personalised approach to lifelong learning opportunities for academic staff, is in operation and development in Australia, America and England.

If you are able to identify with the outlined benefits of the personalised approach of a Boutique Library Service to your learning, teaching and research needs, I would encourage readers to start a conversation with your librarians on campus, using the framework offered above. Commitment to such an approach will likely result in improved opportunities for cross-unit communication, collaboration, knowledge management, knowledge transfer, knowledge creation and lifelong learning.

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Verbal or Written form of Expression? Does it matter?

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This study attempts to examine if there is a difference between verbal and written forms of expression among pupils when they explain scientific ideas, in particular, by virtue of introducing a second language as the medium of instruction. The research design employed a qualitative methodology involving the administration of interview sessions for data collection to 60 children from 2 Primary 6 classes. The pupils were asked to write their responses on one structured question based on two Pictures on Conservation of Water and the Environment. Using the same pictures, interviews were later conducted. Semi-structured questions were used to lead pupils to give the expected answer. The pupils' written responses and the transcription of their interview were analyzed and categorized according to the coding system: 'uncodeable' (Low order of explanation), 'perceptual' (moderate order of explanation) and 'abstract' (high order of explanation). The 'uncodeable' type of response is considered as the lowest order of explanation while the 'abstract' type of response is considered as the highest order of explanation. Analysis of data reveals that pupils could give a better response verbally than in written form when explaining scientific concepts.

Brunei System of Education

Prior to 2008, Negara Brunei Darussalam (henceforth called Brunei), adopted a bilingual system of education, known as “dwibahasa”. In this old system of education, two school languages, English and Malay, were used as the medium of instruction in the lower primary level. From the pre-school level to Primary 3, or until children are approximately 8 years old, teaching has been in Malay, the national language, with English language being taught only as a subject. From upper primary onwards, that is starting in Primary 4, the majority of school subjects including Mathematics and Science have been taught in English. With the implementation of SPN21, a new education system to replace the bilingual system of education, in January 2008, Primary 1 children are now taught Mathematics and Science in English.

Rationale of the study

At the upper primary level, pupils’ achievements are measured by the PSR examination taken by all Primary 6 pupils. The PSR examination measures pupils’ understanding on all core subjects, including science, through their written responses during the examination only. According to the primary teachers in an unpublished report entitled ‘Laporan Penilaian Dapatan 2 5A PSR’ on science achievement, the major weakness of the pupils in the PSR Examination lies in the comprehension and application types of questions (Badan Akademik Jawatankuasa GGB, PGB & GG Brunei IV, 2005). These are the types of questions that require the pupils to explain their understanding in written form.

In 2005, the Deputy Minister of Education urged headmasters and principals to find ways to determine why the results in Science and Mathematics had been decreasing (Ministry of Education, 2005). He also expressed concern regarding the achievement of students in Science in Brunei, which had been continuously low for the previous few years.

Purpose and significance of the study

The issue of pupils’ difficulties in answering the application type questions in the PSR Science examination became an area of concern for many Science teachers (Badan Akademik GGB, PGB & GG, 2005). This called for a study to identify possible factors that might affect the pupils’ inability to do well in Science. Thus, the purpose of this study is to investigate and identify the factors affecting pupils’ ability to express ideas and to explain scientific concepts in verbal and written form.

Theoretical framework

Two topics from the Science syllabus based on conservation of water and the environment were chosen to elicit pupils’ knowledge and understanding when expressing

their ideas to explain the science concepts. These two topics were extracted from the new Upper Curriculum Syllabus under Themes 3 and 4.

This study of the pupils' knowledge and understanding of the conservation of water and the environment is the first of its kind to be conducted in Brunei. However, this study is similar to some overseas studies investigating pupils' ability to explain scientific concepts (Ogborn, Kress, Martins & McGillicuddy 1997). Ogborn et al. (1997) study was based on pupils' ability to explain Science in the classroom. Ogborn et al. (1997) found that the major problem when describing and explaining in the Science classroom was language. This finding thus becomes the basis of this study.

The theoretical framework of this study is based on two educational theories. Firstly, the work of Vygotsky (2000), who asserts that both thought and language are important in helping to explain what we have in our mind. In this respect, pupils were asked to "translate" their thoughts by explaining the scientific concepts verbally and in written form using the language of the examination that is, English. Finally, the study looked at the problem from Piaget's theoretical perspective. According to Piaget pupils at the concrete operational level are characterized as children who have the ability to think logically, but only about concrete problems and objects (Seng, Parsons, Hinson & Sardo-Brown, 2003). In this aspect, the pupils' ability to explain scientific concepts (based on the pictures on the conservation of water and the environment) was investigated and examined closely. Figure 1 provides the illustration of the theoretical framework of this study adapted from two well-known educational psychologists.

Research Question

The study was designed to investigate the pupils' knowledge and understanding of the conservation of water and the environment. The research question formulated to guide this investigation was 'Is there a difference between verbal and written forms of expression among pupils when they explain scientific ideas?'

Language

English language is the most evident factor that contributes to a pupils' achievement in science. It has been a major concern for several decades. Studies by the sociologist Bernstein in 1973, cited by Rogers (1976) found that language is a determining factor of educational failure. Lewelling (2000) further claims that the academic achievement of limited-English-proficiency (LEP) students is a group of students at risk of academic failure.

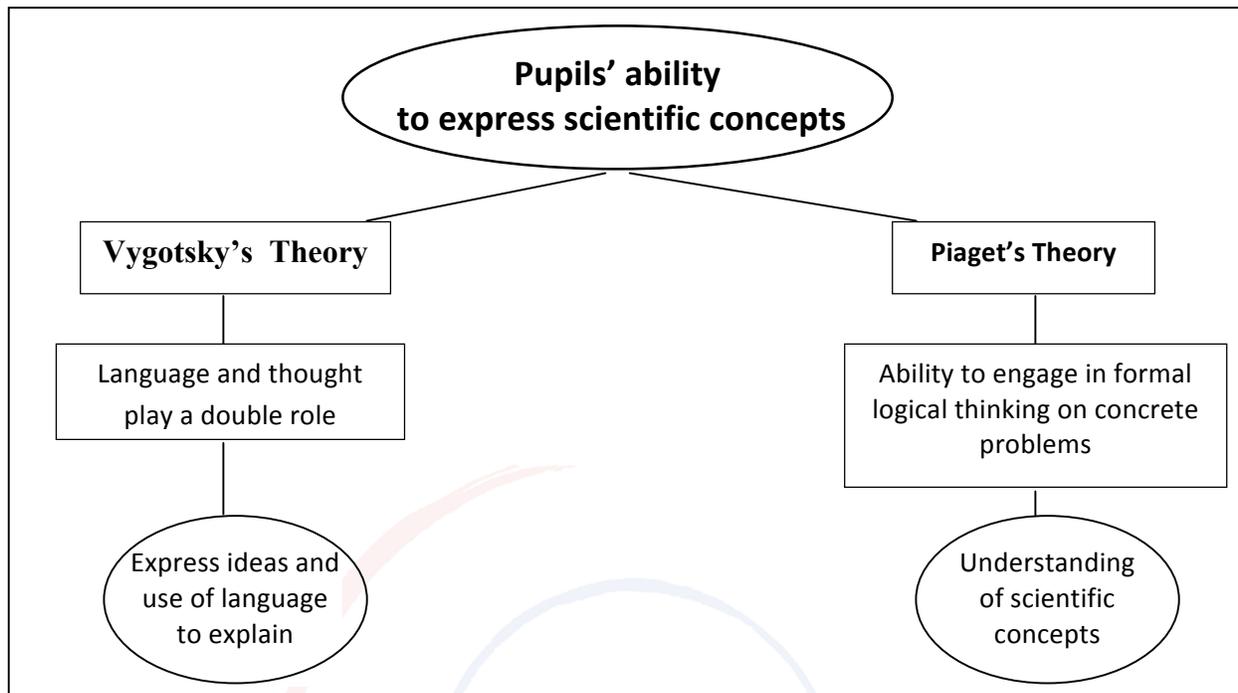


Figure 1. The theoretical background of the study

In the Brunei context, it seems that language problems are also an important factor affecting students' achievement in academic study. Romaizah (2005) found that language is the main factor contributing to students' underachievement in Science. In this study, Romaizah (2005) claims that limited vocabulary resources in English are likely to contribute to poor explanations in the science learning process. Yong (2003) explained that students encountered many problems learning Biology among them were the inability to understand notes and written texts in the Biology textbooks, difficulty in writing their own notes and in understanding fully the concepts presented to them.

English Language in Science Teaching

Rollnick (1998) claimed that English language is regarded as crucial for communication in science internationally and for explaining clearly the concepts of science. Isa and Maskill (1982) demonstrated that many languages produce inappropriate associations when invented words are used. In Brunei, it seems that many English words have different meanings in different contexts. Pupils are confronted with English Language problems in studying Science are often confused by words whose daily meanings do not correspond to meanings in a scientific context. For example, the words "open" and "close" in studying electricity: the complete circuit is the closed circuit and the incomplete circuit is the open circuit. But to the pupils, to open means to turn on the circuit so the bulb lights up and to close means to turn off the circuit. This leads to confusion and misconceptions.

The importance of explaining

Explaining in teaching Science

Ogborn et al. (1997) give an account of how important the art of explaining is in the teaching of Science. When an explanation is not well understood by pupils, Ogborn et al. (1997) claimed that confusion occurs. Regardless of the importance of the way in which scientific facts are explained to pupils, little attention has been given to the role of explaining and any association between poor explanation and under-achievement in Brunei classroom.

Verbal and Written Explanation

Warwick, Linfield and Stephenson (1999) found that the majority of primary school pupils in the UK can express or explain procedural understanding in science verbally rather than in writing. Haworth and Garill (2003) asserted that verbal assessment can give an accurate reflection of the student's ability and can therefore be used as a method of formative evaluation. In relation to this, it was observed that the majority of the pupils in school cannot express their ideas in writing (Liew, 1992).

Research methodology

A case study approach was used in this study. This case study was carried out on 30 Primary 6 pupils in a selected school in the Brunei-Muara district. Two topics from the Primary 6 Science syllabus, "Conservation of Water" and "Conserving the Environment" were used for the purpose of this study. The research methodology used in this study was based both on qualitative and quantitative analysis. The qualitative analysis was used to analyze interviews and the written response of the pupils. The number of occurrence of the different types of responses was analysed quantitatively.

Written response analysis

The pupils were shown two pictures, Picture 1 and 2. Picture 1 is a picture of a boy using a hose to wash a car. This picture is based on the topic 'Conservation of Water.' Picture 2 shows a heap of rubbish and the pupils were asked to explain about the conservation of the environment. Picture 1 was on asked to describe what they can write their responses on one structured question distributed to them. They were asked to write their responses based on the Pictures 1 and 2 (Appendix 1 & 2). The written task on the Conservation of Water (Picture 1) and the Environment (Picture 2) were given to the pupils after each lesson on both concepts was completed. Picture 1 is a picture of a boy using a hose to wash a car. This picture is based on the topic 'Conservation of Water.' Picture 2 shows a heap of rubbish and the pupils were asked to explain about the conservation of the environment. The pupils' written responses were then recorded and analyzed.

Interview

Interviews were conducted to collect further data for this study. The interviews were recorded in two ways: by using a tape recorder and note taking. During the note taking, all the relevant data provided by the interviewee were recorded. This was done to avoid confusion when analysing the data later on. The interviews were then transcribed and analyzed.

One similar question was used to elicit answers from two pictures, Picture 1 and 2. The pupils' responses from the interviews were transcribed and analyzed. The main question for both pictures to elicit ideas is: Look at the picture carefully. Tell me what you can see in this picture?

Interpretation and analysis of data

Written response analysis

The pupils' written responses were first categorised according to the coding system generated as shown in Table 1. The types of responses are classified into 'uncodeable' (Low order of explanation), 'perceptual' (moderate order of explanation) and 'abstract' (high order of explanation). The 'uncodeable' type of response is considered as the lowest order of explanation while the 'abstract' type of response is considered as the highest order of explanation.

The number of occurrence of these types of responses was then calculated. This would provide a pattern of types of responses the pupils gave when explaining science in written form.

Interview

Pupils' verbal responses were recorded and analysed. Similarly, the responses were categorised into the three types of responses mentioned earlier (Table 1). This would provide the pattern of types of responses the pupils gave when explaining science verbally. The results obtained from written and verbal responses were then compared and analysed. The result provided the answer for Research Question 1: Is there a difference between the verbal and written form of expression among pupils when explaining scientific ideas? The data obtained from these analyses (written and verbal responses) was scrutinized further to answer Research Question 2: What are the effects of language on a pupils' way of explaining scientific concepts on the conservation of water and the environment. In this Research Question 2, the order of explanation will be determined if there is a change in the type of response given by the pupils.

Table 1 *A coding system generated for verbal and written responses on the Conservation of water and the environment*

Types of response	Description of responses
Uncodeable (Low order of explanation)	Incorrect response or incomprehensible Malay verbal and written responses A 'don't know' response A response which does not make sense Insufficient or unusual does not fit into the needed category
Perceptual (Moderate order of explanation)	A response which gives ideas from the picture
Abstract (High order of explanation)	The ability to generate new ideas from the pictures which are scientifically correct

Results and discussions

Findings

a) Written Form

The data obtained from the pupils' written response on the Conservation of water is shown in Table 2. Table 24 shows that 50.0% of pupils gave uncodeable types of response, 40.0% gave perceptual types of response and 10.0% gave abstract types of response.

Table 2 *The percentage of pupils' written response on the Conservation of water*

Type of Response	Conservation of Water	
	No.	%
Uncodeable	15	50.0
Perceptual	12	40.0
Abstract	3	10.0
Total	30	100

The data on pupils' written response on the conservation of the environment as shown in Table 3 shows that 40.0% of pupils could give uncodeable types of response, 26.7% perceptual type of response and 33.3% abstract types of response.

From the data, it is shown that the majority of the pupils gave uncodeable types of response on both the conservation of water and the environment when giving written explanations.

Table 3 *The percentage of pupils' written response on Conservation of the environment*

Type of Response	Conservation of the Environment	
	No.	%
Uncodeable	12	40.0
Perceptual	8	26.7
Abstract	10	33.3
Total	30	100

b) Verbal Form

The data from the interview on the Conservation of water as shown in Table 4 reveals that 33.3% of pupils gave uncodeable type of response, 53.4.0% on perceptual and 13.3% on abstract types of response. While data on Conservation of the environment as shown in Table 4 shows 33.3% of pupils gave uncodeable responses, 40.0% perceptual and 26.7% gave abstract types of response. This means that the majority of pupils gave perceptual types of response on both conservation of water and the environment when explaining science concepts verbally. When the pupils' responses on conservation of water and the environment were combined and the means were calculated, it was shown that for pupils' written response, the highest order of explanation was the 'uncodeable' with 45.0% (Table 5). For pupils' verbal response, the highest order of explanation was the 'perceptual' with 46.7%.

Table 4 *The percentage of pupils' verbal responses on Conservation of water*

Type of Response	Conservation of Water	
	No.	%
Uncodeable	10	33.3
Perceptual	16	53.4
Abstract	4	13.3
Total	30	100

Table 5 *The percentage of pupils' verbal responses on Conservation of the environment*

Type of Response	Conservation of the Environment	
	No.	%
Uncodeable	10	33.3
Perceptual	12	40.0
Abstract	8	26.7
Total	30	100

From Table 6, it can be said that there is a difference between verbal and written forms of expression among pupils when they explain scientific ideas. It seems that the pupils could give a better response verbally than in written form when explaining scientific concepts.

Table 6 *The average mean of percentage of the pupils' verbal and written responses on the Conservation of water and the environment*

Type of Response	Uncodeable	Perceptual	Abstract	Total
Written Form	45.0%	33.3%	21.7%	100%
Verbal Form	33.3%	46.7%	20.0%	100%

Conclusions, Implications and Recommendations

The findings for the research question show that there is a difference between verbal and written forms of expression among pupils when they explain scientific ideas. This was traced from the pupils' response in the two science concepts where the majority of pupils gave a better response verbally than in the written form.

The results of this study were correlated with some findings found by earlier researchers. This study identified that pupils had limited English Language proficiency. This result corresponded with Lewelling (2000) who claimed that Limited English Proficiency (LEP) results in a group of students at risk of academic failure. Another result showed that pupils in this study lacked of English vocabulary. This result correlated with

Romaizah (2005) who found that limited vocabulary resources in English contribute to poor explanations in the Science learning process.

The Findings regarding pupils' inability to express ideas to explain scientific concepts because of limited English proficiency was correlated with Vygotsky's theory which stated that language and thought play a double role. Meaning that without enough language it is difficult to express or explain what is in the mind. This is true in the case of this study where the pupils used incomprehensible responses and Malay language to respond in the written form.

According to Piaget, pupils at concrete operational level are characterized as children who have the ability to think logically, but only for concrete problems and objects (Seng, Parsons & Sardo-Brown, 2003). Based on this study, it was found that the pupils were not able to relate to the picture of everyday life. It is important that pupils are able to do some abstract thinking to express their ideas. It is only by doing this, that teachers can be convinced that pupils have actually understood the concepts. This is where 'application of knowledge' can be practised and used by the pupils.

Recommendations

a) For science teachers

This study found that pupils' limited English Language Proficiency hindered their performance in science is not surprising. The awareness of the English Language problem in Science is not a new issue. It also affects other English Language medium subjects such as Mathematics, Geography and the English Language subject itself. Teachers should not be discouraged regarding this issue but to take this as a challenge and instead find other methods to help pupils to improve their learning.

Teachers may help pupils learn science by providing 'active pupils learning strategies' For example:

- 1) Teachers can provide 'talk science class activities' where pupils are given the opportunity to talk about a science topic, their completed project work, talk about the procedure of the practical activities, talk about their observations, talk about their findings and so on.
- 2) Provide opportunities for the pupils to write reports or write a procedure when doing an experiment.
- 3) Introduce forum or debate activities on selected science topics.
- 4) Provide group discussion activities
- 5) Provide presentation activities
- 6) Use inquiry learning approach

All these activities, indirectly teach the pupils to use the English Language in their science lesson.

b) For Curriculum development

As for improving of the pupils' performance in Science, it is recommended that the curriculum should provide an "oral examination section" in the science exam for the pupils. This is based on the findings of the study where pupils perform better verbally.

Significance of the Study

Language was found to be one of the main problems that hindered the pupils' ability to learn science. This is due to their limited vocabulary especially related to scientific terms. Pupils are easily confused between the use of normal English and scientific English terms. Therefore, science teachers must place emphasis on providing sufficient vocabulary and ensure the pupils are familiar with the meaning. In this way teachers can enrich their pupils' vocabulary and the pupils can improve their learning in science.

It was found that pupils could give better verbal explanation than written explanations. One of the reasons for this is the complexity of English spelling. The spelling of many English words does not reflect the way the word is pronounced. This confuses the pupils especially those of lower ability. Thus, science teachers should provide more spelling practice or spelling activities to help their pupils improve in their English spelling skills.

Pupils' inability to express their ideas in written form, in this aspect science teachers must provide more practice in written exercises especially in sentence construction. This may help the pupils to answer their Science 2 examination paper later on.

Finale

To improve and strengthen the teaching and learning of science, it is hoped that in the future science is introduced and taught as a single subject using English as a medium of instruction starting in lower primary classes. If this can be fulfilled and implemented, it is thought the pupils' achievement in science may improve in the future.

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Appendix 1

Picture 1

Look at the picture carefully. Tell me what can you see in this picture?



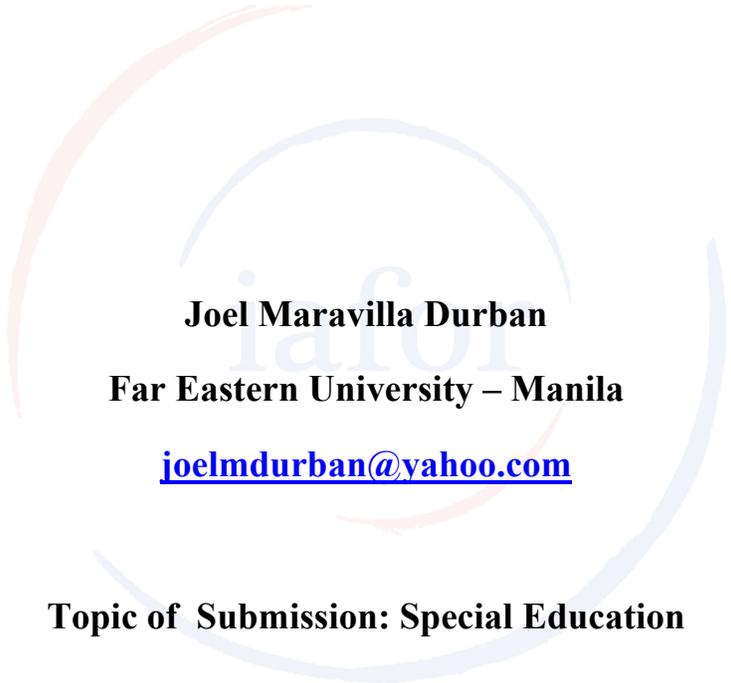
Appendix 2

Picture 2

Look at the picture carefully. Tell me what can you see in this picture?



Teaching Children in Rural Areas of the Philippines: A Proposed Model for Grass Root Approach to Special Education



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Topic of Submission: Special Education

Teaching Children in Rural Areas of the Philippines: A Grassroot Approach to Special Education

Abstract

This research is an attempt on the part of the researcher to address the immediate needs and concerns of children with special needs belonging to the poor and depressed families located in the rural and remote areas of the Philippines. The researcher developed a model that could teach children with special needs on their cognitive, adaptive, communication, physical, social and emotional domains using resources available in the home and community.

The model is based on the context that the child grows with his interaction with his family and the community where he belongs. His growth is affected by the economic and environmental conditions he is exposed.

The model identified the sectors that would be responsible for the implementation of the program such as government institutions, specifically the local government units, non- government organizations and the private institutions. There is a need of training the parents of the special child on the processes of teaching their children with the identified domains using the resources in the home and community. There is a group that will monitor the progress of the lesson and similarly, an evaluation measure to determine the learning of the child.

It is the intention of this research that parents shall collaborate with different institutions in educating their children. With parents working hand in hand with concerned private and public institutions, they will be able to provide the educational needs of their children with special needs so that they will not just be a burden to society but can become productive citizens.

I. Introduction and the Review of Related Literature

In the Philippines not every Filipino family can afford to send their children to school in spite of the fact that the state through the constitution is mandated to provide and maintain free public education in the elementary and high school levels (Duka, 2003, p.68). The Department of Education data show that for school year 2004 – 2005, only 4.8 percent of the total population of children with special needs (CSNs) are provided educational services, whereas the remaining 95.2 percent of the population are not served. At present, there are 2, 149 public and private schools offering Special Education Programs in the country. The government supports 230 SPED centers in the public elementary level sectors. Most of these SPED centers are located in the regional cities and urban areas (www.deped.gov.ph). Similarly, private SPED schools and centers congregate in urban areas where the paying clientele are located. This scenario validates the fact that CSNs in rural areas are not provided educational services despite the 100 years of existence of Special Education program in the Philippines. .

It is the objective of this research to come up with a special education model that would best address the needs and concerns of children belonging to families located in rural areas. Hence, it is the aim of this research is to address the immediate needs and concerns of CSNs belonging to the poor families located in the rural areas of the Philippines. Specifically, the study focused on developing a model that would teach CSNs on the following domains: Cognitive; Adaptive; Communication; Physical and the Social or Emotional using resources available in the home and community. Likewise, it is the ultimate goal of this study to provide a framework that shall provide education to CSNs in rural areas of the Philippines to function independently or with the least minimal supervision.

II. Theoretical and Conceptual Framework

Developing the skills and improving the well – being of CSNs, is not only a function of the government. One institution which plays a major role in developing the CSNs is the community. Bronfenbrenner (1979, 1989) as cited in Bowe (2000, p. 8 - 9) posited that the child develops within the context of the family while the family in turn, evolves within context of the community. Bronfenbrenner's Ecological Systems Theory affirms the interweaving relationship that exist between the child and his family and the relationship between the family and the community.

The development of CSNs is also being emphasized in the Community - Based Instruction (CBI) program. CBI, which is used to teach functional skills, self – determination, and adaptive behaviours, occurs in the environments in which the need for these skills arises naturally or wherein CSNs learn from natural setting (Smith, 2007, p. 300).

Further, the family is considered as the most potent institution in terms of effect in the development of CSNs. Bronfenbrenner, (1998) (cited in Bowe, 2000, p. 8) considers that the most important setting for a young child is his family, because that is where he spends the most time and because it has the most emotional influence on him.

With the family playing a very important role in the learning experience of a CSN, the parents can substitute the role of SPED teachers in teaching their CSNs. Parents can model to their children a concept developed by Bandura in his Social Learning Theory. Bandura, as discussed by Hergenhann and Olson (2005 p. 340 - 364) states that human learning is not shaped by its consequences but is more

efficiently learned directly from a model. And what better model can teach a child with disabilities than his parents or siblings. Parents will be directly involved in the teaching of their children. Using Peztaozzi's concept of "object lesson" as part of the curriculum of the child, (Dunn, 2005, p. 162 -163) objects such as rocks, plants, pieces of fruits can be used to teach basic lessons in form, shape, color, and size.

Finally, parents can use the Life – Centered Career Education (LCCE) Curriculum approach as advocated by Brolin and Loyd (2004) which focuses on the skills that the child must know to become a more effective person. In the LCCE, children are taught the basic foundation for student's education.

Theoretical Framework (Figure 1)

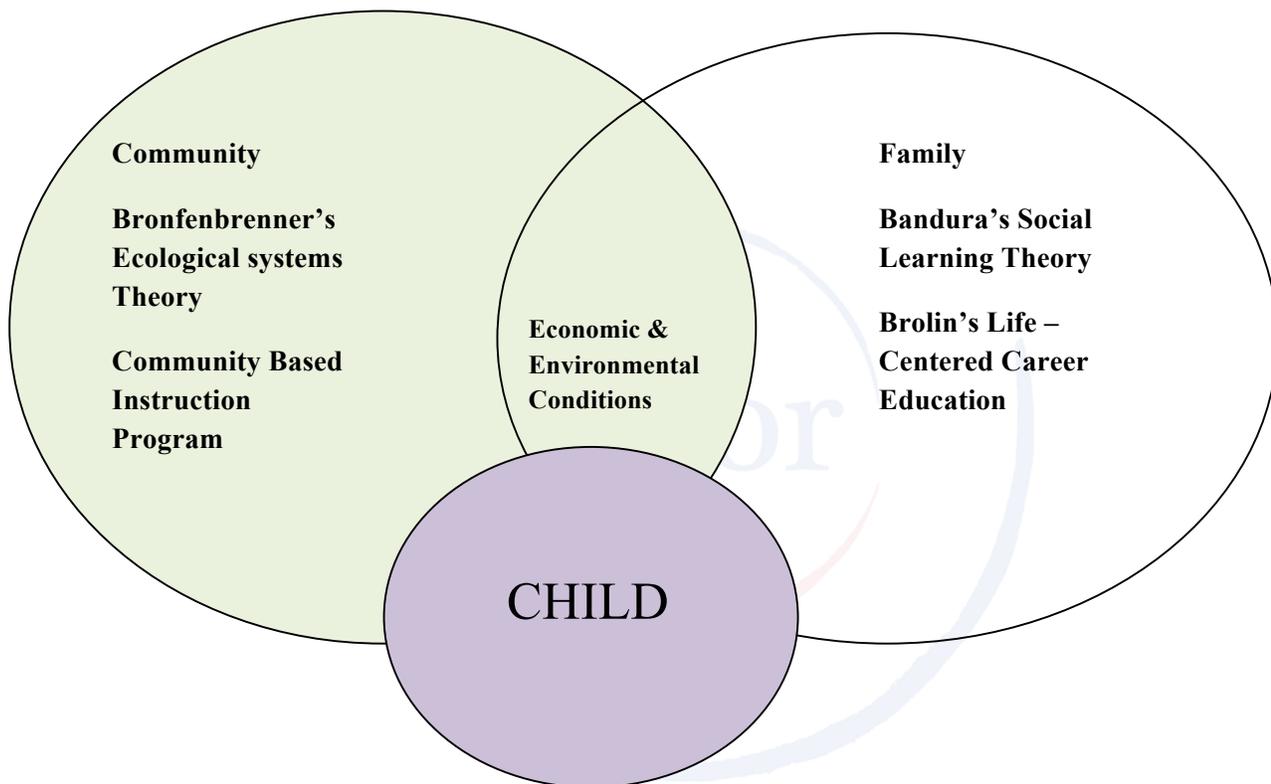


Figure 1 depicts the schematic bases of the study. As shown the family interacts with the community and the community will always influence the family. The child, being a member of a family will interact

with these two institutions. As the child is being affected by these institutions, he can also affect to a certain degree both institutions. The procedural steps of the study are illustrated below.

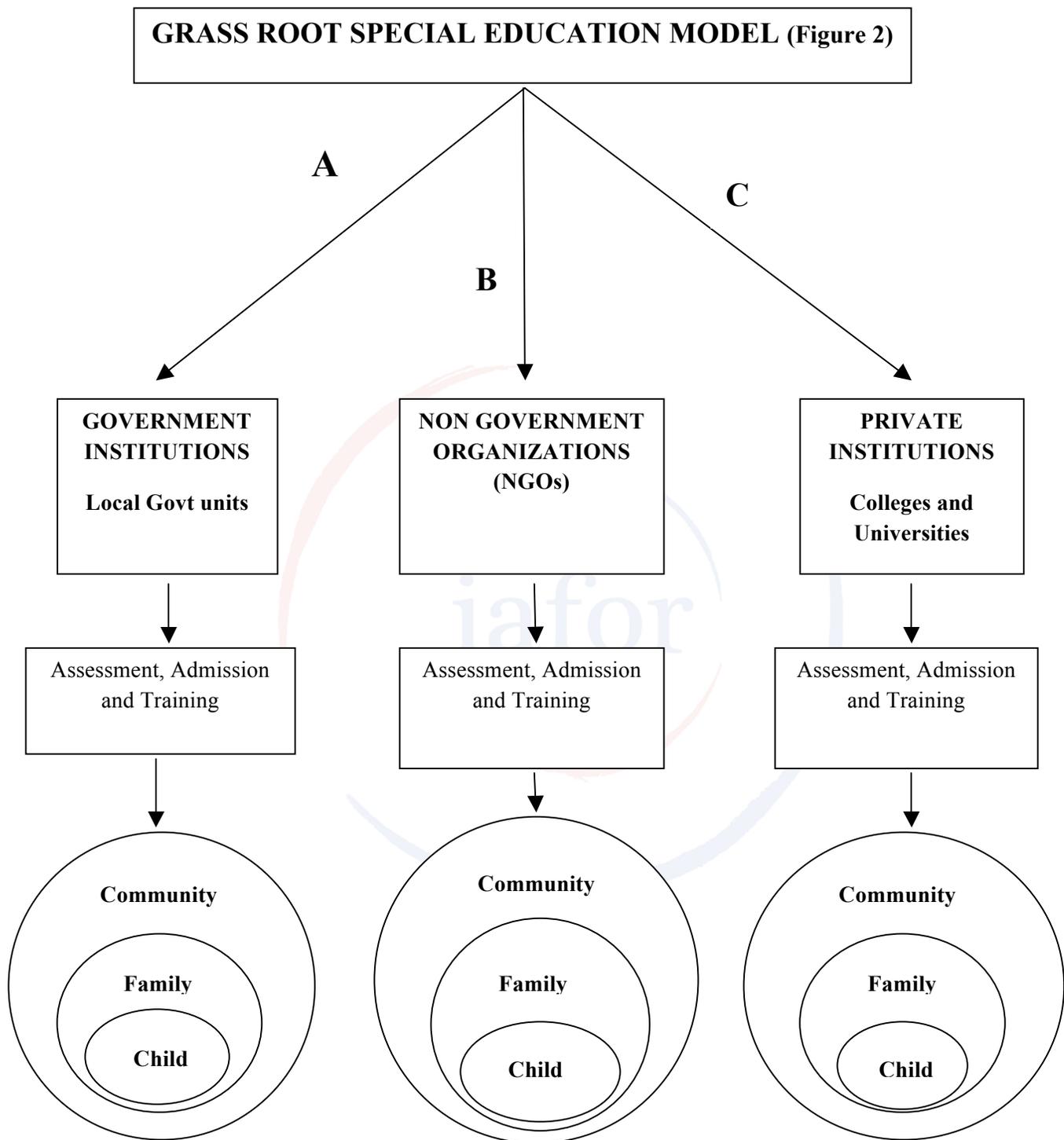


Figure 2 shows how the model can be implemented in different streams. In the first stream (A), the program will be implemented with the help of the government agencies like the Department of Social Welfare and Development (DSWD) and the Department of Education (DepEd). These two government

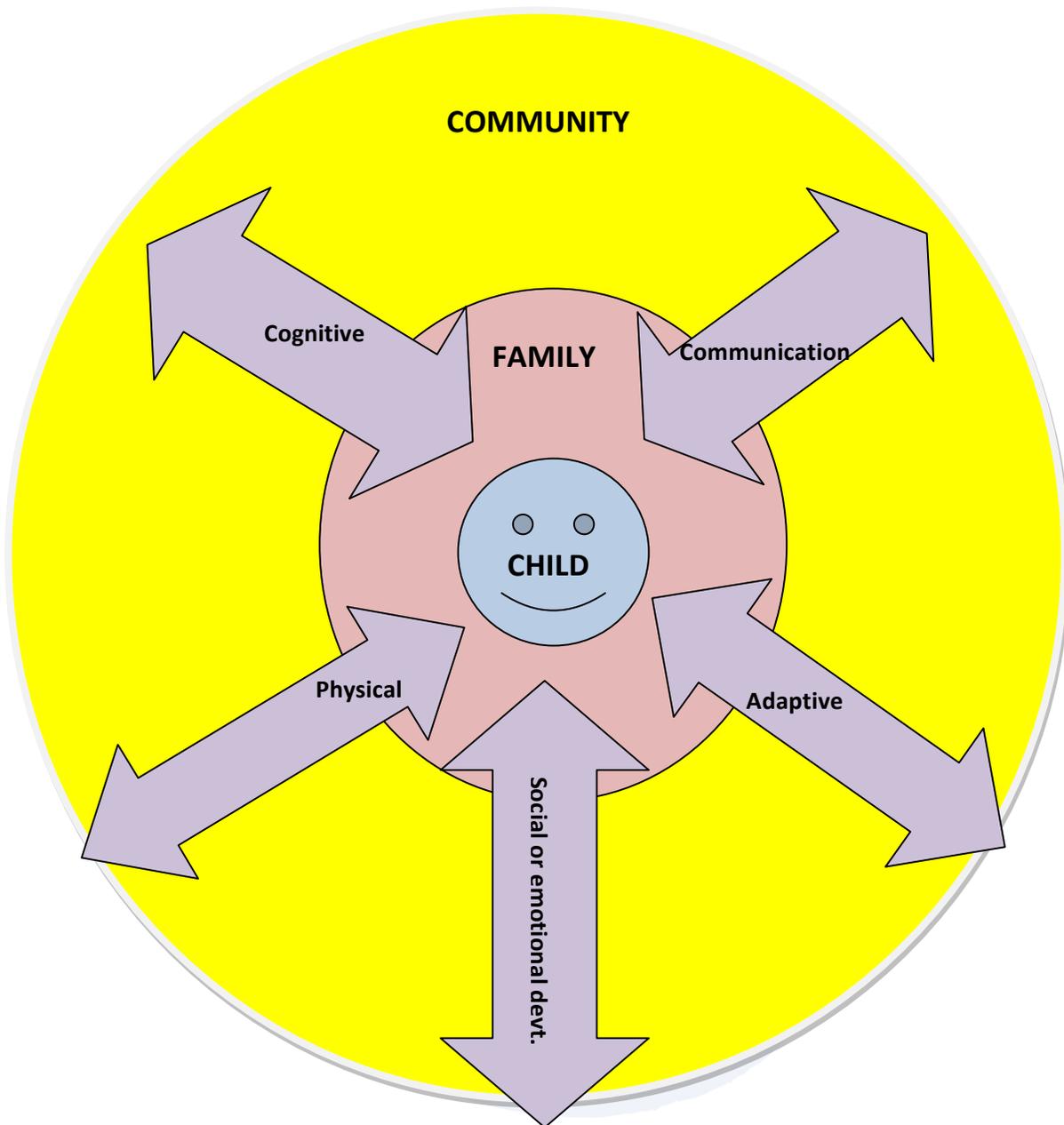
agencies will work with local government units (LGUs) in implementing the program. The DSWD through its local unit will coordinate with the social workers who will be responsible for the census of families in every barangay in order to know the exact number of CSNs. It then would coordinate with families and help them in the assessment of these children so they can be classified according to their disability. Further, the social workers will coordinate with DepED for training of parents. DepEd will be responsible for providing special educators who will be training the parents on the implementation of the program. Then the parents will be responsible in teaching their children the necessary skills for them to develop their deficiencies in certain areas. The parents through the social workers will be monitored as to the improvement of their children.

For stream **B**, the program will be implemented with the coordination of the different non governmental agencies (NGOs) who are presently involved in the different barangays. The employees of the NGOs will be responsible in coordinating with barangay captains in doing a census of families with CSNs. The NGOs will be working with parents on pooling family resources so that each family with a CSN will be able to benefit from collective resources of the community. Like stream A, the children will be assessed in order to determine their developmental delays or deficiencies necessary as a prerequisite for coming up with their educational intervention programs. The NGO personnel will be responsible for the training of parents about the program. Progress monitoring will be done through the coordination of parents and NGO personnel.

Private educational institutions which offer special education degree programs can be tapped in stream **C**. Under this scenario, educational institutions in coordination with the LGUs will be responsible in conducting a census of families with CSNs. Once families are identified, assessment of their CSNs will be conducted to determine the level of deficiencies. The sped teachers will train parents to teach their CSNs on improving their skills. Program monitoring can be done through the coordination of parents and sped students from these universities who will do ocular visits to these families from time to time. The students will report to their teachers the improvements made by CSNs.

Regardless of who will be the service providers of the program, the coordination of the LGUs, the communities, and private institutions are important. Hence, the local community leaders will be tapped in providing venues for the training of parents and other caregivers. Based on the procedural framework, figure 3 illustrates how the program will function once it will be implemented. As reflected, the child's development will be measured in five developmental domains namely: Cognitive; Physical; Communication; Adaptive; and Social and Emotional domains.

Figure 3



The basis for choosing these five developmental domains is adapted from Individuals with Disabilities Act (IDEA). Based on Bove (2000, p 12 - 28), the descriptions of the developmental domains are the following:

1. *Cognitive development* – development of age – appropriate mental functions, especially those of perceiving, understanding, and knowing.
2. *Social or emotional development* – development of age – and situation – appropriate abilities to understand one’s own feelings and those of others and to respond to both with behaviour that is socially acceptable.
3. *Physical development* – development of age – appropriate abilities by controlling and coordinating gross motor and fine motor movements.

4. *Adaptive development* – development of age – appropriate self – care and other behaviours so as to adapt successfully to different circumstances.
5. Communication development – development of abilities to express thoughts and feelings and to understand others’ vocal, nonverbal, signed, gestural, and written expressions.

Although the five domains are important, it should be noted that CSNs have unique needs or express delays in more than one developmental domain. Hence, it is the objective of this model to educate parents on what developmental domains should be addressed with utmost concern.

III. The Model

The proposed model is based on the following:

a. Needs Assessment

Statistics from government agencies show that for the year 2005, only 4.8 percent of children with special needs were given educational services. Though the reasons for not providing education may vary, it is a fact that there were CSNs who were not able to attend school. Based on these statistics and observation, CSNs in the rural areas need to be educated according to the resources available in the community and with their parents as the teacher. Since most rural parents had not received any formal education, there is a great need for them to be trained so that they shall be equipped in teaching their CSNs the basic skills necessary for them to learn. Moreover, the model addresses the needs of parents who find it difficult to educate their CSNs due to lack of financial resources and the distance of their home from the nearest barangay elementary school. The model recommends the utilization of resources found in the homes and the community as instructional tools, thereby, reducing the financial implications of their children’s education.

b. Guidelines

Since the focus of the model is the development of the five enumerated developmental domains as adapted from IDEA, the following are some of the proposed lessons that would be included in the program:

Cognitive skills would involve activities in functional reading, functional writing and functional math. Sample functional reading strategies that can be taught to a child can be, teaching the child to read labels and/or instructions of products used at home; teaching the child to read signs and symbols found in the child’s community

For functional writing, a child will be taught the basics of the alphabet so that he or she can write his or her name; the name of parents or siblings and the address. The materials to be used need not necessarily be of commercially available writing paper or pen but any available materials found in the community can be utilized.

The teaching of functional mathematics would involve the child learning to count using his fingers or other locally available materials like stones, poultry, eggs, vegetables, etc. The child can learn the basic arithmetic by doing household chores, for example: Teaching the CSN to identify and count money correctly; teaching to count the numbers of poultry or domesticated animals the family owns; asking the CSN to prepare ingredients used in the preparing food as a way to teach fractions; and shapes is taught

through identifying native materials and asking the CSN to cut different shapes from rice cakes the family prepares.

Adaptive behavior includes social responsibility, self-help skills, community self-sufficiency, and social adjustment. *Social responsibility* includes a child's ability to interact with other children and adults. Activities under the social responsibility would include: teaching the CSN to respect elders (perform greeting of elders and other people); playing with other children in the neighbourhood and teaching the CSN to say polite expressions like "thank you", "I am sorry", "Good morning", etc.

Self-help skills include eating, dressing, toileting, grooming, and hygiene to a degree that is developmentally appropriate. Examples are brushing teeth regularly/washing face/washing hands; bathing regularly/ Toilet training; cooking rice and viands and cleaning the house

Community self-sufficiency in early childhood means that children can function appropriately for their age and culture with adult supervision in community environments (e.g., church, stores, parks). Activities under this category would include: going to the Sari - Sari store or market to purchase items; cross the streets alone (for those with moderate disability); going to police station and make a report in case of emergency.

Social adjustment refers to children's ability to adapt to new situations and to develop and respond to behavioral patterns. Children's ability to cope with new, stressful, or frustrating situations would indicate their social adjustment. Examples are playing with other kids in the community; attending birthdays and parties; engaging in sports activities in the community.

The Physical development would involve the gross motor and fine motor skills. The activities would include allowing the CSN to participate in traditional Filipino games normally played in their community so that he will be able to develop gross motor skills like walking, running, jumping, balancing. For fine motor activities, the child will be taught to pick up small objects at home aside from participating in traditional Filipino games that involve fine motor activities. Letting him play with other kids traditional Filipino games recommended for the Gross Motor Development are: Piko or hopscotch; Luksong tinik (jump over the thorns) ; Lawin at sisiw (Hawk and hen), etc. And for fine motors development Jack 'en Poy (scissors); Holen or jolen; sungka , etc.

Communication development relates to hearing, vision, speech, and language in particular (Bowe, 2000, p. 326 - 327). Examples of these activities is to encourage the child to engage in simple conversations; listening to a radio together with parents or siblings; talking to a child to encourage him to speak and communicate; teaching traditional nursery rhymes to facilitate the development of speech.

Some of the activities used in teaching the physical development of the child will also be used in teaching the social and emotional domains. However, the parents will teach socialization to the child by exposing the child to the people in the community. Aside from developing social and emotional domains through participation in games and plays, the child will also be encouraged to learn to give and accept praises and criticism; learn to request favors from others; learn to cooperate with members of the family, peers and with elders

c. Implementation

The implementation of the model can be done by tapping the resources and cooperation of several governmental and non governmental agencies and institutions. The logistical implementation of the program was already discussed in the conceptual framework.

IV. Monitoring and Evaluation

The evaluation criteria shall be used in rating the level of learning of students. For each domain, the child shall be rated according to the following rubrics:

SCALE	1	2	3
RECALL	The child did not recall objects, persons, events in the activities presented all the time..	The child recall objects, persons, events in the activities presented 40% of the time.	The child recall objects, persons, events in the activities presented 60% of the time.
RECOGNITION	The child did not recognize objects, persons, events in the activities presented all the time.	The child recognized objects, persons, events in the activities presented 40% of the time.	The child recognized objects, persons, events in the activities presented 60% of the time..
CLASSIFICATION	The child cannot classify objects, events, persons based on the previous activities.	The child can classify objects, events, persons based on the previous activities 40% of the time.	The child can classify objects, events, persons based on the previous activities 60% of the time.
EXPRESSION	The child cannot express his emotions towards objects, events, persons based on previous activities.	The child can express his emotions towards objects, events, persons based on previous activities 40% of the time.	The child can express his emotions towards objects, events, persons based on previous activities 60% of the time.
REPRODUCTION	The child cannot perform the activities, cannot name the persons or identify events based on the activities presented.	The child can perform the activities, can name the persons or identify events based on the activities presented 40% of the time.	The child can perform the activities, can name the persons or identify events based on the activities presented 60% of the time

The above rubrics are based on Bloom's level of cognitive domain. The focus was only on the simple recall or recognition of facts as it would be difficult to teach CSNs to use higher order thinking skills.

The rubrics are meant to be used in all activities; however, specific rubrics can be designed depending on the complexity of the activities given to the child. Prior to evaluating the child, a time frame is given in teaching a particular activity. It is advised to use two weeks as the time frame of any activity before assessment is made. If no learning is observed after a two – week period, the activity is thereby repeated.

The criteria of 40 percent and 60 percent are based on the two correct responses and three correct responses out of five trials given. The criterion on Reproduction is to be used in evaluating activities under the physical and adaptive domains whereas the criterion on Expression is to be used in evaluating activities under the Social and Emotional domains.

Scoring for the rubric will be *1.0 – 1.66 – not evident; 1.66 – 2.32 – evident; 2.33 – 3.0 – highly evident*. Based on given criteria it is easy to determine whether the child has significantly improved after teaching the skills for a specified period of time.

V. Validation and Pilot Testing of the Proposed Model

The model was subjected for content validation by experts in the field. The experts comprised of people in the academe, especially special educators, and members of NGO's working closely with special or disadvantaged children. Their suggestions were incorporated in the final text of the model.

To test the reliability of the model, pilot testing was conducted in a family situated in Barangay Roma, San Joaquin, in the rural municipality in Iloilo province. The family consisted of parents and 8 siblings with a special child. Although the child has never been assessed, one could readily distinguish that the child has Mental Retardation. Further, the child has speech and communication problems. He also looks so small for his age of 11 years old. The parents were basically farm workers and the highest education was only elementary level. Two of the siblings are already married. The others are attending school, two in the secondary and two in the elementary. The family still has one year old baby. The special child, an 11 - year - old, male, and the fourth to the youngest does not attend school. It was after a thorough explanation of the researcher, a special educator and a barangay health worker and an NGO volunteer that the parents and the siblings consented to participate in the program.

San Joaquin is a third class municipality of the province of Iloilo. It is situated approximately 55 kilometers south of Iloilo City with a population of 50,102 as of 2008 census. It is composed of 85 barangays. Roma is situated 7 kilometers from the poblacion of San Joaquin. It is basically an agricultural barangay. There are 508 residents belonging to 72 households. The family resides in Barangay Roma, approximately 9 kilometers from the town proper. Children in the barangay attend elementary schooling in San Joaquin Central School which is located in the poblacion of San Joaquin. Although at present the central school has opened its special education class and there are teachers trained in handling CSNs, the subject of the study is not attending the program simply because he has to walk 18 kilometers just to go to school.. Although, at times he would borrow the school materials of his siblings and pretend that he will go to school.

The parents were visited and oriented by the researcher, the barangay social worker and the NGO volunteer on how to implement the program. The visitation was facilitated by a special educator, who is a university professor teaching special education. The group identified the resources in the community that they can utilize in the implementation of the program. They also identified the skill that the mother shall teach her child based on her capabilities and the available resources. The parents really desire their child to learn basic self – help activities, specifically, bathing and toilet training.

The special educator subjected the parents and other siblings, the barangay health officer and the NGO volunteer on a weeklong training on self – help activities that they can teach the child.

Orientation of the child. The child was introduced to the barangay health officer, NGO volunteer, researcher, SPED teacher to establish a certain degree of trust. The personnel involved visited the family five times and stayed on the average of 4 hours per visit before the child started to establish some degree of trust to the team.

Actual Teaching. After the trust was established, the mother, with the help of special educator started teaching the child some self – help skills. The skills were taught upon the request of both parents of the child. The first skill taught to the child was to clean himself after defecating and to wash his hands thereafter, and also to bathe himself. Since these activities are done only once a day, another lesson was given. The other lesson given to the child was to develop his functional mathematics by learning to count from 1 to 10 by teaching the child to count the numbers of domesticated animals the family had.

Prior to teaching the child to clean himself after defecating, he was taught how to wash his hands. The hand washing activity was repeated for 4 times per visit. The child was able to master washing his hands after three weeks of teaching. While the child was taught washing the hands, he was also being prepared to master cleaning himself after defecating. Prior to teaching him the procedures of cleaning himself after defecating, he was first introduced to a doll and engaged in a pretend play. After teaching the child both activities, the child was taught to bathe himself. By then the child is already familiar with things to use in bathing so only the procedures of bathing was taught to the child.

In teaching the child how to count, the mother used the domesticated chicken the family owned. The mother pointed to the first hen then said one, then to the second and said two, etc. He was also taught how to count every morning when the mother harvested the eggs of the chicken. These activities are still being done at present.

Review of Learning. After three week of teaching the child, the parents and the SPED teacher together with the researcher reviewed the progress of the child. Of the activities given, it is the counting of animals that the child has made the most progress since after a week the child was able to count 1 to 8 the number of animals the family had. For self – help skills, the child can now clean himself after defecating. However, in washing his hands he tends to consume more water so the mother would often follow it up by cleaning him again. As regards bathing, he can now bathe himself but he only put soap to his body and not his arms or legs. Also, he tends to play during bathing.

Reteaching the activity. After two weeks of teaching the child, the team decided that although the child showed certain amount of progress, such progress is not enough to warrant that he be left on his own to perform the task. Instead the SPED teacher, the researcher, and the parents decided to extend the lessons for another two weeks in order to determine if the child will indeed record a significant amount of progress.

Evaluation of the program. After a month of giving the child the lessons, an evaluation of the progress made was done. With regard to the self – help skills like cleaning himself after defecating and washing his hands thereafter and bathing himself, it was observed and recorded that the child has performed the activities with 40 to 50 percent accuracy. This means that during these times the mother did not repeat the cleaning or washing of the child because as observed, he was able to clean himself well. The child was also observed to be able to count without prompting from 1 to 8 and with prompting from 9 to 14.

VI. Results

After a month of teaching, the Barangay Health Officer, NGO volunteer and DSWD personnel

and the sped teacher assessed the level of learning of the child with special needs using evaluation criteria designed by the researcher.

After two weeks of teaching the child, there was a remarkable improvement shown. However, it was decided by the evaluation committee that there will be extension of the lessons for another month to improve on his classification and expression skills. Once he can thoroughly master the basic skills of recall, recognition, classification and expression, a significant amount of time shall be devoted to developing his reproduction skills.

The result showed that the CSN had significantly recalled and recognized the toilet training activities taught as seen in the following rubric:

Table 1: Toilet Training

<i>SCALE</i>	<i>1</i>	<i>2</i>	<i>3</i>
<i>RECALL</i>			3
<i>RECOGNITION</i>			3
<i>CLASSIFICATION</i>		2	
<i>REPRODUCTION</i>		2	

The above rubric shows that the child not only recall and recognize the materials used in cleaning himself during defecation but also able to perform independently without the help of the mother

Table 2: Taking a Bath

<i>SCALE</i>	<i>1</i>	<i>2</i>	<i>3</i>
<i>RECALL</i>			3
<i>RECOGNITION</i>			3
<i>CLASSIFICATION</i>		2	
<i>REPRODUCTION</i>		2	

The above rubric shows that the child not only recall and recognize the materials used in cleaning himself during defecation but also able to perform independently without the help of the mother

Table 3: Teaching to Count

<i>SCALE</i>	<i>1</i>	<i>2</i>	<i>3</i>
<i>RECALL</i>			3

<i>RECOGNITION</i>		2	
<i>CLASSIFICATION</i>		2	
<i>EXPRESSION</i>			3

In conclusion, education of CSNs is a challenging task. But with the positive result showed by the pilot testing of the proposed model, the families, the government personnel and NGOs involved in the implementation of the program, are motivated and inspired to implement the program in a larger setting.

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Exploring Mathematical Patterns in Pre-School Children's Artistic and Creative Drawing

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Exploring Mathematical Patterns in Pre-School Children's Artistic and Creative Drawing

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We have seen that children learn the real basics of thinking about mathematics through personal experience and playful activities. With appropriate learning experiences from birth through the early elementary years, children will develop a lifelong interest in using mathematics.

McCracken, 1987

Introduction

Drawing is a child's play. It is an art school activity. It is the draftsman's skill and the mathematician's window on complex thought (Sheridan, 1997). When very young children scribble, it helps them practice and organize the shapes or patterns of thought. Children's scribbles function neutrally in three ways: they represent thought, they make thought, and they refine thought.

Scribbles function as central motor pattern generators for antiphonal body exchanges including bipedal locomotion, or walking, running, and swimming (Wilson, 1999). Secondly, the circles and spirals and waves children draw are at least abstract mathematical representations of brain activity (Kosslyn, 1999; Wilson, 1993; Waters, 2004). Whether children's scribbles are abstract or concrete representations of the shapes of thought, scribbles provide practice with such shapes, and may streamline neural operations in some directly kinesthetic manner.

Many researchers like Fein (1993) and Freeman (2000) studied children's drawings in terms of their meaning and functions and most importantly the patterns exhibited in the scribbles and drawings. While most discussed the neurological significance of children's drawings, this small scale study only investigated the varieties of mathematical patterns exhibited through pre-school children's artistic creative thinking and expressive drawing through an activity that involved appreciation of free drawing and coloring. This study further examined if the displayed patterns were systematic and what children could build on based on the patterns that they chose to draw. Such approach should be in harmony with the children's natural ways of learning. Children's interests and play should be the source of their first mathematical experiences. These experiences become mathematical as they are represented in their own natural expressions which among other mechanisms, are also in their drawings. Young children represent their ideas by talking, but also through models and graphics. From the motoric and sing-song beginnings of "pat-a-cake" stem the geometric patterns of a "fence" built from unit blocks and the gradual generalization and abstraction of patterns throughout the child's day (Clements, 1999).

Patterning is critical to the abstraction of mathematical ideas and relationships, and the development of mathematical reasoning in young children (English, 2004; Mulligan, Prescott & Mitchelmore, 2004, 2006; Waters, 2004) the integration of patterning in early mathematics learning can promote the development of mathematical modeling, representation and abstraction of mathematical ideas. It seems advantageous then, that initiatives in mathematics curricula and assessment in Brunei and at regional and international levels are promoting the development of early mathematical patterning and reasoning (Clements, 1999).

A local study conducted by Hanapi (2006) indicates that the pre-school teachers in Brunei primarily conceptualize creativity as something mainly which includes children's art work. The teachers believe that providing children enough time to engage with art works, giving children freedom, provide enough materials for children, flexibility in teaching, interactions and open-ended questions, group work and discussion and learning through play are the best ways to promote children's creativity.

Research Methodology

Sample:

162 pre school children (78 males and 84 females) from one private school in Brunei took part in this study in May 2010. The children's age ranges from 3 to 5 years. There are three levels of pre-school in this particular school before they enter their official Year 1 primary school level. The pre-schools levels are Pre-school 1, Pre-school 2 and Pre-school 3 and there were 2 groups for each level. For this study 42 children are from Pre-school 1, 57 from Pre-school 2 and 63 children from Pre-school 3. All classes from this particular school took part in the study i.e. a total of 6 pre-school classes.

Research Questions:

The following research questions were used to guide the study:

- i) Do mathematical patterns exist in pre-school children's drawings?
- ii) If there are, are the patterns shown in a systematic way?
- iii) Is there a difference in patterns produced by boys and girls?
- iv) Are the pre-school teachers aware of the existence and importance of patterns produced by their children?

Research Instrument

The following instruments were used to collect the quantitative and qualitative data:

- i) Children's free drawings (each child was given drawing utensils like A4 drawing blocks, pencils, colored pencils and crayons)
- ii) Teachers' interviews
- iii) Children's interviews

Data Collection

Each group and each child was given 3 opportunities to make their drawings at an interval of one week. Since 162 children comprised the 3 levels of the pre-schools, the expected number of drawings after the 3 activities should be 486. However, due to the different children's absentees

on the 3 activity days, at the end of the data collection period, only 468 drawings were obtained and only those drawings were analyzed for discussions.

For each drawing activity, each group and child was given 30 minutes to make their free and expressive drawings. No further instruction was given except that they were asked to draw anything they liked or they had in mind on the blank drawing blocks, using the colored pencils and crayons provided by the researcher.

All the activities were done in the children's respective classrooms and supervised by the researcher. While drawing the children were free to move around their classes or to look at the surroundings outside their classes. Mathematics exploration in the primary years should be related to the child's immediate environment and should always be based on a sound foundation of concrete experiences (Copley, 2000). The respective group's actual class teacher was also around just to make sure that the children felt more secure with the other teacher (the researcher) was around too. This consideration is especially important for the Pre-school 1 children who were the youngest compared to Pre-schools 2 and 3 levels.

Throughout the data collection period, the researcher was being vigilant and observing the children throughout the drawing activities. Although it was not their first drawing activities, it was observed that for this study first activity, some Pre-school 1 children looked "lost" and some asked the researcher and their friends what to do and some took some time to compose themselves before they started scribbling something on their drawing blocks. This factor could be due to the presence of the "other" teacher i.e. the researcher. The scenario was much different with the pre-schools 2 and 3 levels. They were more confident and relaxed as compared to Pre-school 1 children. Not only they were very expressive in their drawings, they also made stories and shared the stories verbally as they drew along either to their friends around or even to the researcher, though most preferred to keep quiet while drawing. To those children who were communicating among themselves or with the researcher, the opportunity was used by the researcher to probe more into their thinking in relation to what they were drawing.

Most children completed their drawings within the allocated time which was more or less 30 minutes. It was observed throughout the three drawing activities; the children could describe and share some mathematics-related concepts. Examples are they described the names of shapes, frequency of objects and patterns drawn and they even talked about the size of patterns drawn like from the smallest to the biggest. This concept development is crucial in early mathematics because as English (2004), Mulligan, Prescott & Mitchelmore (2004) and Waters (2004) mentioned that patterning is critical to the abstraction of mathematical ideas and relationships, and the development of mathematical reasoning in young children. The integration of patterning in early mathematics learning can promote the development of mathematical modeling, representation and abstraction of mathematical ideas.

Data Analysis

Data collected from the teachers' and children's interviews. A classification of patterns exhibited in the children's drawings was also done in terms of pre schools levels and gender. To answer the four research questions, the data analysis was done in the following manners:

- i) Examining all the children's drawing in order to identify if patterns do exist.
- ii) Transcribing the children's and teachers' interviews scripts.

- iii) Examining the mathematical patterns exhibited in all the children's drawing by levels and gender.

The above analyses were done both quantitatively and qualitatively. Qualitative analysis was done by identifying and categorizing the types of mathematical patterns exhibited in all the children's drawings while quantitative analysis was done by calculating the frequencies of those patterns shown.

All the children's drawings were coded systematically in order to keep the anonymity of the samples. For examples 01M1Y, means Sample Number 1, Male and from KG I Yellow and 34F3R means Sample Number 34, Female and from KG 3 Red.

Results and Discussion

Research Question 1:

Do mathematical patterns exist in pre-school children's drawings?

After a careful observation and analysis of the 468 exploratory drawings produced by 162 children, generally it shows that mathematical patterns obviously do exist in almost 78% of the drawings. The remaining of the drawings shows no obvious mathematical patterns but they were like free and colorful scribbles. Examples of drawings with obvious and not obvious mathematical patterns are shown below:



14F1Y



161F3P



92F2G



05M1Y



079M2G



158F3P

The drawing by Child 14F1Y shows a repeat of different sizes of circles which formed some human figures in a match-stick style drawing. Sample 92F2G shows a repeat of mathematical patterns like circles to create flowers and a combination of different shapes to form like a beautiful and colorful tower house. This child did not only draw the patterns but she also counted the patterns drawn and made some numerical notes in the drawing itself. The drawing done by Child 161F3P shows more vibrant and clearer expressions whereby this child shows more obvious progressions of the objects drawn with very strong colors that may attract anybody seeing it to notice the objects drawn.

Meanwhile drawings done by Children 05M1Y, 079M2G and 158F3P show less obvious mathematical patterns but they are free and colorful scribbles. If examined closely, the drawing done by Child 158F3P shows human figures made of intensive scribbles,

Research shows that the scribbles made by children should not be ignored at all. This is because as Davido (1998) mentioned that before being able to do other things, sometimes even before starting to speak well, children will draw if we give him a piece of paper and a pencil or at least, he will scribble something. We need to know that scribbling, if it's about small children (2-3 years old), represent the way in which our child expresses his fear, his doubts and his joy. He expresses his instincts, in their purest form. The drawings of the little one are a gold mine for the mother, if she knows to understand them, because they mean much more than her baby can say through words. At the pre-school age, sometimes, the child draws circles, long or diagonal lines, which apparently do not express anything. Davido further mentioned that the scribbling is a mandatory step in child's development.

Children's scribbles function neutrally in three ways: they represent thought, they make thought, and they refine thought. Scribbles function as central motor pattern generators for antipodal body exchanges including bipedal locomotion, or walking, running, and swimming (Wilson, 1999). Secondly, the circles and spirals and waves children draw are at least abstract mathematical representations of brain activity (Wilson, 1999) Whether children's scribbles are abstract or concrete representations of the shapes of thought, scribbles provide practice with such shapes, and may streamline neural operations in some directly kinesthetic manner.

The 3 drawings above show that though there are no so obvious mathematical patterns but the children enjoyed producing free and colorful scribbles which to them must be very meaningful.

All the above drawings produced by KG 1, KG2 and KG3 children and whether they show obvious or not so obvious mathematical patterns, it is observed that they depict a style or patterns which show a mature development of the children's thinking and maturity.

Fein's comprehensive book, *First Drawings: Genesis of Visual Thinking* (1993), shows that children - and humankind - use the same visual language: the point, the line, the circle, the spiral, the maze, the mandala, the mandorla, the rectangle and the triangle. Geometry - sacred and profane, Euclidean and non-Euclidean - is an elemental neural/visual language.

Research Question 2:

If there are, are the patterns shown in a systematic way?

As discussed above, most drawings produced by the children show obvious mathematical patterns. They exhibited basic geometrical shapes like circles, triangle, squares and rectangles supported with lines and curves in a way which can be considered as systematic for their age level. Since the children were let free to draw whatever they felt like drawing within the given time, the identified system was believed to have been done unconsciously. Though some children drew those shapes individually, many used those shapes to create a progression of patterns or to develop new objects by making a combination of those basic objects as shown in the two examples below:



17F1Y



30M1G



74M2G



88F2G

Drawing samples above produced by Children 17F1Y, 30M1G, 74M2G and 88F2G show the systematic criteria in terms of colors and shapes. Children 17F1Y and 30M1G were interviewed and when asked what they were trying to show in their drawings, Child 17F1Y said that she was trying to show two squares and two ovals and the same shapes should have the same color. Child 30M1G said he was drawing a combination of different basic shapes but he did not repeat the color of all shapes drawn. This approach compared to Child 17F1Y shows a more cheerful expression. So the probes show that while they were drawing, the children were actually actively

thinking and those thoughts were expressed in the drawings produced. The thoughts were actually a system set by them and they were adopting the set system in producing their end products.

The drawing below produced by Child 065F2U and Child 160F3P show even a more systematic type of drawing. Basic geometrical shapes were used to create scenery or a proper context, which in this drawing shows a proper house with a walkway, green grass, girls and boys playing around, a swimming pool near to the house, a car with trees and a bright smiling sunlight.



065F2U



160F3P

When interviewed, Child 065F2U clearly explained that she was showing her real family's house with a big compound and a swimming pool. Even the green car is also the actual color of their family car. This infers that naturally children express their real life experience in their drawings and as much as possible they are trying to reflect the actual situation. This shows that each time a child draws he or she is thinking on a theme that will set hi/her drawings.

Research Question 3:

Is there a difference in patterns produced by boys and girls?

The evidences discussed in answering Research Questions 1 and 2 confirm that both boys and girls produced mathematical patterns in their drawings. In analyzing the frequencies of samples showing obvious patterns, it shows that there is no difference between boys and girls. Both boys and girls show mathematical patterns in their drawings.

As an example the first drawing shown below was produced by a male Child 03M1Y and the second drawing by a female Child 11F1Y of the same preschool level.



03M1Y



11F1Y

Both drawings show big round circles to represent human figures or human masks. An obvious difference can be seen in terms of colors i.e. the first drawing only used blue and brown while the second drawing used more variety of colors like green, orange, red, purple and yellow. This is always the case where when boys and girls draw and color – girls are more likely to draw flowers and faces, and use brightly colored crayons while boys are more likely to draw with lines and use darker colors.

Examples below show how female children are so engrossed in using multiple and bright colors.



64F2P



88F2G



122F3Y



150F3P

Research Question 4:

Are the pre-school teachers aware of the existence and importance of patterns produced by their children?

Papic and Mulligan (2005) found in their study that many young children's teachers are not aware of the importance and existence of mathematical patterns and thoughts exhibited in children's drawings. In contrary to that finding the six teachers involved in this study and interviewed wholly admitted that they were fully aware that children normally produce drawing with mathematical elements and thoughts in them. Because of that awareness, those teachers always support their children's learning by giving them opportunities for the children to sharpen their thinking and creativity. For examples, the teachers gave the children an activity whereby the children can copy and extend a given pattern, an activity where children are encouraged to create a pattern of their choice or using the existing patterns to create newer and extended patterns or objects. This approach makes the children to be more creative and innovative.

It is crucial for pre-school teachers to be aware of the existence of patterns in children's drawing because as mentioned earlier that patterning is critical to the abstraction of mathematical ideas and relationships, and the development of mathematical reasoning in young children (English, 2004; Mulligan, Prescott & Mitchelmore, 2004; Waters, 2004) The integration of patterning in early mathematics learning can promote the development of mathematical modeling, representation and abstraction of mathematical ideas It seems advantageous then, that initiatives in mathematics curricula and assessment in Brunei and at international level should promote the development of early mathematical patterning and reasoning (Clements, 1999 and Doig, 2005). The Early Childhood Education curriculum should develop a more vigorous and effective program to promote patterning skills among young children.

Conclusion

The above discussion shows that mathematical patterns do exist in children's drawings. Most show the patterns in systematic and progressive ways. The system can be seen in terms of patterns choice, size, frequency of uses and using the basic patterns to create a theme or the main objects of their drawings. Though there is no gender difference in terms of objects drawn or choice of patterns, girls tend to produce more colorful and vibrant drawings as compared to boys. Most boys feel that it is more than sufficient to use just one or two colors but girls feel that more colors will make their drawings more lively and attractive. Teachers do realize of the importance and existence of mathematical patterns in children's drawing and they continuously support the children's potential by providing them instructional strategies which are developmentally appropriate. Since the study was only done in one particular school, further study should be extended to other schools so as to examine if similar results will be sought elsewhere.

This small scale study was not intended as a controlled study and therefore the results do not permit generalisation. However, it clearly shows that pre-school children's drawings do show some elements of mathematical patterns and that proper instruction did lead to a substantial improvement in a wide variety of children's patterning skills.

These findings support the notion that patterning is important in the overall children's development of mathematical representation and abstraction. Children who performed well on patterning tasks and those who were interviewed were identified as high achievers on other numeracy work in their respective classes. It appears that there is a relationship between a child's ability to pattern and their development of pre-algebraic and reasoning skills, as evidenced in the responses to the interview tasks.

A recent international discussion group on mathematical thinking of young children (Hunting & Pearn, 2003) reported that advances in cognitive science had revealed evidence of greater mathematical capabilities than previously believed. This finding supports researchers' views that young children are more capable than current practices reflect, and that providing more challenging early educational programs can have a positive impact on school learning. This is inline with the implementation of the new National Curriculum (SPN21) in Brunei Darussalam where young children are very much encouraged to be very expressive and creative. Though teachers in this particular study admitted that they are already aware of the importance of patterning in mathematical reasoning, their level of awareness still needs to be boosted so that they will have a higher level of confidence in teaching patterning.

New and young teachers need more continuous professional development programs to promote their skill in teaching so that they are more aware of the need to cater for children's interests and mathematical abilities and to engage children in challenging learning experiences. The Early Childhood Education curriculum should consider an assessment schedule and program which can provide valuable professional support for the teachers in the development and implementation of teaching strategies which promote the learning of patterns and algebra in mathematics curricula.

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Introduction

The increased availability of advanced information and communication technology (ICT) has enabled widespread use of and access to computer-assisted learning, or e-learning. This technology-enhanced learning has become ubiquitous in the modern educational environment and is used as an educational marketing tool and/or to enhance equality in learning experiences, due to the flexible learning options it enables (Carroll 2007; Lane 2011a; Lane 2011b; Lane 2011c). Courses in which teaching and learning are aided by and integrated with ICT are often regarded as an improvement on (or equal to) conventional courses, which can be considered teacher-centred rather than student-centred in their approach (Collis & Moonen 2001, cited in McLoughlin & Luca 2001; Wyatt-Schlei 2009). In addition, flexibly oriented, ICT-led approaches may eliminate restrictions imposed by time and geography (Gosper et al. 2007) while boosting students' motivation and autonomy (The Quality Assurance Agency for Higher Education 2005, cited in Arnold 2006). However, it can also be argued that creating an ICT-led educational environment does no more than provide the potential for improved motivation and learning autonomy, but does not, in fact, confirm or guarantee the establishment of either (Boulton et al. 2008). Thus far, ICT-led learning has been found to function most effectively for - and be most valued by - learners who are already highly self-regulated (Njiru & Waugh 2007).

The use of ICT in general education brings both benefits and disadvantages, and this is certainly evident in second/foreign-language courses at the tertiary level. In this particular field, the use of ICT raises some distinct concerns specific to learning a second/foreign language. Further, while professional development and training provides second/foreign-language lecturers with opportunities to develop their knowledge and skills in the use of current and emerging ICTs, these same lecturers encounter an absence of theoretically and practically developed model strategies for applying these skills in their individual teaching pedagogies. Thus there is a chasm between pedagogy and technology, and those engaged in certain fields of study, such as second/foreign-language teaching, may not have the necessary links with those who design technological assistance for their field (Carroll 2011; Rogerson-Revell 2007, cited in Heirdsfield et al. 2011; Tergan 1998, cited in Gosper et al. 2007).

There is a dearth of literature that pinpoints the challenges of ICT use in second/foreign-language courses, especially literature written from the perspective of second/foreign-language lecturers utilising ICT and reflecting their institutional trends and existing educational modes. This paper explores dilemmas exclusively linked to increased use of ICT in second/foreign-language classes/courses, notably: failure to consider the nature of the target students; limitations in testing and assessment methods; and a reduction in synchronous interactions between lecturers and students. The paper also recommends strategies by which university lecturers in Australia can tackle and hopefully overcome these issues.

The lexical item *lecturer* is utilised through this paper to refer to all types of teacher, educator, instructor, tutor and lecturer.

Increased Demands on Students

Most undergraduate students are categorised as Generation Y and do not see the use of ICT as a special learning tool, but rather as an integral part of their lives (Martin 2005; Merritt 2002, cited in Gardner & Eng 2005). Although they appreciate the enhancement of their learning environment by ICT-based approaches (Njiru & Waugh 2007), we cannot assume that their affinity for technologies such as social networking and the like necessarily translates into a similar level of skill in the use of technologies relevant to educational settings. Njiru and Waugh (2007) note that approximately 45% of the university students targeted by their study were categorised as having low-level self-regulated learning styles. In fact, most students are not willing to reject a lecturer's 'human' - assistance, but instead expect and prefer constant personalised feed-back in an informal setting in order to stay on track (Martin 2005). Since these students tend to avoid formal face-to-face interaction and one-on-one consultation, it is necessary for lecturers to offer carefully designed interpersonal strategies and to have an approachable manner, enabling the provision of guidance and immediate constructive feedback and incentives (Martin 2005).

It is notable that Generation Y students tend to try to work things out by themselves, rather than seek help from their teachers (Gardner & Eng 2005); ICT-enabled educational environments might further encourage this 'go it alone' manner. This may in fact encourage students to be individually responsible for their learning, which in most cases can be regarded as a positive step towards developing an autonomous learning style. However, this benefit only functions when students are fully aware and capable of handling their own study modes, and not when their autonomy leads them in directions that are not in line with the benchmarks and guidelines for the unit. Learning autonomy is mostly interpreted as implying a solo learning style; however, a system reliant on personal accountability is only effective when an individual is both willing and able to effectively monitor and motivate themselves. The creation of a context in which learning autonomy can be established does not necessarily mean that students will become effective autonomous learners. Further, in terms of second/foreign-language learning, subtleties of grammar, composition, accent and structure can be easily overlooked and confused by students working alone. The need to clarify the variety of subtleties within these areas means that students learning autonomously must be highly self-disciplined in raising enquiries with lecturers and/or in conducting independent research (Njiru & Waugh 2007). Thus students in an ICT-led environment are required to take more responsibility for their own learning, but many need assistance in achieving this control (McLoughlin & Luca 2001).

Students in general tend to have a higher degree of confidence in the ICT setting than is often supported by their actual skill level (Madigan, Goodfellow & Stone 2007). In order to achieve autonomy, each student must be able to take advantage of the ICT tools provided. Such abilities are enhanced by students' own critical understanding of themselves, including their personal learning preferences and styles, scale of motivation, and requirements in relation to their individual learning natures. On top of this, learning autonomy requires learners '... to be able to take all the decisions concerning their learning: determining targets and objectives, choosing contents and materials, selecting methods and techniques, organising their learning, and assessing their progress' (Boulton et al. 2008, 1. The wonderful world of ICT in language learning, ¶ 1). In other words, successful ICT-based learning requires students to be self-regulated learners, to have cognition (knowledge to build upon) and metacognition (an ability to think about their knowledge and monitor their learning strategies), as well as motivation to use their metacognitive scheme to acquire an understanding of instructional resources (Pintrich & De Groot 1990, cited in Njiru & Waugh 2007). However, a study conducted by Njiru and Waugh (2007), for example, reports that a majority of students categorise themselves as non-highly self-regulated students. The major concern posed here is whether these students are able to efficiently and effectively utilise

elaborate and potentially impenetrable ICT-based learning processes in order to achieve learning autonomy in a collective way.

Students are required to master a range of learning styles and strategies by approaching, analysing and applying these styles to their given learning contexts. However, the sophistication of ICT-based learning means that students are often unobservable and carry out their tasks alone, while the lecturer reverts to the role of 'a manager, mediator and motivator of student learning' (McLoughlin & Luca 2001, p. 417). ICT does not take students' individual learning styles and environments into account in the way that a lecturer in a face-to-face environment can do.

Limits on Test and Assessment Types

Improvement in second/foreign-language proficiency can be enhanced by providing repeated opportunities for students to acquire and demonstrate communication skills and cultural linguistic knowledge, interrelations of which are implicit among proficient users in the target language (Gosper et al. 2007). In order to facilitate broader linguistic knowledge, lecturers of second/foreign languages traditionally organise formative assessment tasks such as weekly/semester tests to enable face-to-face assessment of the four macro-skills: speaking and writing (the productive skills) and listening and reading (the receptive skills). It is acknowledged that these assessments contribute to the stimulation of student learning (McLoughlin & Luca 2001) and can be employed as the principal achievement measurement for quality of learning. Second/foreign-language learning is a discipline that demands ongoing persistence, self-discipline and repetitive learning approaches in order to facilitate the acquisition of important qualitative skills; accordingly, regularly organised tests and assessments that enable students to demonstrate and self-assess their ongoing achievements become the core part of the second/foreign-language learning routine.

Evaluations of ICT-centred education show that the most commonly misaligned factor is assessment (Reeves 2010), and it is likely that many assessment styles in ICT-mode education are based on capacity to measure rather than importance in evaluating student achievement (Reeves 2010). This situation arises because the discussion of quality learning and its outcomes is often blurred. The Quality Assurance Agency for Higher Education (1999) also explains that the assessment methods introduced for students on campus are not necessarily appropriate for an off-campus ICT setting (cited in McLoughlin & Luca 2001). In addition, it should not be forgotten that ICT functionality limits the availability and type of assessment tasks. In particular, when it comes to the issue of productive skills assessment in second/foreign-language education, lecturers often fall into the trap of compromising the quality and quantity of assessment tasks to allow for ICT functionality.

Further, the integration of ICT with fundamental skills-focused language education components can be disruptive: the remote and on-line nature of ICT-enabled tests, along with the absence of face-to-face invigilation, prevents adequate student supervision and the detection of academic misconduct. When completing a test remotely, for example, students are freely able to access hard-copy resources as well as any of the functions available via their computers. In terms of second/foreign-language proficiency, this enables students to access on-line dictionaries, automatic grammar tools, phrase searches and so on while completing a test. It should be acknowledged that academic dishonesty can occur in any educational setting, but an off-campus external mode of learning can increase these risks, even in the case of students who are generally highly motivated and committed self-learners (Taylor & Beckmann 2009). Thus external students may not to be assessed fairly and equally in relation to internal students, which can be detrimental. The ICT designers and instructors who so carefully and enthusiastically guide lecturers on the use

of ICT-assisted assessment fail to mention that they have yet to provide legitimate guidance and/or strategies for avoiding student misconduct.

In the teaching of Japanese as a second/foreign language, ongoing formative tests aimed at improving fundamental linguistic abilities can be divided into two categories: vocabulary tests and writing tests. The latter includes testing of any of the three Japanese scripts - hiragana, katakana and kanji - depending on the lesson level. The currently available ICT-oriented tests are, unfortunately, inadequate when it comes to assessing students' writing skills. Conventional writing tests can assess anything from lexical items to composition, yet in an ICT-supported educational environment, facilities for providing students with timely, vital and specific feedback on their efforts are limited. A prime example when learning Japanese, for instance, is that only a lecturer's explanation and demonstration can clearly identify the difference between general handwriting and formatted textbook writing. Conventional theory is that the learning process for a second/foreign language can be enriched by the kinaesthetic experience of handwriting (Taylor & Beckmann 2009), but even putting this aside, handwriting is essential to the process of articulating and assessing many specific details when learning Japanese. However, the simple and oft-repeated task of writing text is currently impossible to implement in an ICT-learning environment.

Setting aside pressures that are intrinsic or external, test/examination pressure can function as a stimulus for students in their studies (Gosper et al. 2007). This motivational pressure is established when students undertake a test or an examination in a venue where academic misconduct is not only prohibited but also difficult to commit. Thus tests or examinations should be held at a venue supervised by an examiner (at least), and ICT technologies can neither supplement nor substitute for this. Although students do not necessarily welcome regularly organised tests/examinations in class, they understand the impact of these on their academic performance and prefer tests/examinations to be conducted multiple times over the semester. However, the various assessment types made possible due to the greater adaptability and flexibility of ICT (McLoughlin & Luca 2001) do not include traditional and objective assessments, such as quizzes, which have been conducted successfully in and are highly suited to the second/foreign-language educational environment.

Dearth of Synchronous Interaction

The overuse of ICT in second/foreign-language learning risks trivialising student participation in class. Reduction of the face-to-face (a)synchronous networks can mean that students are unable to obtain a sufficient range of interaction in and exposure to the target language. This obstructs ideal second/foreign-language learning task development includes chunking; as well as selecting elements of the target language for use in a wide range of imaginary situations and contexts that cannot be anticipated or matched by existing textbook materials or computer programs (Meskill & Anthony 2010). Therefore, students of a second/foreign language should be frequently encouraged to interact with their peers and lecturers, posing various questions and obtaining answers that are tailored to particular imagined situations. Since a sentence in isolation is unable to offer adequate information about the context in which it is being used, the lecturer must provide a clear picture of the complete context and correct use within this context. This includes discussion of ways in which the target lexical items and structures can be appropriately used, provision of alternative structures specific to the context, and assistance for students in creating their own sentences that are relevant to the target context and to their lives. Inquiry directed towards, and confirmation from, the lecturer increases students' chances of creating grammatically and contextually correct or suitable sentences, which may reduce the likelihood of incorrect or inappropriate expressions.

Simultaneous mutual interactions give students the opportunity to encounter and experience the kinetics and phonetics of their target language. These face-to-face interactions allow observation of details such as the lecturer's use of body language and variation of voice, including elements such as pitch and pronunciation. When the lecturer is a native speaker of the target language, students can benefit further from conscious and subconscious observation, mimicry and impersonation of these behaviours (Hasegawa 2004). In ICT-oriented sessions, where information transfer is the primary aim, these essential interactive skills are more difficult to teach. Thus Brabazon (2007) suggested that traditional face-to-face synchronous delivery still plays a vital role in tertiary education because it enhances students' critical reflection as well as their skills development.

The tutorial/lecture style of teaching can function only when students do not rely solely on ICT (Tait 2000). It must be acknowledged that students accessing on-line learning environment Lectopia, for example, can pause at any time to reflect on its content, but its asynchronous nature restricts them from raising instant questions and this might lead to complications and misunderstandings (Brabazon 2007). Further, an understanding of linguistic knowledge introduced in class does not mean that students can demonstrate this knowledge at a satisfactory level in their own communications. Developing the ability to be receptive and productive depends heavily on reinforcing elements introduced by the lecturer using highly interactive tutorial sessions. This means that, ideally, students should have sufficient time for face-to-face interaction as well as structured activities integrated into a cohesive lesson. Boulton, Chateau, Pereiro and Azzam-Hannachi (2008) noted that the lack of interaction between lecturers and students is a major concern in the ICT-integrated learning environment (Felix, 2000). They also suggested that limited interaction may cause students to feel a sense of isolation, which can lead to failure to complete their university courses (May & Bousted 2003).

The ICT-led decline in synchronous interaction is also a cause of increased student absenteeism (Green et al. 2008). The recent sharp decline in student attendance rates at the tertiary level (Massingham & Herrington 2006) is also an indicator of an increase in failure rates. This is true despite the greater availability and higher quality of ICT assistance, since students do not generally consider catching up on their missed classes by making use of the ICT-enabled resources provided (Hasegawa 2011). As part of their professional practice, lecturers should be expected to participate in an ongoing process of offering instructional guidance and support for students along individual learning pathways, including the monitoring and tracking of student behaviours in their use of ICT-enabled resources, as well as identifying and addressing individual difficulties and weaknesses. Since most Generation Y students are used to having instant and ubiquitous access to information and assistance, it can be a challenge for them to be energetic self-starters who take the initiative to generate knowledge and seek guidance from their lecturer in specific, targeted ways. Thus, '... some form of constraint may be necessary before learners can actually become efficient autonomous learners' (Boulton et al. 2008, 4. Discussion, ¶ 4).

Implications

In light of the issues described above, the following section discusses some implications for current ICT learning approaches. These have been separated into three categories: (1) ICT training for students and lecturers; (2) strategic institution-wide planning; and (3) context-specific lecturer-student interaction. It is vital that these underlying elements – and the practical challenges, costs and time expenditure associated with them – can be managed within the second/foreign-language educational setting in a way which is sustainable within existing

organisational parameters, as has been highlighted by Gosper, Woo, Muir, Dudley and Nakazawa (2007).

Dedicated ICT Training in Specific Fields of Expertise

Despite their high level of familiarity with ICT, many students are not entirely computer literate or have little experience with learning in the ICT mode (Boulton et al. 2008). The influx of ICT-motivated approaches in tertiary institutions is an educational trend, although its implementation can be viewed as incomplete and context unspecific from the lecturer's perspective. Current ICT education and training sessions often focus on ICT's abilities and functionalities while overlooking its limitations and challenges, especially when employed for particular study fields such as second/foreign-language education. Further, the lack of specific strategies for integrating ICT functions into traditionally implemented curriculum content also creates challenges (Green et al. 2008). Note also that lecturers need to be educated about and achieve mastery in the use of ICT tools and functions not only from the lecturer's perspective but also from that of their students and curriculum coordinators. Students, however, are required to learn and acquire these skills from the student's perspective only. Thus, professional training sessions need to be tailored not only to study field but also to trainee type.

Moreover, ICT training should require all educators, students and lecturers to acknowledge and have a contextualised view of the issues emerging from the use of ICT: that '... ICT is not a panacea, is not suitable for all learners in all situations and for all purposes...' (Boulton et al. 2008). This includes the fundamental theory that ICT should not be an entire substitute for, but rather an aid to, conventional teaching and learning (Tait 2000; Trounson 2011). In other words, flexibly oriented ICT delivery must accommodate multiple learning styles and be tailored to the subject and mode of study. Flexible delivery provides '... approaches to education and training through a combination of different teaching/learning methods' and flexible learning, where flexible learning is defined as 'a student oriented approach to learning, which caters for the individual needs and requirements of the learner including choice of time and place of study, and suitability to an individual's learning style' (Dekkers & Andrews 2001, Flexible learning, ¶ 6). The fact that the ICT setting does not provide scope for this individually focused approach is a cause for significant concern among second/foreign-language lecturers at the tertiary level. For example, having been given general instruction and explanation based on abstract de-contextualised knowledge with no specific strategic demonstrations, lecturers in second/foreign languages continue to struggle to acquire the skills and expertise necessary for the effective use of ICT in their second/foreign-language practice (Schacter 1999, cited in McLoughlin & Luca 2001), particularly when it comes to integrating ICT into the models of assessment currently available in the face-to-face mode.

Institutionally Standardised Strategic Plans

Fundamental requirements for students' physical attendance at each lesson should be standardised in each department, school, faculty and preferably university-wide. With the exception of those courses offered in distance education mode, most Australian universities do not have any formalised requirements for student attendance. Instead, in the name of self-learning, flexible learning, or learning autonomy, students are provided with various ICT learning styles from which to choose, and these options often substitute for, or discourage, attendance in class. Although current university policy is that student attendance does not contribute to any portion of their unit assessment, students should be consistently reminded that absence from class will increase the possibility that they will miss vital elements introduced in that class, and that this may ultimately lower their marks and grades. Each institution should stress clearly and widely

that the purpose of ICT-supported learning is to allow students to check for classes they have missed or to preview and review content, rather than to replace their face-to-face classes altogether.

The visa conditions for overseas students in Australia require a minimum attendance rate, except in verifiable circumstances such as unexpected illness or injury. As observed above, however, many students do not attend their classes due to the availability of ICT, although they may not actually use the ICT facilities to check or catch up on missed classes, and this can have a critical adverse impact on their academic results. University-wide campaigns are needed to discourage this attitude, since individual lecturers do not have the capacity to regulate requirements for student attendance. In practice, this means that for courses other than those officially delivered in distance mode, universities should establish a minimum standard of required attendance and not award an academic result to those who show reluctance to attend classes physically. In addition, or alternatively, providing a section to note attendance on student academic records will also improve class attendance rates.

Context-specific Lecturer–Student Interaction

The current prevailing view is that educational models not employing modern ICT tools are contrary to the autonomous, learner-centred approach generally seen as positive in a tertiary setting. Autonomous learning, however, may also be accompanied by less positive features, such as social isolation and a reduction in the level of attention and care paid by lecturers to individual students. As a result, many students feel as if their tertiary education experience is impersonal, focused on results and outcomes without consideration for individual experience. Furthermore, ICT restricts the quantity and quality of synchronous face-to-face interaction and minimises personal attachment between lecturer and students, which has a negative impact on connection and bonding between lecturers and students, a factor the majority of students report as being valuable (Njiru & Waugh 2007) and that can have a vital effect on student performance in learning a second/foreign language (Chan, Tan & Tan 2000, cited in Hasegawa 2004).

ICT increases students' sense of isolation, but can also be used as a motivation to learn when the lecturer values the presence of individual students (Green et al. 2008). While some might argue that the lecturer's role is to conduct the lecture and not to mentor students with unsatisfactory academic performance, others believe that a lecturer's responsibility does, in fact, extend to supervision of students' study progress. Although there are professional counsellors on campus to assist students with advice on how to learn, develop and grow during their academic lives, it must be acknowledged that there are always some students who are unaware even of the presence of these counsellors. As outlined above, the ICT-supported self-directed learning approach tends to create more potential for students to ignore targeted guidance from lecturers and to overlook the need to develop personal commitment, organisation and time-management skills as part of their study process. In some of these cases, timely interaction with a lecturer can play a crucial role in fostering practical study-management skills. Thus the emergence of ICT-supported courses should not lead to a decline in lecturers' tailored action plans for individual students.

Students' class attendance can be encouraged not only by taking attendance records, but also by systematically organising assessable activities such as regular tests/examinations or assignments/homework to be handed in at a designated class during the semester. Tentative dates and times for these should be provided repeatedly by lecturers in advance and reminders given, both orally in class and in written documents such as unit outlines. Students should be warned that there is no opportunity for a make-up test without formal application, unless individual students make an early request to be granted deferment. This formalised approach will prevent

common excuses, many of which arrive in a lecturer's inbox or answering machine while the class in question is being held. Students dislike tests and examinations, yet acknowledge that such instruments have an important role when the aim of the test is made transparent by the lecturer. The due dates and times for homework/assignment submission and the consequences of late submission should be clearly explained to students in advance. These simple but regular practices are in no way linked to ICT, but can go a long way towards creating significant and ongoing motivation to preview and/or review course content, and to attend class regularly. Thus, the research recommends further study into ways in which the potential of ICT can be maximised on a guided basis while minimising its potentially detrimental effects, irrespective of whether its use is considered optional or compulsory with regard to specific teaching contexts.

Conclusion

An ICT-rich environment is seen to be essential to modern tertiary education. While ICT can be beneficial for some modes of delivery in some subjects, it can severely limit learning outcomes when used in others, specifically when used in second/foreign-language education. Therefore, the pros and cons of an ICT-based approach should be examined carefully on a case-by-case basis, taking into consideration the characteristic elements of the particular study fields, including study content, curriculum, and nature of the study field. In order to make ICT-enabled learning more effective and efficient, more concrete strategies for its implementation in individual study fields are required. Second/foreign-language education at the tertiary level is one area in which a richer and broader study of ICT and its possibilities is urgently required.

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Directions for developing educational management for immigrant children with community participation: A Case Study of Banlaem, Phetchaburi, Thailand

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Community, Culture, Globalization, and Internationalization



Directions for developing educational management for immigrant children with community participation: A Case Study of Banlaem, Phetchaburi, Thailand

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Abstract

There is an unskilled labor shortage in Thailand resulting in an influx of legal and illegal immigrant workers from neighbor countries, especially Myanmar. The number of Myanmar immigrants in Thailand is growing rapidly, especially children. Ratifying the Convention on the Rights of the Children to basic education, the Thai government provides 15-years of free education for all children in the country including the children of immigrants. Although the number of immigrant children is increasing greatly each year, the number of immigrant students enrolling in public schools in Thailand at less than 10% of their population is still underrepresented. This research explores the extent of immigrant education in one district of Phetchaburi, Thailand that is densely populated by Myanmar immigrants working in the fisheries industry. Findings illustrate challenges for the immigrant children to access the basic education in Thai public schools. Also suggested are proposals for community participation to promote educational opportunities for the local immigrant children.

Keywords: Immigrant children, Immigrant education, Community participation,

1. Introduction

From the beginning of the 1990s, the number of migrant workers in Thailand has increased steadily. The largest group of immigrants came from Myanmar and a vast majority of them were undocumented. (Kanchai & Kaung, 2002) The increased number of immigrant workers results in a higher number of immigrant children. Thailand ratified the International Convention on the Right of the Child in 1992. 7 years later, the Thai National Education Act ensured the right of all children born in Thailand to a free basic education for at least 12 years including children who are illegal immigrants. However, very few of the migrant children attend mainstream Thai schools. The Ministry of Education still lacks information about the Myanmar immigrant children. The purpose of this study is to explore directions to develop educational management for Myanmar immigrant children in Banlaem, Thailand. To accomplish this, the paper begins with an overview of immigrant education. These sections are followed by a discussion of the research findings. The paper concludes with a proposal for the directions for the educational management for the Myanmar immigrant children with community participation.

2. Literature Review

2.1. Immigrant children and education

2.1.1 Immigrant children in Thailand

In 2004, the Thai government registered children under the age of 15 years that are accompanying their families for labor purpose. It was found that 82% of the children are of Myanmar origin. In addition to the registered immigrant children, there are undocumented children immigrating to Thailand by themselves for labor jobs near boarder areas and in several locations in Thailand. Some of them were abused in human trafficking such as the sex business. Including the undocumented immigrant children, the number of immigrant children in Thailand is more than the registered number. The unidentified number of immigrant children in Thailand effects the educational management for this group of children.

2.1.2 Immigration Immigrant children and Education

UNHCH (1994) (cited in Adams & Kirowa, 2006) indicates that more than half of the immigrants are children. Adams & Kirowa suggest that educators working with immigrant and refugee children should recognize the difficulties in society, economic, and health care areas that the children and their families are facing. Moreover the educator should also realize the challenge in the education system that needs to be adjusted. Many countries are facing a rapid increase of the immigrant population while native birth rates are decreasing (Kirowa & Adams, 2006). This indicates that the schools at present and in the future need to improve their practice due to the constant population increase. The practice needs to encourage immigrant parents' participation in their children's education. Moreover, for a qualified education process, it is required that schools, teachers, and school personal become more flexible. There is a need for critical change in the teacher's curriculum. This change is necessary if teachers are expected to do teaching service with knowledge, skills, attitude, and a belief that all children have the right to a qualified education.

2.1.3 Immigrant education

Theory of human capital investment (Schultz, 1961; Becker, 1964) suggests that there is a difference between native-born workers and immigrant workers in transforming education into income. Immigrants may not be able to transfer human capital accumulating from their original country to job markets in the labor receiving country. The transferring of skills, which is called International Transferability of Skills, is similar in job markets of a labor sending country and a labor receiving country. The skills are regulated by education and language (DeBurman, 2005). Education has 2 components. The first is what they learned in one country, and the second one is transferred skills across the country. These two components are different depending on the level of education and their academic achievement. Countries that use same languages tend to have similar quality of education and skill training on the job. Similarities and differences between languages of a labor sending country and a labor receiving country affect the transferring of working skills.

2.1.4 Education investment in immigrants

Chiswick (1988) describes that investment in education is influenced by parental investment. There are 4 factors contributing to parental investment in child education including the parents education level, family income, family size, and mother time. The researcher believes that parent investment of child education is influenced by ethnicity as different ethnics have different views on family size and woman participation in labor. The motivation for immigrant parent's investment in child education is low when there is a possibility of moving back to their origin country. Immigrants from some countries have high level of education and high income. This supports the investment in child education. However, immigrant parents with a low level of education, large family size, and low income tend to have little investment in child education. Moreover, ethnic groups differ in women's participation in labor, which contributes to children enrollment in schools, especially for small children.

2.1.5 Academic readiness and academic achievement in immigrants

Ethnography of education in immigrant children shows that the immigrant children of ethnic groups face problems and learning difficulties more than native born children due to language barrier and education background (Vidali & Adams, 2006). Adams & Shambleau (2006) mentioned that immigrant children often lack experience in schools at their most critical time. Most of them cannot read or write in their mother languages and lack memory strategies and high order of thinking skills. Findings of more than 4 decades from sociology studies pointed out that children of parents with low level of education tend to have a low level of education as well. Then when the children enter labor age, they are more likely to be low wage earners. Parents who

have a low level of education tend to have limited knowledge and learning experience, therefore the parents cannot support their children learning and homework. Moreover, the parents do not have an effective way of interacting with schools, teachers, and administrators for the education of their children (Hernandez et al., 2010).

2.2. Myanmar immigrant children education in Thailand

Many immigrant children in Thailand have the risk in being a victim of human trafficking, drug trade, and several kinds of crimes. Education is one means of developing immigrant children so that they have knowledge and healthy life skills (Vungsiriphisal, 2010). Immigrant children in Samutsakorn province, the most Myanmar labor populated area in Thailand, can get non-formal education from religious institutions but the number is very small compared to Myanmar children population in Thailand (Amaraphibal & Worasaen, 2010) Although the Ministry of Education has allowed immigrant children to study in Thai schools since 1992, there were only 20 Myanmar children in Thai schools (Muangmee, 2005) At present, the number of immigrant children enrolling in Thai schools is very low. There is an estimation that less than 10% of registered immigrant children are studying in Thai schools. Including undocumented immigrant children, the number is even smaller (Vungsiriphisal, 2010) There are 3,679 registered Myanmar immigrant children age 1-15 years old in Samutsakorn province, though the number is far from reality due to many undocumented children, only 95 children enroll in Thai schools (Vungsiriphisal, 2010).

2.3. Educational management with community participation

Organization for Economic Co-Operation and Development (OECD)'s report (2010) on "Closing the gap for immigrant students: Policies, Practice, and Performance" suggests that parental involvement and community participation in education management for immigrant students is important. The report indicates that most schools have communication problem with immigrant families. Moreover the education system lacks the support for immigrant students whose parents cannot help with their learning such as homework. For immigrant parents to participate in their children learning and communicating with schools, they need proficiency in school language. Immigrant parents with limited education and low proficiency in school language are unable to help their children's homework. They need support from the schools and communities. Schools and all stakeholders in the community should provide language teachers, ethnic mentors, and vocational training. These supports could be possible if the government encourage schools to approach immigrant parents and immigrant communities.

In order to increase academic achievement in immigrant students, ethnic community is resourceful. Many schools in OECD's reported countries invite ethnic minority mentors having similar background with immigrant students to help them with their homework. German creates the original program called "Educational Support for Children and Youth with Migration Background". The objective of the program is to support immigrant children' learning and to prepare the ethnic minority mentors to be teachers for diverse ethnic classrooms in the future. Moreover, local organizations can also contribute to immigrant children development. For example, local organizations in German join "National Integration Project" such as building partnership between business sectors and schools to provide vocational training for immigrant children, requiring community projects to involve immigrants' participation in decision making and processing. Sweden has learning centers near schools to help immigrant students with school activities, home works and recreation.

3. The Study

Rationale of the Study

Banlaem, a district in the northeastern part of Phetchaburi, Thailand, has been facing a rapid increase of Myanmar laborers as other parts of the country have. Most of the immigrant laborers in this district work in the fishery industry. As Myanmar immigrants tend not to practice birth control, they are the ethnic group that produces the highest birth rates in the city. The increased number of immigrant workers also results in a high number of immigrant children. For the case of Banlaem, there is no study on the education of Myanmar immigrant children. Therefore this research is a pioneer work on directions of educational management with community participation for Myanmar immigrant children.

Objectives

1. To understand the context of Myanmar immigrant children' education in Banlaem
2. To explore the community participation in Myanmar immigrant children' education in the local area
3. To find directions for educational management with community participation for the Myanmar immigrant children in Banlaem

Method

This study is qualitative. Data collection is conducted through observations, in-depth interviews, and focus-group discussions.

Research Context

Banlaem is situated in the northeastern part of Phetchaburi province. It consists of 10 sub districts (tambon). The total area is 189.885 km² and total population is 54,068. Population density is 290.7/km² (752.9/sq mi). Sea fisheries along the shore and muddy shore provide a rich seafood resource. The fishery business brought foreign labor and merchant immigrants to live here. Thus, Banlaem residents now are a mixture of Thais with different ethnic backgrounds including Chinese, Muslim, Indian, Burmese, and Mon.

The participants

Criteria for selecting the participants are the introduction from reliable person in the community and on voluntary basis. The informants are from the following groups.

1. Schools administrators
2. Thai teachers from 3 elementary schools
3. Myanmar immigrant students, 10 years old or over, from the 3 elementary schools
4. Myanmar immigrant parents of the students in the 3 schools
5. Myanmar immigrant children, less than 15 years old, working in fishery business
6. Myanmar immigrant parents whose children do not study in Thai schools.
7. Municipal administrators
8. An Immigration officer
9. Village heads
10. Thai and Myanmar in the community
11. School board committees
12. NGO staff
13. Non-formal education office staff

Data collection and analysis

This research collect data from Banlaem district in Phetchaburi province where is highly populated with Myanmar immigrants. The analysis method for the study is content analysis. The

data used for the analysis is documents, interviews, field notes, and other relevant material. The data analysis leads to the following themes and sub themes.

4. Findings

4.1. The context of immigrant children education

4.1.1. Discrepancies between policy and implementation

Thai government has confirmed educational right for all minority groups including immigrant children in the National Educational Act since 2004. However, the number of Myanmar immigrant children enrolling in Thai schools in Banlaem is very small. According to the statistics from Phetchaburi Primary Educational Service Area Office 1, there are only 32 Myanmar children enrolling in Thai schools. The number relates to the following sub themes indicating the discrepancies between the policy and actual practice of educational management for immigrant children.

4.1.1.1 No database of Myanmar immigrant children

Not only the number of Myanmar immigrant students in Thai schools contrast to the policy, but also the lack of database of Myanmar immigrant children from immigration registration office cannot provide information for school age immigrant children. The problem with immigration registration of Myanmar children are from several reasons such as parents' illegal status, parents' constantly moving for temporary labor, no birth certificate, etc.

4.1.1.2 No actual practice guideline

Educational personal in the district indeed realize the rapid increase of school-age immigrant children. These children do not have access to education. Most of them help their parents work in fishery works even younger than 15 years old. They pointed out that the policy to provide free basic education to all children including Myanmar immigrant children is not effective due to the lack of an implementation guide line and organizations in charge of promoting education in Myanmar immigrant children. Therefore, the child's right to education of this ethnic group in the district is still not protected. One school principal said:

"There must be law or regulation. We have Compulsory Education Act for Thai citizen. The government provides basic education for free to them (Myanmar) as well".

4.1.1.3 Child labor

Myanmar labors working for small fishery business usually take their children to workplace with them instead of sending the children to school. When the children are about 9 or 10 years old, they become the labor there. Though labor law does not allow child labor younger than 15 years old, the enforcement of the law is ineffective. Most 12 or 13 years old Myanmar boys work in fishery ships at sea for 1-2 weeks then come back to the land. This practice of child labor closes the opportunity of acquiring education.

4.1.2 Schools

4.1.2.1 Administrators' strategies and vision

Schools in Baanlaem district that welcome Myanmar immigrant students are smaller schools rather than medium or large schools. This is because of the low birth rate of the Thai population. According to the Ministry of Education's criteria, small schools that have students' enrollment of less than 120 will be closed. Therefore, small schools turn the crisis into opportunity when the government provides right to basic education to immigrant children. This strategy depends on the school administrators' vision of education for all and cultural diversity. One school principal voiced his/her idea:

"I had an idea to select Burmese as a second language here for this school. I would like to recruit Myanmar teachers to teach our kids, Thai and Myanmar children"

4.1.2.2 Teachers

Teachers have important roles in Myanmar immigrant students because they are the first school personal that has direct contact with the children. Many immigrant children whose parents do not have information about the school system gain the chance to access Thai schools when Thai teachers conduct their survey for Thai children enrollment in the community. Each year schools will get a list of Thai children from the district that schools have to survey and make sure that children will go to school for compulsory education. Myanmar parents who can speak Thai and are interested in sending their children to school get the opportunity from the survey. Some immigrant children even ask for the chance to go to school by themselves. One teacher shared her experience:

“We went to survey Thai children and we found Burmese children. They asked us if they can study at our school. They are afraid to come by themselves. We told them that we welcome them. We want many students.”

4.1.2.3 Communication

Most Myanmar parents in Banlaem district may be able to communicate with Thai employers and Thai workers at work but they cannot communicate with Thai teachers about education opportunity and the information. They cannot read and write in Thai and do not understand school system and the requirement such as official documents. On the other hand, Thai teachers do not speak Burmese. Therefore, the only chance that Myanmar children can get the opportunity to study in Thai school is through Myanmar students who can speak Thai. The communication between schools and parents went through immigrant students who can read and write in Thai. The students sign their parents' name in official documents such as enrollment, financial aid from the government, etc. The followings are teachers' comment about communication problem:

“The problem that Burmese children do not come to school because teacher cannot communicate with them in Burmese”

“Their parents' speech in Thai is incomprehensible. They don't understand Thai”

4.1.2.4 Myanmar students' learning achievement

Most of Myanmar students study in small schools. The school environment is positive for learning due to many factors. First, the class size is less than 20 students per classroom; therefore, teachers can take care and pay attention to all students. Second, teachers do not have bias and do not discriminate against Myanmar children. They treat all students equally the same. Thai teachers report that most Myanmar students' academic achievement is similar or even higher than Thai students. The reason that most Myanmar immigrant do well in Thai schools is because they start first grade when they are older than 7 or 8 years old. Some of them enroll in first grade at the age of 10 years. Therefore, most Myanmar students are more mature than their Thai classmates. Some Myanmar students experience 3 or 4 years in elementary school in Myanmar before they immigrate to Thailand and start first grade in Thai schools.

“Burmese students are older than our children. Their ages are second or third grade but they first enrolled in our school so we place them in first grade. They learn fast so in second semester we pass them to second grade.” (School teacher)

4.1.3 Family

4.1.3.1 Poverty

The Myanmar immigrant students at the three Thai schools are from economically disadvantaged families. Even though the government provides education at no cost to all children both Thai and minorities, with free lunch, financial aid for school uniforms, books and school materials, the labor families are struggling with other expenses to send their children to schools. The expenses are such as breakfast, commuting cost and extra curricular activities. Many Myanmar families cannot afford these expenses; therefore the immigrant students drop from elementary schools

before they finish the sixth grade and become laborers like their parents to support their families. Studying in Thai schools with the same support that Thai children gain from the government such as free milk and lunch is the motivation that Myanmar parents send their children to schools. The immigrant students prefer going to Thai schools because they receive better food at schools than at their home. In addition, as the schools situate in Buddhist temple area, Thai Buddhists usually come to the temples to make merit and host delicious lunch for the students. One teacher provided her observation as the following:

“Food at schools is better than food at their homes so they like coming to schools”

4.1.3.2 Parent education level

Most Myanmar parents have learning experience in primary education in Myanmar. Some of them graduate primary schools but some of them do not finish primary education. Very few of them went to junior high schools. They can read and write in Burmese but not in Thai. They can only sign their name in Thai for official documents. Though they can read and write in their mother language, they do not consider reading at home important. All of the immigrant students mention that their parents never read Burmese literature to them and there is no reading activity at homes. In stead, the parents rely on the immigrant students for reading utilities bills and medicine instruction.

4.1.3.3 Thai language and interaction with Thai community

Myanmar immigrants communicate in Burmese in daily life and at work. They mostly contact with their own ethnic group. Myanmar laborers that do not have contact with Thai usually do not speak Thai well even after more than 10 years of living in the Thai community. The immigrant students whose parents do not speak Thai and live in ethnic enclave have strong influence of their first language on Thai. However, the strong accent of Burmese in their Thai speech does not impede their studying at Thai schools. The interaction between Myanmar laborers and Thai community are mostly limited to the laborers and their employers or Thai workers at the same workplace. Besides the work, the immigrants need to rely on their employers for communicating with Thai officials, immigration registration, health care, and their children enrollment in Thai schools. One teacher gave the following comment on the immigrant students' second language (Thai) and their learning at school.

“They (the immigrant students) speak Burmese at school. I told them to speak Thai at school because here is not Myanmar. Sometimes their Thai speech is difficult to understand. Sometimes I need to ask them to repeat 3 times until I get it. But they learn well and their hand writing is good.”

4.1.4 Community

4.1.4.1 Myanmar community

There are many Myanmar houses in sub-districts in Banlaem, which develop into ethnic communities. The community is very crowded as a large size family living in the same one- room house. Therefore the hygiene and environment around ethnic community is deteriorating. Moreover, the Myanmar house communities are perceived by local Thai as unsafe and scary for outsiders. The most scary scenes for Thai local are the laborers gathering drinking groups and turn to serious fighting when they are drunk. However, for the laborers, they perceive that their lives in Banlaem are comfortable and good for income. Thai parent and Myanmar parent gave the following perspective.

“They go to the sea for many days. Once in a while they come back from the sea. The neighbor near Myanmar houses is in trouble. They drink and fight. Sometimes they kill their drinking mates” (Thai parent)

“Life in Thailand is good. I have job everyday and I earn money.” (Myanmar parent)

4.1.4.2 Thai community

Environment around communities in Banlaem have changed since there has been a flood of Myanmar labors into the district and rapid increase of birth rate of Myanmar children. Perceptions of local Thai depend on their contact with the labors. Thai employees, Myanmar house landlord, and Thai merchants who do business with the labors gain the most benefits and are positive about them.

“Most Thai employers like Myanmar labors because the labor cost is cheap. This is a problem if the employers use illegal labors. These illegal labors become social problem. Our people are too selfish.” (School principal)

However, for Thai workers, though they do appreciate Myanmar laborers hard work, they feel threatening and insecure for their jobs.

“Now we do not have OT (overtime job) because Myanmar labors replace us. They live near the factory. The employers hire Myanmar because they can cut costs for labor transportation. We live far from the factory. The employers have to provide the transportation. But for Myanmar, there is no transportation cost”

For local Thai who do not have contact with the labors, some of them do not like the environment around Myanmar houses, most of local Thai are impressed with Myanmar strong faith in Buddhism and their practice of merit making based on Buddhist principles.

“Each year they offer Kathina to every temple in Banlaem” (Thai parent)

“Their good point is that all Myanmar love merit making” (Thai parent)

Thai parents, though they do not have direct contact with Myanmar, they have worried if there are many Myanmar students in Thai school.

“School uses only Thai for instructions. Myanmar children do not speak much Thai. They don't understand much Thai. They understand more in Burmese. If they are in the same class, Thai teachers may have to slow down for them to understand. This can slow learning pace of Thai children too”

Findings 2

4.2 Community participation

4.2.1 Myanmar parent

Immigrant education research suggests that community participation in immigrant children education plays an important role in their academic achievement and reduce the achievement gap between immigrant children and mainstream children. In the case of Banlaem district, less than 5% of the immigrant population have just began to enter Thai elementary schools in a couple of years, it will take 3 or 4 years to see the first cohort of immigrant children academic achievement when they finish elementary schools. Therefore, the current issue is not the gap of academic achievement but the opportunity to gain access to get education in Thai school. This needs communication between parent and schools but this does not exist. Also, for all immigrant students at the three schools, there is no parental support for their children learning because most of the parents cannot read and write or even speak in Thai.

4.2.2 Thai & Myanmar Communities

Myanmar laborers usually don't have interaction with local Thai except with their employers and Thai workers at workplace. They live in totally ethnic enclave. They can help each other for basic needs, but not for education. Most immigrant children who are studying in Thai schools right now gain access from the help of local Thai who live near by Myanmar community or local Thai who work at the same place with the immigrant laborers. But this is individual basis. Right now there is no support group to extend access for education for Myanmar children in the community

4.2.3 Local organizations

Community participation can play more roles on immigrant children education with the support from the local municipal. Right now the municipal is in charge of 5 preschool programs for all children in the district. This is to prepare their readiness before they go to kindergarten. Immigrant children have right in this service as well. But the immigrant families have no means to access the service. They don't communicate in Thai. They don't know about the information. The parents' illegal status is also a problem. Non-Formal Education provides free basic education to all generations who cannot access formal education including minorities in Thai society. They can provide basic education, vocational training, and necessary skills to live in Thai society. But they have not reached out to immigrant laborers and children because of language barrier and the requirement of official documents.

4.2.4 NGOs

Immigrant education research often shows the active role of NGO in immigrant education. However, no NGO plays the role in Banlaem. There was one NGO helping Myanmar immigrant laborers in the community with their health care, such as HIV and disease protection. However, immigrant education is still not its concern. NGO in the community works with Thai hospital for humanitarian purpose in providing vaccine injection to all immigrant infants. The NGO and the hospital seem to be able to communicate with Myanmar laborers but education is not their concern. In the past 3 years, the NGO managed a classroom for Myanmar children. The class was taught by Myanmar staff working for NGO, but Myanmar parents complained that their children still cannot read and write. The parents who have relatives or families in Myanmar tend to send the children to be educated in Myanmar. Right now the NGO has moved to work in nearby province because that province is near Myanmar border and much highly populated with Myanmar laborers.

5. Suggestions for direction

To conclude, the number of Myanmar immigrant students in Thai schools in Banlaem district is extremely small. Moreover, community participation from various groups in the students' education is underrepresented. The followings are proposals for community participation to promote education opportunities for the immigrant children in the district.

- 1) Policy: Ministry of Education needs to cooperate with Ministry of Interior to require the local registration office to create immigrant children data base so that local schools can reach out to these children. Also, Ministry of Education have to provide information about Thai school system in Burmese and have all documents in the language that school personal can distribute to Myanmar community when they visit students' homes.
- 2) Local municipal: To help adaptation to Thai institution, immigrant children should be prepared since preschool level. This will support them to be ready in mainstream school and socialization in Thai society. Local municipal should work with Myanmar parents and Myanmar community by inviting volunteers to be teaching assistants for preschool programs.
- 3) Thai and Myanmar community:
Schools should work with their current Myanmar students to bring Myanmar cultural knowledge to classroom, and to invite Myanmar parents to present their cultural knowledge in classroom. This will establish relationship between two ethnics and two communities, which contribute to mutual understanding and rich human resource for the local future.

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Supporting Dyslexic Children in Learning Multiplication Facts with a Software-based Scaffolding: A Malaysian Experience

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INTRODUCTION

Learning disability is a neurobiological disorder affecting the structuring and functioning of a person's brain. This mental condition affect a person's ability to speak, listen, read, write, spell, reason, recall, and reorganize information; and it poses a significant difficulty in learning mathematics (The Coordinated Campaign for Learning Disabilities, 1998). Among the common types of learning disability is dyslexia. Lokerson (2002) defined dyslexia as a severe difficulty in understanding or using one or more areas of language, including listening, speaking, reading, writing and spelling. Joffe (2005) found that dyslexic students would not only have trouble in reading, writing and spelling, but also in mathematics. The same researcher contends that a high proportion of dyslexic students – at about 60% – would typically face difficulties in learning mathematics, which raises serious educational implications. The various degree of severity of dyslexia further heightens this matter. There are several clues to diagnose children with dyslexia, but because each individual is different, not every child exhibits the same symptom (Baumer, 1996). Thus, dyslexic students would require extra support and motivation in learning, particularly for unfamiliar, new tasks. Various learning strategies have been conceptualized to help these students and invariably the application of technologies seems to be a major choice. One fine example is to employ a multimedia courseware, which is designed based on critical scaffolding principles that can help students with learning disabilities namely dyslexia (Barry & Pitt 2006; Jackson, Krajcik, & Soloway 2005).

Judge (2001), and Quintana and Fishman (2006) cautioned the lack of adequate research on multimedia courseware that integrates scaffolding principles into the courseware development as most of these were based on scaffolding designed for teacher (Lepper, Drake & O'Donnell-Johnson 1997; Wolery, Ault & Doyle 1992). Only a few research are related to scaffolding which focus on the design of digital learning environment for children. Beale (2005) states that interactive, digital multimedia can serve as an ideal platform for intelligent learning environment using scaffolding strategies. He also suggests a few learning concepts that were derived from the behavioural research literature, which is relevant to the design of scaffolding components in the digital learning environment. According to Beale (2005), errorless learning, knowledge or prerequisite skills, immediate positive feedback, motivation to learn, and cognitive loading are among the behavioural concepts deemed critical when designing a learning environment with scaffolding principles. In view of the lack of multimedia courseware with scaffolding strategy for use by dyslexic students, the need to develop such a learning tool grows more and more

imperative. Thus, the design, development and application of a multimedia courseware (i.e., multiplication module) with scaffolding strategy have been carried out by the researchers to address the prevailing learning issues faced by the dyslexic students. Two main research objectives to set the direction and aims of the study are as follows:

- (a) To develop a multimedia courseware (i.e., multiplication module) using scaffolding strategy and Mnemonic V-A method that can help dyslexic students to learn multiplication,
- (b) To evaluate the usability (i.e., flexibility) of the multimedia courseware as perceived by the dyslexic students.

The main focus of this study was on the learning problems experienced by eight (8) dyslexic students of a special dyslexic school in Titiwangsa Kuala Lumpur, Malaysia in learning multiplication table (Multiplication tables 1-5).

SCAFFOLDING MODEL

A scaffolding model is an important model or tool that can help dyslexic students to improve their mathematical literacy. Scaffolding models (multiplication tables 1-5) have been developed and integrated into the courseware (multiplication module) in order to assist dyslexic students learn multiplication tables effectively, and at the same time to motivate them in the learning process. Integrating scaffolding into the courseware would assist learners in learning through appropriate support that gradually increases learning independence (Torgeson 2004). Eight scaffolding models for multiplication for number one (1) to number five (5) have been developed to assist the dyslexic students. The models are based on two main strategies: Strategy 1 and Strategy 2, which are summarized in Table 1.0.

Table 1.0: Strategy models for the multiplication module

Strategy:	Description:	Model name:
Strategy 1a	Scaffolding model for multiplication with number 0	MSDN-0
Strategy 1b	Scaffolding model for multiplication with number 1	MSDN-1
Strategy 1c	Scaffolding model for multiplication with double numbers	MSDN-2
Strategy 1d	Scaffolding model for multiplication with number 5	MSDN-5
Strategy 1e	Scaffolding model for multiplication with number 9	MSDN-9
Strategy 1f	Scaffolding model for multiplication with number 10	MSDN-10
Strategy 1g	Scaffolding model for multiplication with number 11	MSDN-11
Strategy 2	Scaffolding model for multiplication of numbers in pegword category	MSDN-PegW

Example of the scaffolding model related to Strategy 1 is shown in Figure 1.0. Scaffolding model for multiplication with number zero consists of several elements: (i) category of number, (ii) strategy chart, and (iii) method in gaining an answer. The category of the number in the

strategy refers to number zero; the strategy chart refers to the rule or procedure that has to be performed by the system, which is based on student's response; and the method in gaining an answer refers to how to get an answer through an example. Figure 1.0 shows the model used in the study.

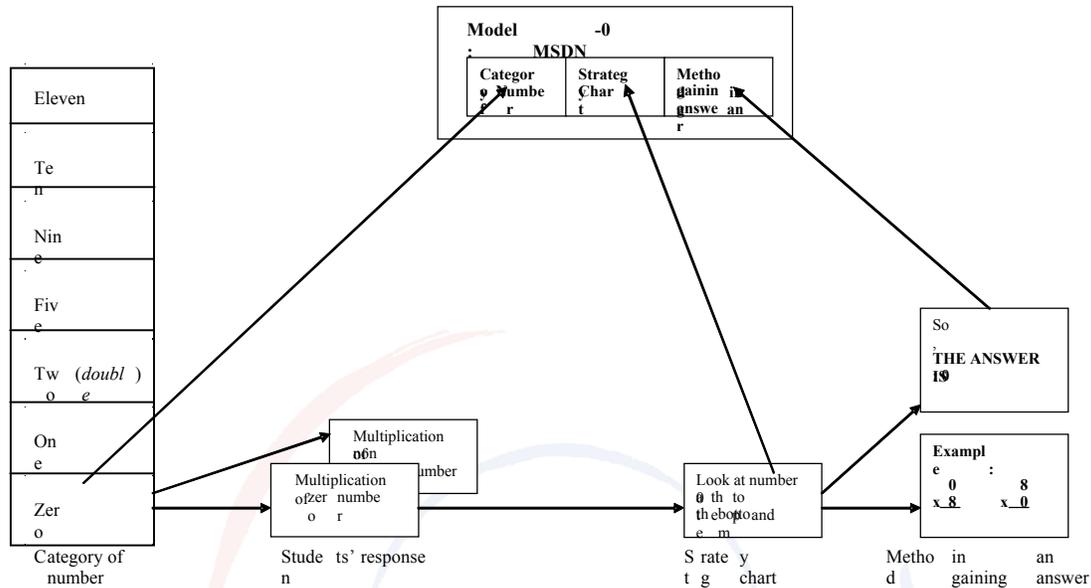


Figure 1.0: Strategy 1 - Scaffolding Model for multiplication with number 0 (MSDN-0)

THE DEVELOPMENT OF THE MULTIPLICATION MODULE

The development of the multiplication module has been carried out to assist and motivate dyslexic students in learning the multiplication table. The targeted group comprised a standard four dyslexic student (i.e., a fourth grader) of the special dyslexic school in Titiwangsa Kuala Lumpur and other seven dyslexic students. The module could also serve as an alternative learning material in learning multiplication table for the targeted dyslexic student as well as other dyslexic students. The multiplication module has been packaged into the CD format. The screen shot for the introduction of the module is shown in Figure 2.0.

The multiplication module comprises three sub-modules: *Belajar* (Learning), *Latihan* (Exercise) and *Aktiviti* (Activity) as depicted in Figure 2.0. The contents of the multiplication table were presented in the Malay language to suit the needs and syllabus requirements of the participant.

Sub-module *Belajar Darab* (Learning Multiplication Table) was designed for the purpose of learning multiplication tables of numbers ranging from one to six using scaffolding strategy and Mnemonic V-A method. Mnemonic V-A method consisted of two steps which were *Langkah 1* (Step 1) and *Langkah 2* (Step 2). In *Langkah 1*, it involved the numbers such as 0, 1, double (2,2), 5, 9, 10 and 11; meanwhile in *Langkah 2*, it involved the numbers in *pegword* category, meaning that the numbers which were not involved in *Langkah 1*.

Figure 3.0 shows the first screen in sub-module *Belajar Darab*. The screen introduces the Mnemonic V-A method to the dyslexic students using an approach of mind mapping concept. Hence, it could help dyslexic students gain the overall view regarding what they will learn. On top of that, the integration of multimedia elements such as animation, text and audio were presented in an interesting way, in order to encourage dyslexic students to explore the following screen.

Meanwhile Figure 4.0(i) to Figure 4.0 (v) are examples of screen for demonstrating multiplying number of category 9 in *Langkah 1*. These screens show the technique of memorizing multiplication table of 9 using Mnemonic V-A method.

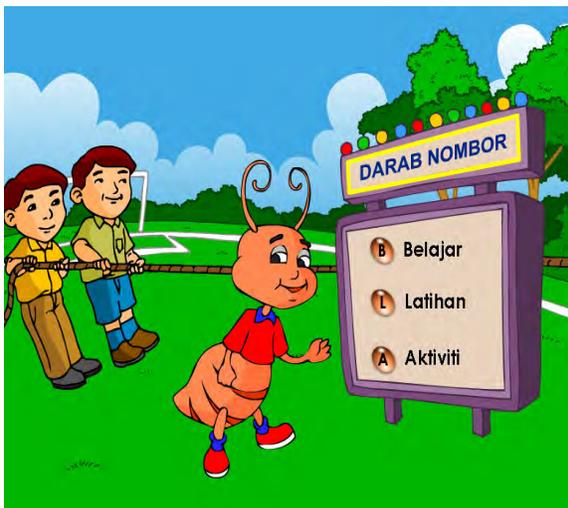


Figure. 2.0: The selection icons of the Multiplication Module



Figure 3.0: The Mnemonic V-A method in sub-module Belajar Darab

The screen shot for one of the exercise in the *Modul Darab Nombor* (Multiplication Module) is shown in Figure 5.0. The participant was required to answer a given question and then the system would respond accordingly to provide the correct solution. The pupil used the scaffolding approach as a problem solving aid, which is based on the scaffolding model discussed earlier. By integrating the model into the module, the system would be able to assist the dyslexic student in solving a series of multiplication problems within the stipulated phase. Figure 5.0 has also integrated the Scaffolding model aspect through preparing an appropriate answer selection, and based on dyslexic students' response to the system.



Figure 4.0(i) First Screen of *Langkah 1*:
Number 9 Category



Figure 4.0(ii) Second Screen of *Langkah 1*:
Number 9 Category



Figure 4.0(iii) Third Screen of *Langkah 1*:
Number 9 Category



Figure 4.0(iv) Fourth Screen of *Langkah 1* :
Number 9 Category



Figure 4.0(v) Fifth Screen of Langkah 1: Number 9 Category



Figure 5.0: Screen sub-module Belajar Modul Darab Nombor based on Scaffolding model

This research has produced a mathematics courseware for dyslexic students where its content and interface were found to be well accepted by the pupils. The dyslexic students were very excited and inspired to learn mathematics owing to the interactive and appealing elements of the courseware namely the flashy question pop-ups, animation, colourful background, prompt feedback of answers and audio narration.

After the completion of the multiplication module by the dyslexic student, a flexibility test was conducted where the multiplication module was again given to the same student, and student's feedback was obtained after three months. The frequency of use of the multiplication sub-modules of the multiplication module by the student serves as the measure of the flexibility of the learning tool.

METHODOLOGY

This study was based on the design and development research "... [involving] the systematic study of design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional and non-instructional products and tools and new or enhanced models that govern their development" (Richey & Klein, 2007). The development of the multiplication module used the courseware engineering principles involving the integration of Instructional Design Methodology (ADDIE model) and Software Development Methodology (Rapid Prototyping). According to Bostock (2003), courseware engineering is a mix of two well-established disciplines: software engineering as the process of developing business software, and the instructional design as the process of developing instruction for delivery by computers or other means. The combination of the development, implementation, evaluation phases and prototyping process is shown in Figure 6.0. Qualitative data to test the flexibility aspect of the D-Matematika courseware were gathered based on an ethnographic method through observations.

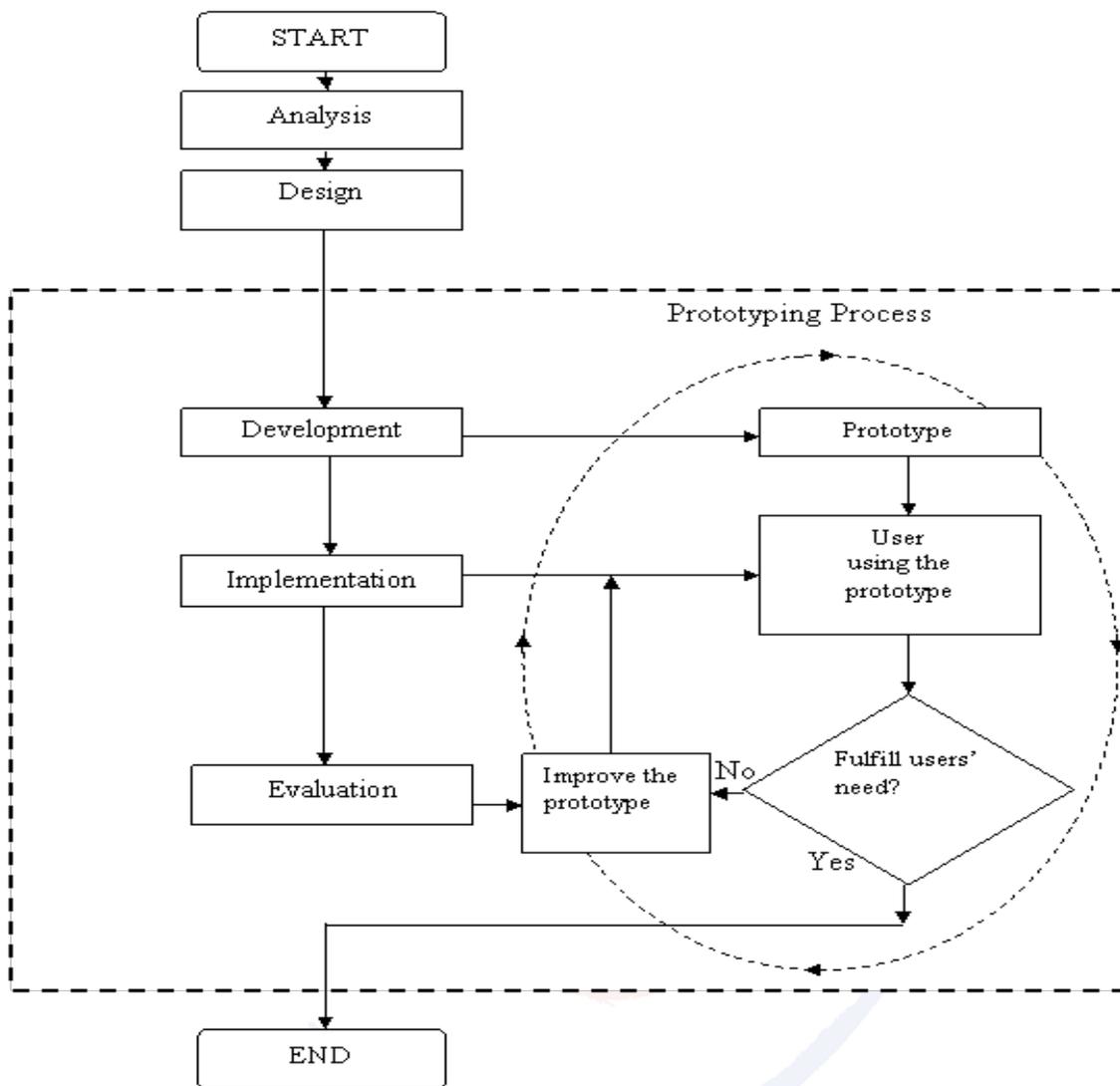


Figure 6.0: A combination of development, implementation, evaluation phases and prototyping

Respondents

As for the observation, eight (8) dyslexic students were drawn from the special dyslexic school in Titiwangsa, Kuala Lumpur. Their mean age was eight (8) years and their academic achievements were approximately similar as informed by their teachers. Parental consent was secured from respective parents prior to the observational exercise.

This relatively small sample size comprising eight pupils is within the recommended values as the evaluation of a prototype especially for use by students with learning disability is normally performed through a small sample size (Gagne, Briggs, & Wager, 1992; McKethan & Everhat,

2001). This standpoint is practical to test the effectiveness and usability of a software in detail before a complete, working software is developed. According to Virzi (1992), a sample of 4-5 pupils is enough to identify 80%-90% of learner's usability problem, especially for learners with learning problem. In assessing the effect of a teaching package in solving a multiplication problem, Wood, Frank, and Wacker (1998) used only three students and managed to obtain detailed and useful findings. With eight pupils, this study would be able to reveal findings pertaining to the flexibility construct of the multimedia courseware that are adequate and reliable.

Research Instrument

The main instrument used by the researchers in the study was based on a checklist known as the *Senarai Semak Matematik Ujian Keanjalan – (SSMUK)* for dyslexic students. Learning activities performed by the dyslexic students were meticulously observed and recorded.

Data Gathering/ Research Procedure

The research procedure was conducted based on two phases as follows:

Phase 1: Obtaining written permission from the chairperson of the special dyslexic school in Titiwangsa Kuala Lumpur and parents of the dyslexic students before the implementation of the observation.

Phase 2: Working with the selected dyslexic students. An ethnography method was used in this study to test the flexibility aspect of the courseware based on the frequency of use of the multiplication module through a check list. Throughout the learning activities, the researchers managed and overlooked all the interactions and observations with the assistance of the teachers who taught these students.

Data Analysis

The ethnography method was used to analyze the observation and the interaction with the dyslexic students. The frequencies of use of the sub-module *Belajar* (Learning) were recorded in order to gauge and measure students' improvement. The participants were observed four times spanning three months namely first, fifth, tenth and twelfth weeks.

RESULTS AND DISCUSSION

The results show a gradual decrease in the use of the multiplication sub-modules over this period of observation. The first participant used the multiplication sub-modules thrice on the first observation (week-1), twice on the second observation (week-5), only once on the third observation (week-10) and he did not use the module at all on the fourth observation (week-12). The table also shows that the third student (S3), the sixth student (S6) and the eighth student (S8) did not use the module at all on the fourth observation (week-12). Even though the results show students S2, S4, S5 and S7 had used the multiplication sub-modules once on the fourth observation (week-12), a gradual decrease in the use of the multiplication sub-modules over this

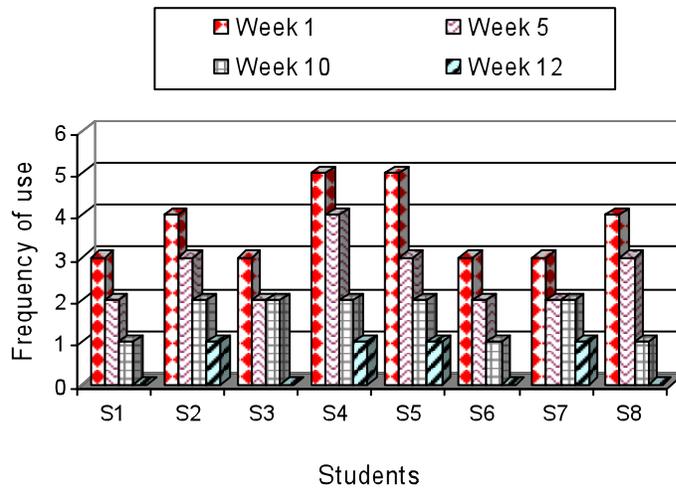
period of observation was quite apparent. Table 2.0 summarizes the frequency of use of the multiplication sub-module by the participants over this period.

As expected, the use of the multiplication module's *Belajar* (Learning) was quite high beginning the earlier phase of the learning process. The frequency of use of this sub-module dropped slightly on the fifth week and continued to decline gradually on the tenth week. Eventually, the participant did not resort to using this sub-module when performing the rest of the activities in this study namely the *Latihan* (Training) and *Aktiviti* (Activities) sub-modules. Evidentially, the participant had gained sufficient level of understanding of the multiplication concepts that eventually weaned them the scaffolding feature of the multimedia courseware. This particular finding shows that the multiplication module is promising and highly flexible through the scaffolding approach (i.e. the fading characteristic).

The purpose of the scaffolding approach was to give an indirect support to the dyslexic student making him more comfortable and confident with himself. Pahl (2002) also supports the integration of scaffolding approach into the courseware development where users will gradually become less dependent of this cognitive support as they become more confident in performing the tasks. The scaffolding model developed was demonstrated to be flexible in fulfilling the needs of the dyslexic student in learning multiplication operations. The result of the study concurs with Tinker's (2001) analogy that likens the software to the scaffolds of a construction site that are readily adjustable to individual needs – as when desired and required.

Table 2.0: Frequency of use of the multiplication sub-modules

Activity	Week	Frequency of use							
		S1	S2	S3	S4	S5	S6	S7	S8
Students		S1	S2	S3	S4	S5	S6	S7	S8
First observation	1	3	4	3	5	5	3	3	4
Second observation	5	2	3	2	4	3	2	2	3
Third observation	10	1	2	2	2	2	1	2	1
Fourth observation	12	Nil	1	Nil	1	1	Nil	1	Nil



In many instances in Malaysian schools, most teachers use an array of multimedia courseware that were developed by the Curriculum Development Centre; and invariably these learning tools are primarily designed for normal students. However, these software lack instructional strategy for teaching dyslexic students where the need for scaffolds is imperative for meaningful learning (Nor Hasbiah, 2007; Sri Fatiany Abd Kader & Ismail, 2008, Zainuddin et al., 2009).

Due to their limited cognitive ability, dyslexic students would face problems in understanding the multiplication table concepts introduced to them. Retention of knowledge is also compromised, as they do not possess well-developed working memory (Nor Hasbiah, 2007) which concurs with another finding affecting deaf students (Zainuddin et al., 2009). Hence, the integration of the Mnemonic V-A method in the courseware could act as a cognitive tool for helping dyslexic students in recalling information.

In light of this dire situation, the finding of the study provides a strong case for instructional designers and developers to invest more effort in developing specific, customized learning tool for disadvantaged pupils. This will help create a learning environment that is conducive and supportive through computer-mediated scaffolds to improve the learning process, which is challenging in many learning domains, particularly in mathematics.

CONCLUSION

This study provides evidence that the integration of scaffolding approach and mnemonic V-A method into a multiplication module is efficacious in helping dyslexic students to learn multiplication operations. The multiplication module based on this design can serve as an effective learning tool where students with dyslexia will be supported through computer-enhanced scaffolds. These scaffolds serve as a very crucial cognitive support especially during the early phase of the learning process of the multiplication exercises. However, several improvements need to be addressed in developing future learning module. These include the

addition of the multiplication tables of numbers ranging from six to 12 into the module. Greater sample size of dyslexic participants is entailed to improve the validity of the test results and the views of the experts can be sought to shed more insights on the learning of mathematical operations. Overall, this study has revealed promising result that can further enrich the body of knowledge pertaining to the learning of students with dyslexia symptoms.

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TITLE

Identifying the needs to facilitate effective mentoring relationships

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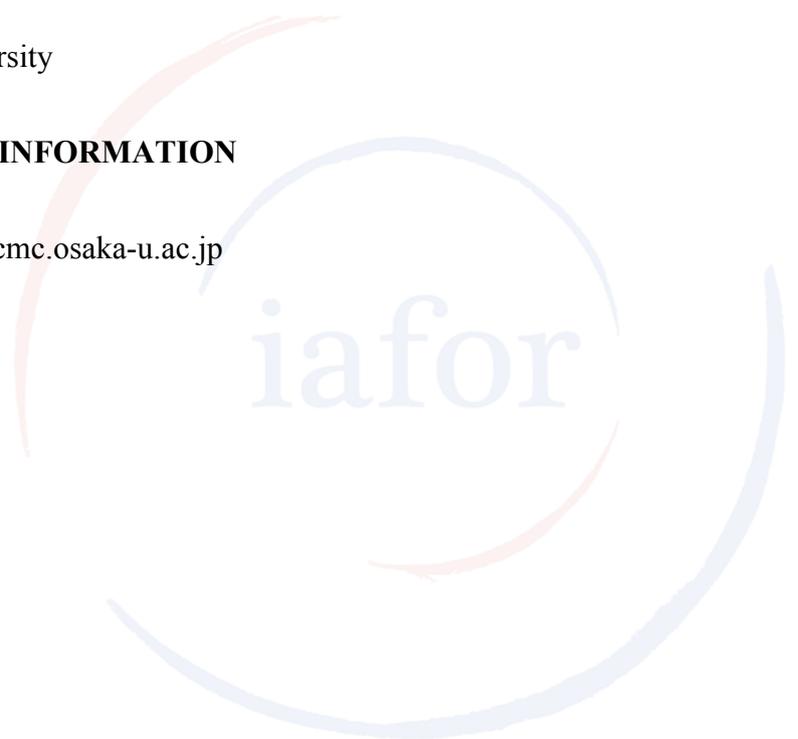
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The logo for the International Association for Frontiers in Education (iafor) is centered on the page. It features the word "iafor" in a light blue, lowercase, sans-serif font. The text is enclosed within a circular graphic composed of two overlapping, curved lines. The upper line is a light red color, and the lower line is a light blue color, creating a sense of motion or a stylized 'O' shape around the text.

TITLE

Identifying the needs to facilitate effective mentoring relationships

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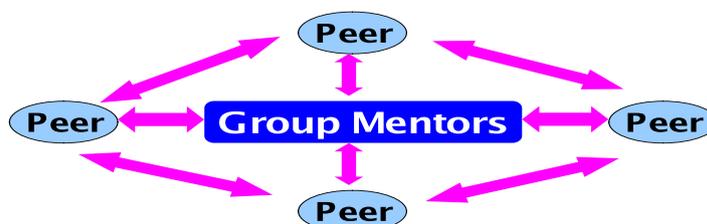
Osaka University

Our Group Mentoring initiative was implemented to provide a platform (Mailing List and other activities) to faculty members to discuss about teaching and learning, and help us in identifying education and training needs. This approach was given preference over, the traditional pair mentoring (mentor-mentee) approach because after doing an initial announcement for pair mentoring, we received feedback opting for group-based mentoring set-up rather than a pair set-up. The main reasons for avoiding a pair set-up was the feeling of a sense of official responsibility towards another colleague and some were uncomfortable meeting on one to one basis.

We realized that a group mentoring may offer a more relaxed and informal environment in which faculty members could interact with each other and share valuable information related to teaching and learning as that was our main aim. Therefore, we established small groups of eight faculty members for a semester who would interact regularly with-in the small group and receive guidance and support.

It provided a strong support system where each participant fulfilled their duty as a trusted member and guide. We observed the development of strong and meaningful relationships, where a group of faculty members could rely on each other for feedback and guidance related to their course or university life at the hour of need. (fig. 1):

Structure of the group mentoring program :



Why Group Mentoring ?

It was an opportunity for the faculty members to have a sounding board where they could discuss about their teaching experiences and get useful feedback from colleagues in a positive group environment. Members of the current program reported the benefits of helping each other and sharing information on course design and teaching aspects. It had a positive influence on their teaching performance and the process of continuous exchange of feedback and guidance encouraged them to achieve better results. Peers also played a crucial role in helping each other network with colleagues from their own as well as other disciplines. The interactions helped members in fulfilling their academic needs as well as friendship and a support system.

These results represent a new dimension to the group mentoring set-up. It not only fulfills teaching and learning needs but also helps each of them in growing academically and socially. In a certain way it is the zoomed-out image of pair mentoring, set in a broader context with members bringing with them a range of experiences that they share with each other. Each member played a significant role in making this program a success. All of them found this platform extremely useful and wanted it to continue and grow in the future. The significance of peer interactions in higher education was felt deeply through these meetings.

Highlights of the Group Mentoring relationships

As it is a group set-up the relationship between participants are easy and casual, compared to mentor-mentee relationships which are more deep and nurturing in nature. However, there was consistency in the relationship and a strong sense of a joint responsibility toward each other did not go unnoticed. The members used different activities to stay connected with each other. They met and mailed each other regularly and had get-togethers for discussion on chosen topics. There was an inherent interest in talking about teaching and learning. Members were also open to one to one meeting if there was a definite need.

Our findings support that faculty members want more such platforms where they can get together to share views on teaching and learning. The following feedback was received from the members of the group regarding the mentoring program.

- **Feedback from group members regarding class progress in the fall semester**
- 1. The **classes got better** with time.
- 2. Student **response was better**.
- 3. Students had a heavy workload. They were subjected to almost 3 exams during the semester.
- 4. Slides were reduced 70-50, **less contents** were considered better
- 5. **Preparation** → The textbook and materials for class are set, however recompiling files needed a lot of preparation time.
- 6. Students not doing **prior preparation**.
- 7. Get more **Japanese teachers involved from different areas** Professors with common areas can exchange opinion on discipline specific teaching and learning.
- 8. Discuss more about **how to motivate students**.
- 9. Delve into **higher/deeper approaches** to teaching and learning.
- 10. **Details** of the members on the **web** → Class size, course details etc.
- 11. **Mentoring webpage/ blog** would help to spread and develop awareness of the mentoring program
- 12. **Continuation** of the mentoring program and future plans; Change to T&L Discussion Group
- 13. **Organizing** Workshop on Mentoring.

Barriers in Group Mentoring

Though there is a considerable research on pair mentoring (mentor-mentee), there is hardly any literature on group mentoring as educational developers have not been very keen on this approach. Though group mentoring has started to be accepted widely, there are questions regarding the quality of this approach. As it is a set-up where there is a lower sense of responsibility in fulfilling the needs of each member and attention in not

given on individual basis the traditional pair mentoring is considered more effective in the academic growth of the members. Time constraints and limitations in structuring group activities is another challenge which is common while working with a group, due the varied of interests of the members and it is difficult to do justice to all.

Finally, our preliminary observations from this study, point to the fact that group mentoring works for faculty members who are uncomfortable in a pair mentoring set-up. Along with getting involved in group interactions on teaching and learning they are also keen to achieve higher outcomes in teaching and learning. The relationship among members was not very deep but it was consistent. They collaborated with each other to achieve the group's goals and activities. Regular interactions with the group helped them grow not only academically but also socially.

As a follow-up to this program we organized a group mentoring workshop, where faculty members could learn about the various aspects and advantages of mentoring. Our aim is to create organizational awareness towards the benefits of the program further, provide multiple opportunities and launch other new initiatives related to this program.

We are providing on-going support and also training members to be mentors. Create a bigger task force that would help us in monitoring the progress and carry out evaluations. We have realized the scope and value of this program and hope continue to with our program as well as the study of group mentoring approach.

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**Integrated Academic Information System
In Relation of Enhancing the Competence of Teacher
In the Web Based Learning Method**

Topics: Technology in Learning

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Abstract

The teacher profession nowadays has been the professional position in education. The teacher's professions, has been described by the Law of the Republic of Indonesia in 2003 on National Education System and stated as the professional profession, there for it has a significant role.

Such demanding role has requires teachers to continuously improve the competence of expertise, as already been organized by the Ministry of National Education Regulation No.16, 2007. In line with those competencies and the demands of the era and technological advances, the teachers are required to continuously improve competency by developing a creative learning process and materials and the varied contexts in science and technology development.

But when it comes to terms of teaching, teachers in Jakarta mostly in Jatinegara's village weren't familiar with learning by internet. The schools' site was rarely used to including the teacher's learning sites and that would make their students less in using the schools' site in learning matter. This would lead to teachers' insufficient knowledge in learning the information and technology advancement in web-based media and the improvement of their competency would be difficult to meet.

Keywords: Integrated academic, Information systems, Web-Based Media

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I. Introduction

The Advances in information technology and rapid communication has resulted in the latest product innovations and most advanced in terms of facilities and infrastructure that facilitates the work of men. In human life and organization, utilization of innovative products that can save distance and time in the execution of a job would result in efficiency and high productivity. Similarly, the organizations such as educational institutions for example schools, where the transferring of knowledge through communication and information technology in the learning process requires capable supporting medium and reliable one to fulfill the purpose of education itself.

Information technology that needed in education is one of facilities and infrastructure that must be provided by the school and have been set in The Ministry of National Education Regulation of Indonesian Republic No. 24 of 2007 on Standards for School Infrastructures. For high school, completeness standard of facilities and infrastructure are for example has a computer laboratorium space with a sufficient number of computers for students and teachers and has an adequate local area network. The space must also be supported by an internet access point in the school's portal in the form of wide area network or the popular so-called hotspots, so that students and teachers can access science and technology information freely outside the laboratory area but still within the school environment.

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The school property portal of which in this research has the address at <http://www.sman107.com>. This portal has been designed so that teachers can access the menu of School Administration System with the link <http://202.149.85.50/>. The School Administration System is managed directly by the Ministry of National Education and the students' score which uploaded by teachers into the data bank would be processed periodically. The e-learning facility just created recently, respectfully due to the after training conducted by **JICA** and **GWY** to one of this research's author in 2010. JICA and GWY have provided intensive and useful trainings in information technology used in education and business field.

The idea of integrating academic information system was emerged after observing Gifu textile center and the Information and Technology Center in Ogaki where the information technology have developed in their integrated online systems.

The idea was then transfered to the teacher through the creating of teacher's blog by an activity called dedication to society activity. Since then, the teacher have been developing and integrating web based learning into their academic information system website. This research was conducted to find out the relation of integrated academic information system in enhancing the teacher competence by using the web based learning method.

Hopefully this research would give benefits as inputs for the improvement of teacher's learning method, variabels that will influence teacher's motivation about their future profession, enhancing teachers in their competence of

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assessing the advancement of learning technology during their teaching activities.

II. Theoretical Background and Hypotheses Development

The system is a group of components that work together in receiving input from the environment outside the system, organize and communicate the results as output to interested parties to achieve certain goals¹. Academic information is information about all things related to academic issues of interest to educators and students to be able to communicate with each other². Teachers need information systems for the purposes of transferring academic knowledge to students, submit an assessment of student learning outcomes and communicate with colleagues to develop themselves and their profession. Meanwhile students need the academic information system for the purpose of learning and knowing the results of their academic progress.

Due to the needs of teachers and students as the academic schools side and the Ministry of National Education as the authorities, it needs be designed of academic information system that connects directly between teachers, student and academic school with the Ministry of National Education. In line with the advances in information and communication technology, the

¹ Winarno, Wing Wahyu, Sistem Informasi Akuntansi, 2002:1.3

² Mazalisa, Zaniel, Analisis Pengaruh Kualitas Layanan Sistem Informasi Berbasis Komputer Terhadap Kepuasan User di Universitas Bina Dharma, Palembang, 2010

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world of education, especially high schools teachers face the challenge of developing learning methods that can accommodate the demands of quality education and fulfilling their professional teaching.

According to Davis (1986) in the research of Agustiani Nurul Huda (2010), the Technology Acceptance Model theory explains that the perception of users will determine the nature of the benefits of technology. Information systems technology is considered useful if it easily operated by users. But if it is considered difficult to operate, the information system technology would be rarely used. Technology information system will also provide an effective benefit and contribution to the performance if they can be used well³. According to Idi Rathomy Baisa, the use of information systems technology is said to be good if it gives maximum benefit to the person's or organization's performance to be able to achieve its objectives. The basic characteristics of a person related to effective or superior performance criteria in a work called competence⁴.

Competence is an underlying characterize, is caused by the characteristics inherent in the deepest part of one's personality and can predict a variety of situations and types of jobs⁵. In the world of education, competence has meaning as the knowledge, skills, and basic values are reflected in the habit of thinking and

³ H.C, Lucas & Spitler, V.K, (2000). “*Implementation in a world of workstations and networks*. Information & Management, 38:(2), (119-128).

⁴ Lyle M., Spencer, Jr. & Signe M., Spencer. (1993). *Competence at Work: Models for Superior Performance*. John Wiley & Sons. Inc

⁵ Ibid: 4

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acting⁶. Competence is the ability of standard mastery of knowledge, skills and values fundamental to any profession, especially for the teaching profession that must be met in carrying out duties and responsibilities of his profession as well.

Teaching profession has been described by the Law of the Republic of Indonesia Number 20 of 2003 on National Education System as a professional job which has been mandated in the context of fulfilling the national goals of the nation's intellectual life. The demanding of this role requires teachers to continuously improve the competence of expertise, as stipulated by Act No. 25 of 2000 on National Development Programs which includes pioneering the establishment of The Accreditation and Certification of Teaching and Teacher Competency standards.

In connection with the implementation the Act of the Ministry of National Education Republic of Indonesia has issued Ministerial Decrit No. 16 of 2007 on Teacher Academic Qualifications Standards which states that every teacher must meet the standards of competence and academic qualifications obtained nationally. Then issued the Regulation of the Minister of National Education No. 18 Year 2007 regarding Professional Certification For Teachers which is stated that the certification for in-service teacher competency test carried through to obtain educational certificates.

In educational certificate, the teacher must meet the academic qualifications through formal education in this research, teachers who have passed the competency test and obtain professional allowances are as much as 40% of the total teachers

⁶ The Department of National Education of Indonesian Republic, (2004:7).

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in the school⁷. As much as 60% of teachers are not certified yet and should follow the education of profession and pass the competency test. The competency test that must be taken in the certification covers core competencies, namely Pedagogic Competence, Personality Competence, Social and Professional Competence⁸. Competence is further elaborated in the Subject of Teacher Competency Standards⁹.

The field of this research is in the pedagogic competence because the term of the web based as the learning method. According to the research of Riyana, Cepi (2009), there is a sliding of conventional learning pattern due to the Information and Communication Technology into the remote and media based. Riyana further said that the web based learning method can be used to improve the teacher's pedagogic competence and the independency of teacher in studying.

Furthermore, the web-based learning process is one method of learning that uses computer-based instructional media that can be applied in teaching and learning in the classroom¹⁰. The research of Idi Rathomy balsa (2010), provide empirical

⁷ The Ministry of National Education Decrit of Indonesian Republic, No.0090.0164/D5.6/D/SK/2011

⁸ The Ministry of National Education Regulation of Indonesian Republic, No.18 Tahun 2007 Pasal 2: 6

⁹ The Ministry of National Education Supplementary of Indonesian Republic, No. 16 Tahun 2007

¹⁰ Balsa, Idi Rathomy, Pengaruh Penerapan Media Pembelajaran Berbasis Web terhadap Keterampilan Berpikir Kritis dan Kemampuan Kognitif Siswa Kelas V SD Islam Sabilillah Malang, 2010

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evidence that there is influence between the media application on the web-based learning on critical thinking skills and cognitive abilities of students. Also have been mentioned by Idi, the student perceptions of the media web-based learning is that students find it easy to operate, attractive and fun.

There are two advantages to be gained from web-based learning methods, they are the freedom of the platform and the classroom (Herman Dwi Surjono & Maltby, 2003). According to Herman, flexibility of time, space and extensive interaction can be utilized with this kind of learning method.

Most schools in East Jakarta have been equipped with school site facilities and teachers' have been familiar with the school administration system (SAS). Based on the School's Accreditation Institute respectively in this research, the school's ranking was stated in grade A. It means that the students graduated from this school were 50% entitled to have the clear entrance to any state universities they have chosen. It also means that the infrastructure of the school was categorized good. But in terms of learning, teachers in the area of Jatinegara, East Jakarta are not familiar with web-based learning methods.

It's very easy to find schools that already have a school site, but apparently teachers rarely utilize these facilities to conduct web-based learning and it showed in the site activity which is only be used to up load announcements or been accessed only in the school administration system. Teachers might lack the motivation to develop learning with web-based method due to the lack of trainings. Hence, arise a thought whether web-based learning methods in integrated academic information systems

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have a relationship with the motivation of teachers to improve competence in the web based learning method.

Based on the background and the identification of problems, we develop the research model in Appendix VII.1, and the hypotheses in this study are formulated as follows:

1. Is there a relationship between the competences of teachers with web-based learning?
2. Is there a relationship between the levels of utilization of the academic information systems integrated with an increase in teacher competence?
3. Is there a relationship between integrated academic information systems and improving the competence of teachers with web-based learning methods?

III. Data and Methodology

We have asked 50 teachers as the best representatives of the population in Jatinegara East Jakarta High School, to fill up the questionnaires. They are consisted of Jakarta's State teachers and honorers who actively teach at the current semester in 2011.

The questionnaire was designed with 70 questions, which were measured by 5 scales of Lickert scale and the answer options are from strongly agree, neutral to strongly disagree.

The questions were divided into 3 groups of variabel, 30 questions were grouped in integrated academic information system and 20 questions in enhancing the competency of teachers as independent variabel. The remaining 20 questions were group in the web based learning method as dependent variabel.

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We have put data in the validity and reliability test in the try out test. After we had the reliability index from the initial test, we have conducted the descriptive statistics tests from normality, correlation and the multicollinearity test. We have used the linear regression analyze to test our hypotheses and drawing the conclusions.

IV. Results and Discussion

IV.1. The Integrated academic information system

The instrument of integrated academic information system in this research has indicator which is the frequency of using. The sub indicator of the frequency of using are the time base in daily and weekly. Based on the reliability test that we have conducted, the Corrected Item Total Correlation for this variabel have score more than 0,444 at Pearson product moment score. Questions no 20, 27 and 30 have drop due to the scores less than 0,444. The Cronbach Alpha score for this variabel has more than 0,444, which is 0,924 (Appendix.VII.2), it means that the intruments can be used as final instrument to measure variables reliability.

The mean score for integrated academic information system variabel is 110,72, the minimum score is 97, the maximum is 129. The highest frequency is on the interval 100-110, it shows that teachers almost agree with the duration of using integrated academic information system more than one hour a day and more than one time a week.

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IV.2. Enhancing the competency of teacher

The instrument of enhancing the competency of teacher in this research has indicator, which is the pedagogic competence. The sub indicators of the pedagogic competences are the comprehension of students and the choice of technology in learning. The Corrected Item Total Correlation for this variabel have scores more than 0,444 at Pearson product moment score however question no 21 and 25 have drop due to the scores less than 0,444. The Cronbach Alpha score is 0,942 (Appendix.VII.2), it means that the intruments can be used as final instrument to measure variables reliability.

The competence of teacher variabel mean score is 70,82, the minimum score is 60 and the maximum is 89. The highest frequency is on the interval 70-80, meaning that teachers agree with the fact that teacher should acquire knowledge, comprehending students, evaluating the learning results and using the technology learning systems.

IV.3. The web based learning method

The instrument of web based learning method in this research has indicator, which is the using of the method. The sub indicators of the using are frequency and the people that could use the web based learning method and the advantages of using it. Question no 10 and 11 have drop due to the scores less than 0,444. The Cronbach Alpha score is 0,960 (Appendix.VII.2), it means that the intruments can be used.

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The mean score for enhancing the competence of teacher variabel is 71,58, the minimum score is 59 while maximum is 90. The highest frequency is on the interval 65-80, it means that teachers agree with the fact that teachers using web based learning method more than one hour a day and more than one time a week and they are agree with the fact that the system could be used by the people in the school and that the web based learning method is useful.

IV.4. Quality Data Test

The linear regression was analyzing the set of integrated academic information system (X1) and enhancing the competence of teacher (X2) with the web based learning method (Y), the results are the regression coefficient of X1= 0,004, X2= 0,474 and a constant of 37,554 (Appendix.VII.4). Therefor the relation between the integrated academic information system variabel with the web based learning method is $\hat{Y} = 37,554 + 0,004X1$. The linearity shows that the increasing of each score integrated academic information system variabel would then producing the increase of web based learning method variabel. Though the increasing index of integrated academic information system variabel is not much by the score of 0,004. Meanwhile the relation between enhancing the competence of teacher with the web based learning method is $\hat{Y} = 37,554 + 0,474X2$. The linearity shows that the increasing of each score of enhancing the competence of teacher would then producing the increase of web based learning method.

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The normality test was conducted to show whether the regression prediction Y on X1, X2 has the normal distribution. The test was using Lilliefors at the significance level of ($\alpha=0,05$). The distribution with sampel of 50 teachers assumed normal if L count > L tabel.

We have count that L count = 0,200 and L tabel = 0,125 (Appendix.VII.3), it shows that the regression prediction of Y on X has normal distribution.

Based on the Multicollinearity test, we can conclude that there is no multicollinearity among variabel X1 and X2 as independent variables and their scores are 0,719 (Appendix.VII.4). The VIF scores 1,391, have showed that the regression equity is the good model.

IV.5. Hypotheses Test

Based on the test that we have conducted, F count= 0,005 and F tabel= 4,04 (Appendix.VII.4), it showed that H_0 was rejected so the regression was significant. The regression linearity testing showed that F count < F tabel it means that we can conclude the regression equity model is linear.

According to the coefficient correlation significancy testing, the result for X1 is t count= 0,978 < t tabel= 1,67 (Appendix.VII.4), it indicated that integrated academic information system significantly influenced in the regression on web based learning method. Meanwhile the result for X2 is t count= 0,005 < t tabel= 1,67, it indicated that enhancing the competence of teacher significantly influenced in double

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regression on web based learning method. Therefore we may conclude that the correlation coefficient is significant, it means that there is a 20,2% or 0,202 R^2 value (Appendix.VII.4) of web based learning method explained by enhancing the competence of teacher.

V. Conclusion and Suggestion

Based on the calculations above, it was acknowledged that there is a positive relation between the integrated academic information system and enhancing the competence of teacher with the web based learning method. The independent variables (X_1 , X_2) have significant influence on the web based learning method, however, this research would only be admitted on Jatinegara East Jakarta High School and could not be generalized on other schools or institution in wider area. We are strongly suggest that for further research, any researchers in this field might want to gather more data from wider area than East Jakarta and more factors been used to enhance the educational research as well.

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VII. Appendixes

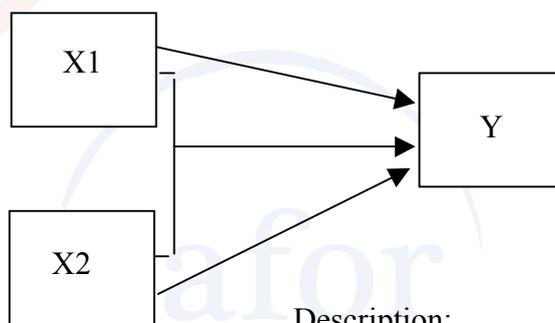
VII.1. Research Model

**Integrated Academic Information System
In Relation of Enhancing the Competence of Teacher
In the Web Based Learning Method**

Topics: Technology in Learning

Diena Noviarini

Lecturers of Faculty Economic, State University of Jakarta



Description:

X1: Integrated academic information system

X2: Enhancing the competence of teacher

Y : Web based learning method

VII.2. Reliability Test

[DataSet8] D:\Jepang\RELIABEX1.sav

X1

Cronbach's Alpha	N of Items
,925	29

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	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
V3	98,90	545,463	,540	,922
V4	98,50	529,737	,706	,919
V5	98,10	543,674	,576	,921
V6	97,45	553,629	,579	,921
V7	96,85	571,818	,614	,922
V8	96,80	566,168	,617	,922
V9	96,80	571,747	,567	,922
V10	97,15	566,555	,505	,922
V11	97,00	572,105	,516	,923
V12	96,75	568,408	,661	,922
V13	97,45	553,629	,579	,921
V14	97,35	558,871	,611	,921
V15	97,00	562,421	,703	,921
V16	98,20	533,853	,628	,921

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V17	99,10	559,147	,449	,923
V18	98,95	556,050	,446	,923
V19	98,50	543,000	,623	,921
V21	99,00	549,263	,513	,922
V22	97,55	552,261	,710	,920
V23	97,85	551,082	,532	,922
V24	99,10	555,779	,536	,922
V25	97,20	563,642	,521	,922
V26	98,65	549,713	,484	,923
V27	97,75	568,197	,299	,926
V28	97,45	550,155	,570	,921
V29	98,35	549,608	,552	,922
V30	98,05	553,313	,438	,924
V31	97,95	546,471	,595	,921

X2

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Cronbach's Alpha	N of Items
,942	25

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlatio n	Cronbach's Alpha if Item Deleted
V3	77,95	736,050	,772	,938
V5	79,40	726,147	,749	,938
V6	78,35	744,976	,612	,940
V7	78,25	749,461	,663	,939
V8	79,10	752,411	,585	,940
V9	77,95	736,050	,772	,938
V10	78,15	725,924	,825	,937
V11	79,40	726,147	,749	,938
V12	78,35	744,976	,612	,940
V13	78,25	749,461	,663	,939

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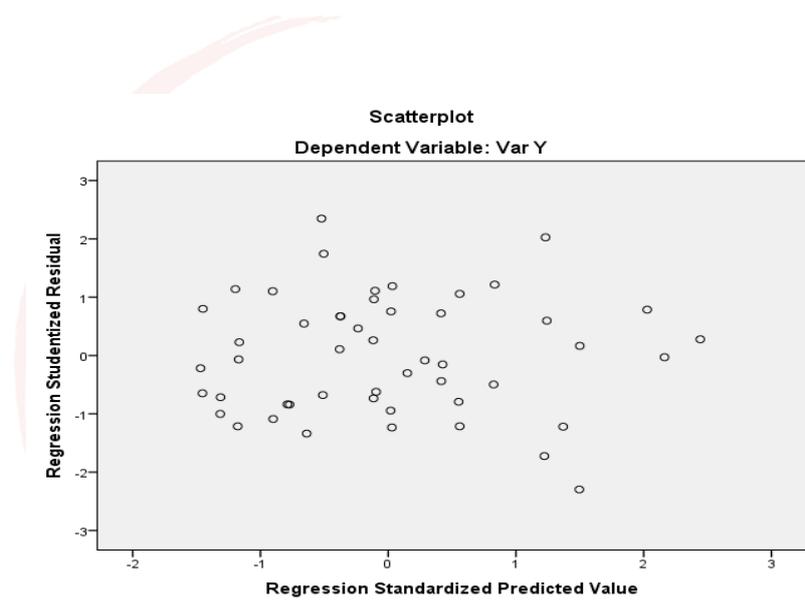
Lecturer of Faculty Economic, State University of Jakarta

V14	79,45	756,787	,472	,942
V15	79,05	744,576	,556	,941
V16	78,95	742,682	,558	,941
V17	79,45	756,787	,472	,942
V18	78,80	759,747	,455	,942
V19	79,25	738,618	,629	,940
V20	79,05	744,576	,556	,941
V21	78,80	763,432	,407	,942
V22	78,35	744,976	,612	,940
V23	78,25	749,461	,663	,939
V25	79,15	771,924	,363	,943
V26	79,15	749,713	,514	,941
V27	79,00	730,947	,687	,939

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X3

Cronbach's Alpha	N of Items
,960	19

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correla	Cronbac h's Alpha if Item Deleted

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			tion	
V3	53,80	597,642	,940	,955
V4	53,55	623,103	,623	,959
V5	53,70	623,379	,602	,960
V6	53,40	626,253	,647	,959
V7	53,80	597,642	,940	,955
V8	53,80	597,642	,940	,955
V9	53,80	597,642	,940	,955
V10	53,80	660,379	,238	,964
V12	53,45	638,576	,533	,960
V13	54,00	619,263	,616	,960
V14	54,10	619,042	,656	,959
V15	53,80	597,642	,940	,955
V16	53,80	597,642	,940	,955
V17	53,80	597,642	,940	,955
V18	53,80	597,642	,940	,955

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V19	53,85	639,292	,467	,961
V20	53,80	597,642	,940	,955
V21	53,25	613,039	,723	,958

VII.3. Normality, Correlation and Multicollinearity
 [DataSet1] E:\Jepang\Liliefors.sav

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Var X1	50	100,0%	0	,0%	50	100,0%
Var X2	50	100,0%	0	,0%	50	100,0%
Var Y	50	100,0%	0	,0%	50	100,0%

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Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Var X1	,095	50	,200*	,969	50	,214
Var X2	,110	50	,176	,956	50	,060
Var Y	,100	50	,200*	,968	50	,187

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

VII.4. Regression

[DataSet1] E:\Jepang\Liliefors.sav

Descriptive Statistics

	Mean	Std. Deviation	N
Var Y	71,58	7,830	50
Var X1	110,72	8,202	50
Var X2	70,82	7,466	50

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Correlations

		Var Y	Var X1	Var X2
Pearson Correlation	Var Y	1,000	-,235	,450
	Var X1	-,235	1,000	-,530
	Var X2	,450	-,530	1,000
Sig. (1- tailed)	Var Y	.	,050	,001
	Var X1	,050	.	,000
	Var X2	,001	,000	.
N	Var Y	50	50	50
	Var X1	50	50	50
	Var X2	50	50	50

Model Summary^b

Model	R	R Square	Adjusted R	Std. Error of		

Change Statistics

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Model	R	R Square	Adjusted R Square	the Estimate	Change Statistics					n
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,450 ^a	,202	,168	7,141	,202	5,958	2	47	,005	1,383

a. Predictors: (Constant), Var X2, Var X1

b. Dependent Variable: Var Y

ANOVA^b

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	607,612	2	303,806	5,958	,005 ^a
Residual	2396,568	47	50,991		
Total	3004,180	49			

a. Predictors: (Constant), Var X2, Var X1

b. Dependent Variable: Var Y

**Integrated Academic Information System
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Roles of Sleep Quality, Cognitive Load, and Multiple Intelligences in Learning

Shujen Lee Chang and Ka Wai Ng

Department of Psychology, Asia University, Taichung, Taiwan

Topic of the submission: Student Learning, Learner Experiences & Learner Diversity

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Roles of Sleep Quality, Cognitive Load, and Multiple Intelligences in Learning

Shujen Lee Chang and Ka Wai Ng

Department of Psychology, Asia University, Taichung, Taiwan

Abstract

Sleep deprivation has become a serious issue among college students, whose cognitive capability and intelligences may have been constrained. However, few studies explore the relationships among college student sleep quality, cognitive capability, intelligences, and learning in chorus. The purpose of this study is to investigate the roles of sleep quality, cognitive load, and multiple intelligences in learning achievement among college students. One hundred and thirty-three college students completed surveys in this study. Results indicate students with good sleep quality, compared to those with poor sleep quality, scored significantly higher in the final examination and in several dimensions of multiple intelligences. Furthermore, cognitive load, sleep quality, and logical-mathematical intelligence were predictors toward learning achievement. Findings underscore the imperative roles of sleep quality along with cognitive load and logical-mathematical intelligence toward college statistics learning achievement.

1. Introduction

1.1 Sleep quality

The sleep quality of college students nowadays has become a serious issue and resulted in worrisome academic performance. The percentage of self-reported sleep problems among college students rose from 24% in 1978 to 53% in 1988 (Hicks et al., 1989), 44% in 2003 (Yang, 2003), and 60% in 2010 (Lund et al., 2010). Poor sleep quality was reported to be significantly correlated with poor academic performance in various education levels including middle school, high school, and college students (Gaultney, 2010, Pagel and Kwiatkowski, 2010, Trockel et al., 2000)

Sleep quality also influences cognitive performance considerably. Sleep deprivation had an overall negative effect on cognitive functions, such as accuracy rates in immediate recall, delayed recall, digit span tasks, and time estimation (Taylor and McFatter, 2003). Adults' cognitive performance declined as their sleep deficiency levels increased their accuracy decreased, even performing a simple math tasks; researchers concluded that during cognitive information processing, access to the declarative knowledge was impaired as sleep deprivation increased (Gunzelmann et al.).

1.2 Cognitive load

Poor sleep quality may increase cognitive load (CL) in learning. CL refers to the cognitive resources used in the executive control of working memory in learning situations and is defined as an individual's allocation of working memory resources to conduct content element interactivity or to organize apparatus in a learning situation (Sweller, 2010, Paas et

al., 2004). CL theory (CLT) can be traced back to the study of the limited working memory capacity that our short-term memory can only store seven plus/minus two pieces of information (Miller, 1956). With poor sleep quality and less cognitive resources to use, learners' cognitive information processing most likely are less efficient or make more mistakes (Gunzelmann et al.). Consequently, sleep deprived learners may feel more difficult or perceive higher CL concerning the content of an examination, compared to sleep sufficient learners.

1.3 Multiple intelligences

Multiple intelligences refer to people having more than one intelligence. In addition to the linguistic and mathematics intelligences emphasized in schools, multiple intelligences also include musical, spatial, kinesthetic, intrapersonal, interpersonal, naturalistic, and existential intelligences. To discover student potentials and to promote education quality in various aptitudes, several school programs in U. S. A. have employed the concept of multiple intelligences, such as 'Project Zero' in Boston, 'Discover' in Arizona, 'SUMIT' in Pennsylvania, 'PSA' in North Carolina, 'Model Program' in Maryland, 'Key Learning Community Program' in Indiana, and 'New City School Program' in Louisiana.

1.4 Research questions

Although sleep deprivation substantially influences college student academic performance, the relationships among sleep quality, cognitive load, and multiple intelligences remain unknown in the literature. Thus, we examined the following research questions: 1) Would sleep quality (good vs. poor) affect cognitive load, multiple intelligences, and learning achievement? We expected good sleep quality participants would report notably lower cognitive load, score considerably higher in multiple intelligences, and obtain substantially higher in learning achievement. 2) Are cognitive load, multiple intelligences, and learning achievement correlated? We hypothesized cognitive load would be negatively correlated with multiple intelligences and learning achievement, but multiple intelligences are positively correlated with learning achievement. 3) Can sleep quality, cognitive load, and multiple intelligences predict learning achievement? We expected sleep quality, cognitive load, linguistic and logical-mathematics intelligences could reliably predict learning achievement.

2. Method

2.1 Participants

Participants included 133 college students (80 females, 53 males; average age 19.26, $SD = 1.28$) from the Department of Psychology of a private university in central Taiwan. Participants enrolled in a required course, Introduction to Statistics in Education and Psychology and received three bonus points added into the course grade, which ranged from 0 to 100 points.

2.2 Measures

2.2.1 Sleep quality

Pittsburg Sleep Quality Index (PSQI) is a 19-item self-rated questionnaire, assesses the sleep quality in the past one month (Buysse et al., 1988). PSQI contains 7 components: subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction. Each component scores from 0 to 3 and the global PSQI score ranges from 0 to 21, higher scores indicating poorer sleep quality. Scores within 0-5 indicate good sleep quality and scores of 6 and more indicate poor sleep quality. PSQI has an adequate validity as the global PSQI scores were significantly different between the health and depressive patient groups ($F = 45.1, p = .001$). The internal consistency of the seven component scores of PSQI was high (*Cronbach's* $\alpha = .83$).

2.2.2 Cognitive load

The cognitive load (CL) measure is a scale commonly used for learners to rate mental effort during learning (Brunken et al., 2003, DeLeeuw and Mayer, 2008, Sweller et al., 1998). Each CL measure contains one 9-point item ranging from 1-9 points, with higher points indicating greater mental effort. In this study, we adapted the CL measure to form two CL measure questions that asked participants to indicate their mental effort, one about the content cognitive load of the examination and the other about the difficulty cognitive load of the examination.

2.2.3 Multiple intelligences

Multiple Intelligence Developmental Assessment Scales (MIDAS) measures 9 types of multiple intelligences: linguistic, logical-mathematical, musical, spatial, kinesthetic, intrapersonal, interpersonal, naturalistic, and existential intelligences (Shearer, 2005). Each intelligence type contains 14 items on a 5-point scale, which ranges from 14-70 points and the higher score indicates higher intelligence. MIDAS overall construct validity was adequate and internal reliability of college students was high ($r = .81-.93$).

2.2.4 Learning achievement

Learning achievement, the independent variable, was the scores participants earned from of the course's final examination with 20 multiple-choice questions and the scores ranged from 0 to 100 points. Students were allowed to bring an A4-note and use a calculator during the examination.

2.3 Procedure and data analysis

We briefly explained the purpose of this study and offered participants to sign the informed consent forms. Data was collected in two stages; first, participants completed surveys concerning sleep quality and multiple intelligences; one week later, participants took the examination followed by reporting their cognitive load about the content and difficulty of the examination. The two data collection stages took around 40 minutes and one hour correspondingly.

ANOVA determined the effects of sleep quality (good vs. poor) on cognitive load, multiple intelligences, and learning achievement. Pearson correlations analyzed the relationships

among learning achievement, cognitive load, and multiple intelligences. Multiple regression analysis identified the predictors of learning achievement. A priori significance level of .05 was used for all statistical analyses in this study.

3. Results

3.1 Questions: Does sleep quality (good vs. poor) affect cognitive load, multiple intelligences, and learning achievement?

Table 1 presents the means and standard deviations of the variables observed in this study. Fifty three (40%) participants reported good sleep quality and eighty participants (60%) reported poor sleep quality. Good sleep quality students significantly outperformed poor sleep quality students in learning achievement ($F_{(1, 132)} = 11.57, p = .001$) and several dimensions of multiple intelligences, including linguistic ($F_{(1, 132)} = 4.71, p = .03$), logical-mathematical ($F_{(1, 132)} = 7.99, p = .006$), intrapersonal ($F_{(1, 132)} = 11.81, p = .001$), interpersonal ($F_{(1, 132)} = 11.76, p = .001$) and naturalist intelligences ($F_{(1, 132)} = 4.64, p = .034$).

Table 1

Descriptive data: means and standard deviations

Variables	Sleep Quality		Total(N=133)	
	Good (n = 53) Mean(SD)	Poor (n = 80) Mean(SD)	F	p
Sleep quality	3.79 (1.13)	8.10 (2.27)	162.09*	.00
Learning Achievement	59.23(28.17)	41.72(29.35)	11.57*	.00
CL-Content	7.12(1.90)	7.08(1.73)	.016	.90
CL-Difficulty	6.96(1.80)	7.40(1.52)	2.19	.14
MI-Linguistic	54.23(9.81)	50.06(9.39)	4.71*	.03
MI-Mathematical	53.30(8.63)	47.94(9.90)	7.99*	.01
MI-Musical	55.70(10.31)	54.95(9.33)	.15	.70
MI-Spatial	52.65(9.05)	49.54(10.79)	2.32	.13
MI-Kinesthetic	54.68(10.62)	51.91(11.75)	1.47	.23
MI-Intrapersonal	54.55(9.18)	48.57(8.33)	11.81*	.00
MI-Interpersonal	58.51(8.41)	52.43(8.95)	11.76*	.00
MI-Naturalistic	55.55(11.56)	50.45(11.93)	4.64*	.03
MI-Existential	56.79(9.05)	53.40(8.80)	3.48	.07

Note. CL = Cognitive load; MI = Multiple intelligence; $p^* < .05, p^{**} < .01$

3.2 Questions: Are cognitive load, multiple intelligences, and learning achievement

correlated?

Table 2 presents the correlations among cognitive load, multiple intelligences and learning achievement. Learning achievement was significantly and positively correlated with logical-mathematical and intrapersonal intelligences. However, learning achievement was negatively and significantly correlated with both content and difficulty cognitive load. Besides, content cognitive load was significantly and positively correlated with difficulty cognitive load and kinesthetic of multiple intelligences.



**Contextual Influences on Chinese Language Learning Strategies Use of Students from
Singapore Special Assistance Plan (SAP) Schools**

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1. Introduction

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The purpose of this study is to examine the contextual influences on Chinese language learning strategies used by students from Singapore Assistance Plan (SAP) schools. In 1979, the SAP program was introduced in response to more students choosing English-medium schools over the Chinese-medium schools. The objective of establishing SAP schools was therefore “to preserve the best traditions and ethos of the old Chinese medium schools, and to nurture a core group of students who are proficient in both English and Chinese” (MOE² Press Release 11 February 2008). As a result of this plan, nine established Chinese secondary schools were identified and converted into bilingual institutions whereby students would have to study both English and Chinese at first language level. SAP schools are in effect elite schools and the students are seen as high-ability students due to its admission criteria. SAP students who study Chinese as first language are either the top 10% of those who pass the Primary School Leaving Examination (PSLE) or the top 11%-30% who have language achievement in Chinese (meaning an A* grade in Chinese or at least a Merit in the Higher Chinese³).

In the next section, the literature review will focus on the significance of context in influencing language learning strategies. This will be followed by an explanation on the research procedures and a discussion of the findings.

2. Literature Review

While research on language learning strategies in the cognitive psychological field focuses on the learner, the environment that the learner is situated also has an impact on the latter. The study by Levine *et al.* (1996) noted the contextual influences on immigrants from the former Soviet Union (new-comers) and those who have lived in Israel for at least 5 years (old-comers). It shows that learning strategies have developed differently under two educational systems; one that is highly structured and uniformed, and another that is less structured and more democratic. The habits of new-comers revealed they were used to the system of “formal, structured learning and mechanical memorization or printed material” (Levine *et al.* 1996, p.43).

Zhang (2003, p.303) had also pointed out a study conducted by Goh and Liu (1999) that the group of Chinese learners from Mainland China, who had been exposed to English in Singapore, did not use strategies such as memorization, translation and pattern drills in their English learning as compared to another group in mainland China. And Yashima and Zenuk-Nishide’s paper (2008) on a study abroad group (SB) and stay-home group (SH) also showed differences. Doubtless to say, the use of language learning strategies certainly depends on the degree of exposure to a target language in specific environment. Takeuchi (2003) in his investigation on

² MOE refers to Singapore Ministry of Education

³ ‘Higher Chinese’ is studied at first language level and ‘Chinese’ is studied at second language level.

books that published success stories in learning foreign languages, concluded that some strategies reported were limited by the Japanese context; in this case a foreign language context.

The significance of language learning research by focusing on context is reflected in Wharton's (1997, 2000) study on bilinguals in a multilingual setting, in contrast to those that focus on monolingual subjects in monocultural settings. Due to the contextual factor, his investigation led him to discover differences contrary to past studies. Not only are there new findings on gender differences in the number of strategies used, there are also differences among Asian learners in their patterns of strategy use. As such, there seems to be a need to pay attention to a complex linguistic setting like Singapore. And since studies on language learning strategies have been mostly on English, this paper shall focus on students' use of Chinese language learning strategies in Singapore. Agreeing with Duff *et al* (2004) for the suggestion to have more investigations on non-European target language, and that "the cultures, contexts, and particularities of those languages offer important and possibly unique insights into larger theoretical issues that have been dominated to date by research on Western European languages", this paper aims to find out: (1) how the context in Singapore has influenced SAP students use of Chinese language learning strategies, and (2) how do they perceive their Chinese language proficiency which is studied at first language level.

3. Research Procedures

A survey was conducted in two SAP schools and there were 60 research participants of 13 years old. All of them were at their first year of secondary school. A questionnaire was distributed to find out their language background and 12 students were selected for the interview. These 12 students were then divided into two groups; one whose most familiar language is English and the other, Chinese. The researcher first asked some opening questions, seeking to establish a good rapport and making them feel comfortable in the session. This was followed by some guiding questions prepared beforehand, and they were designed with reference to Oxford's (1990) classification of language learning strategies; namely memory, cognitive, compensation, metacognitive, affective and social strategies. A semi-structured interview was adopted, hence students were encouraged to express their opinions on the issues and make elaboration on them.

It is assumed that the educational system, the language status of English and Chinese, and the value of meritocracy in Singapore have an effect on the language use and language learning strategies. These contextual factors are encapsulated in Singapore's language planning and policy and they are part of the contributing elements to the sustainable and successful development of the country.

4. Findings and Discussion

Before the discussion of the findings, a brief profile of the students is presented below (See Figure 1).

Most familiar language: English			Most familiar language: Chinese		
Number	Sex	Language(s) Spoken at home	Number	Sex	Language(s) Spoken at home
Student 2	Female	English, Chinese	Student 1	Female	English, Chinese
Student 3	Female	English	Student 4	Female	Chinese
Student 5	Male	English, Chinese	Student 6	Male	English, Chinese
Student 7	Female	English	Student 8	Female	Chinese
Student 10	Male	English	Student 9	Female	English, Chinese, Dialect (Hokkien)
Student 11	Male	English, Chinese , Dialect (Hakka)	Student 12	Male	Chinese

Figure 1: Brief profile of research participants

For the purpose of this paper, if we define ‘home language’ as the language a child had first learnt; that is ‘first language’, then what is taught as first language in school might mismatch with what is learnt at home. Here, I am assuming the home environment as a place that a child will get the most exposure to a language and where he would learn most at his or her early years prior to the learning of language in neighborhood and/or school. Referring to the profile, it seems that students’ most familiar language reported is closely related to their language spoken at home. We also see that the linguistic situation at home among the students varies. Even though English and Chinese (or even dialects) are used, the level of exposure could be different and hence students’ familiar language would not be the same. This could make language learning in school difficult, but the use of language learning strategies could be a contributing factor for overcoming problems and leading to language achievement in school. Based on the students’ report on their use of Chinese language learning strategies, we shall discuss the findings by focusing on contextual factors. The interview was conducted in English, and wherever Chinese words or sentences were used, they were translated in this paper. It is to note that no corrections of grammar on the students’ comments are made and they are quoted as it is unless otherwise stated.

4.1 The Educational System

Most students use memory strategies of “placing new words into a context” and “using *Hanyu Pinyin* (that is ‘Chinese phonetic’) in memory”. These two strategies can be attributed to the availability of dictionaries and vocabulary handbooks in the educational system that enables the students to learn Chinese. Most importantly, the teacher seems to have a role to play in teaching the Chinese language learning strategies.

Prior to 2006, only students who are taking the GCE 'Ordinary' level Chinese language (CL) and Higher Chinese language (HCL) composition examinations, were allowed to use print dictionaries approved by the Singapore Examinations and Assessment Board (SEAB). Later, these approved print dictionaries were allowed in the Primary School Leaving Examination (PSLE) CL and HCL composition. From 2006, handheld electronic dictionaries were also introduced but were only allowed in composition examinations in school-based assessments. But from 2007, they were allowed to be used in composition examinations for both PSLE and GCE 'O' level examinations. According to the Press Release by Ministry of Education (MOE), it is hoped that such new measure will help in reducing the "burden of memorization and encourage practical use of the language" (MOE Press Release 2005).

This "burden of memorization" refers to the memorization of Chinese characters, as we shall see from the comment made by Student 2, "Because I usually forget a lot of words, then I can recognize some of the words [when I see it in the dictionary]". And in the case of Student 4 who had expressed that Chinese is her familiar language and the language she speaks at home, she uses the electronic dictionary very often when writing composition. As she put it "When I am not sure how to write the characters or when I forget or when I'm not confirmed with it, I will check the [electronic] dictionary very often". The approved electronic dictionary is not without limitations. While Student 4 commented that "sometimes the idioms are quite hard to find", Student 6 pointed out that "Some words, the meaning and sentence are very short". Despite some negative remarks, both students felt that it has helped them in writing the characters. As Student 6 had said "it can help us in reducing the amount of wrong characters you write in a compo [composition]".

While students reported that they mainly use the electronic dictionary approved by MOE for the purpose of writing the Chinese characters during examination, they also use other types of dictionaries (that have bilingual function) to learn and memorize its usage and meaning. Another resource for the students is the vocabulary handbooks. As pointed out by Student 2, "For instance, I cannot write a word in composition, then I don't know how to write, I will use the Chinese dictionary. But it didn't help because there is no sentence construction inside, only the vocabulary handbook have only". Student 2 further explained that "The sentence constructions provided in the dictionary is very little, is about 10% of the whole dictionary. Then, sentence constructions are very short, so I can't find out the meaning from there. Like let say, they give you a word '*gao xing*' (translated as 'happy') , so they just put it like sentences like '*xiao ming hen gao xing*' (translated as 'Xiao Ming is happy') , so I don't know the meaning from the sentence construction".

The vocabulary handbook is used to complement the Chinese language textbook. Again, Student 2 said, "Usually I will check those guidebooks (meaning the vocabulary handbook) and

look for the meanings, then I'll remember the meanings". Student 6 also mentioned that "We got extra materials in reading like vocabulary handbook, then the handbook inside also got meaning so you can refer to see which one is better".

In addition to the above, the teacher seems to play a central role in teaching the Chinese language learning strategies. Student 1, 4, 5 and 11 had mentioned about memorizing from the notes given by the teacher. In this way, they also use cognitive strategy of "taking notes" to aid memory strategy of "placing new words into context". As seen from the comments below;

Every time in Chinese class, teacher will give us notes to do. She will give you one chart, there is a list with the vocabulary and the sentences. You copy them into your notebook. I remember the sentences and when there is a test, I check the meaning again so that I make sure what is the meaning. (Student 1)

Sometimes teacher will ask us to do the notebook. We will note down the words and then we'll write the *pinyin* (meaning 'Chinese phonetic') and meaning on our exercise books. Then, we can just flip through like recap on what we've learned. Sometimes teachers will give us papers. On the papers, we will fill in those new words that we have learnt. (Student 5)

In the case of Student 1, she pointed out the limitation in the use of dictionary.

Inside the dictionary, there are sentences and meanings also, so usually I'll go and check the meaning. But sometimes really the sentences are not very good, you know, in the dictionary. Compared to my teacher's one, my teacher's one is better. It's better and then can express the meaning of the word. The short sentence [in electronic dictionary], you'll score lesser marks. Not longer the better but you have to really express the meaning of the word in the sentence so sometimes the sentences is very short right, then after that there's no meaning at all. (Student 1)

There is a reliance on electronic dictionaries by both groups of students. Students need to use *Hanyu Pinyin* to find the meaning in the electronic dictionary. Also, the notes given by the teachers also included *Hanyu Pinyin* to help them learn. Since English alphabets are required for the phonetic system, it can be argued that English has an influence in the students' preferred use of *Hanyu pinyin*.

4.2 The Language Status of English and Chinese

Although SAP was established with the objective to preserve the ethos of the Chinese medium schools and to promote the learning of Chinese Language and culture, the predominant use of English is evident. Student 3 had said, “This is a Chinese school, so here got a lot of people very good in Chinese. This school although is Chinese school, a lot of people very good but most still use English to communicate, except for those came from China or Taiwan.” And even though Chinese is studied as a first language in SAP schools, it might not be perceived as first language by the students. As expressed by Student 12, “Because mostly in our school, we speak in English. So English is more familiar and Chinese is our second language.” These two comments reveal a higher frequency use of English than Chinese in schools, and consequently, the dominance of English could have become a factor in influencing Singaporeans preferred use of *Hanyu pinyin* input for computers, as observed by Lu (2001: 15), and also for memory strategies as noted earlier.

Also, according to Report of the Chinese Language Curriculum and Pedagogy Review Committee (Report CLCPRC 2004: 35), it has hoped that “the frequent use of *Hanyu Pinyin* to type CL characters can enhance character recognition”. Thus, technological tools such as handheld dictionaries that allow the conversion of *Hanyu Pinyin* input into characters can be seen to facilitate Chinese language learning. Below are another three students’ comments that show the influence from English.

They [English] use English alphabets, I think English is easier than Chinese. The *pinyin* will help me to remember the Chinese words. (Student 2)

Because the *pinyin* is a bit associated with English as well so it’s easier. Because I cannot recognize the Chinese words, then sometimes the *pinyin* helps. It just come naturally. When you see the *pinyin*, then you suddenly remember the character (Student 7)

I use both book and electronic dictionary. If I know the *Hanyu Pinyin* of the word, then I’ll use the electronic dictionary because it gives a faster search. (Student 10)

Student 9 had commented on such measure, “I build up the foundation in Primary One, because in Primary One, they keep teaching us *Hanyu Pinyin*, then at home, I have this *Hanyu Pinyin* chart, so I learn every day”. Similar to Student 9, Student 8 also expressed that her familiar language and the language she speaks at home is Chinese, but they do not show any confusion with *Hanyu Pinyin* through its use of English alphabets in the phonetic system, rather it is used as a search tool in dictionary to facilitate learning. And here, we could again see the dominance of English in Chinese language learning. As Student 9 had said, “Type in the *Hanyu Pinyin*, see the word. Use bilingual dictionary. It is easier to read in English. I look at the English

explanation if can't understand".

It seems that students have made use of English to learn Chinese, such as the case of Student 7 and 3. Student 7 mentioned that her dictionary can translate the meaning, so she will write the English meaning beneath the Chinese meaning and memorize the English meaning. As she puts it,

Like if I don't know how to read this word then I can just write the word in the dictionary, then it'll come out then it'll explain all the meaning, and then most of the time it translates the meaning into English, it's easier for me to understand. I just use it for revising. (Student 7)

I also have one dictionary, English-Chinese one. So you search on the Chinese words, they tell you the meaning in English. They also tell you how to use the word. (Student 3)

Hanyu Pinyin was introduced in 1973 as a measure by the Singapore Ministry of Education to help students overcome difficulty in reading Chinese (Ang 2001:341), particularly at that time, dialects were mainly used as home language. However, in recent years, it is a response to an increasing use of English in the home. In other words, there is a phenomenon of language shift to English in Singapore's society due to its higher language status.

4.3 The Value of Meritocracy

The value of meritocracy is seen as another factor influencing Chinese language learning strategies. Although former Education Minister Shanmugaratnam (2006) had pointed to "a need to shift from the exam meritocracy to a talent meritocracy that is based on a wider interpretation of success that includes the arts, sports and other creative skills", the evaluation performance in the educational system based on results does not change the exam-oriented mindset of students, and as we shall see from the comments below that the students usually have their strategies to prepare and score for the examinations.

I learn the sentences that will come up in the exam. The sentences can help you to score well in exam. You memorize the meaning and then you can score well. (Student 1)

Before exam, I would like memorize how to write the Chinese characters, then sometimes they have test on sentence construction. I will memorize the sentence

construction and not come up one for myself because it is quite difficult for me.
(Student 2)

So if you have exam right, you don't know what'll come up, they will give you an area to be tested. You just have to study inside what you required to study. (Student 6)

In addition to memory strategies, students use compensation strategies such as “adjusting or approximating the message” in order to score marks as seen from the following comments.

When I don't know, I don't use the sentence, I use a simpler one. Because you use the wrong one, you minus marks. So why not use the simpler ones, at least you won't get minus marks, right? (Student 1)

I will also use another word because if you are not sure of the expression, then you don't know how to use it, you will lose your marks in the exam, so there are a lot of words in Chinese and some is the similar meanings, so you can replace the word.
(Student 6)

The above comments have reflected the students' concern to do well in exam. Such as the case in Student 1, 3, 5 and 6 who expressed that they do not plan goals for Chinese learning but merely want to do well for examinations. And Student 7 had pointed out, “Because everything the teacher said is very important for your exam so everybody in class wants to know. As the teacher suggest and she say it's better so the whole class write the notebook because everybody wants to do well in the exam”. Student 4 did not mention about exam but the motivation to do well was high, as she said, “I don't know why I study very hard but I want to maintain my position [class, level position] so that I will get better and better. I don't want to fall behind, I want to improve”.

Although Student 9 said, “Because we are Chinese, then it's natural we do well in Chinese”, reflecting a sense of Chinese identity for learning Chinese, there seems to be a general instrumental motivation in Chinese language learning. All students expressed that they do ‘self-evaluating’; meaning they monitor their progress through tests and examinations. As Student 3 had said, “I compare with the previous test and the other tests to see how well I do”. Similarly, Student 6 also said, “Like from my last test and the test that I'd set now, then I'll compare”. He further elaborated, “I only see the test marks. If I never got my aim right, then I will work harder, I will take more time to study on my Chinese instead of other subjects, I mean like replace the time”. Student 7 also expressed, “I will compare [the marks] and see like what area I can improve on. Sometimes, when I see my grade drops, then I'll panic then I'll just like

try to do better in the next test”. Student 10 sees test as a way to motivate him, as he said, “For a test, I will set certain score for this test, try to go higher up again, say 5 marks or 10 marks higher than this test. I set to motivate myself and to study harder. Because I know if I study harder, maybe I can get a higher score that what I’m getting now.”

And this monitoring of progress is reinforced through the educational system in the schools, as seen from the comments below.

When test or exam coming, then I revise because the test throughout the year got a lot. So it’s quite constant every time got test so test already, then another test. So still have to revise. Because the test is like every week all have, so every week still have to read. (Student 3)

Because our school we have like small test regularly, like once a week or once every two weeks like that, so like I’ll see my grading like if I have improved or not doing well. If I improve, then continue to work hard. But if I don’t do well, then I try to find out what is wrong, and continue to study hard. (Student 5)

However, it is to note that language achievement may not necessarily be a good indication of language proficiency. According to Baker (2006, p.24), language achievement is defined as “the outcome of formal instruction” and language proficiency as “the product of a variety of mechanisms such as formal learning and/or informal acquisition”. He further explained that “language proficiency is sometimes used synonymously with language competence; at other times as a specific, measurable outcome from language testing”. He also points out that “language proficiency is distinct from language achievement”. And this is true in the case of Student 11 who he is more comfortable with English and seems to show a lack of confidence in Chinese language proficiency. He said, “But my Chinese is very poor. I get A for PSLE but normally I don’t get A. Now failed”.

While Student 11 feels that his Chinese language achievement is good and his proficiency is poor, Student 9 could have felt her proficiency is good but her language achievement did not meet her expectation. This is because she thinks she has a strong background in Chinese. She had expressed that Chinese is her familiar language and the language she speaks at home, and mentioned that she had a recent score of A2 for Chinese and C5 for English (which is a better grade in Chinese than English). She said, “Sometimes I’ll feel sort of disappointed in myself. Because in PSLE, it’s the only A* subject, then I think that it’s the only subject I can do very very very good in. Then I’ve have to really buck up because I’m not doing very well now”.

And due to the students' exam-oriented mindset towards Chinese learning, they might not have a 'real' interest in the subject. For instance, Student 7 expressed that she was not sure if she plans goals for Chinese learning, "I don't know. But it's like if we pass our 'O' level Higher Mother Tongue, then we don't have to take Chinese in JC [Junior College], right? Or is it something like that. I think so".

In sum, the contextual factors see the use of English as a dominant language and a high instrumental motivation to pass examination. As a consequence, even though SAP students study Chinese as first language, there are some who might not be confident in their proficiency at first language level.

5. Conclusion

The issue of language achievement and language proficiency could be similar to what Minister Mentor (MM) Lee Kuan Yew has said about the gap between Chinese elites in the present and the past, as reported by Lin (1999). MM Lee does not think that Singapore can produce Chinese elites like those in the 50s. This group, according to him, had about half of the students who received Chinese-medium lessons in Chinese schools, and some of them went to Chinese university, thus receiving a complete Chinese education. This is different when compared to current SAP schools where English is the medium of instruction.

Under such circumstances whereby English is dominant in the Singapore bilingual education system, students are more likely to be called "English-knowing bilinguals". A term that Pakir (1992) has used in highlighting the emphasis of English in the Singapore curriculum where English is the medium of instruction and Chinese is only a mother tongue subject. The contextual influences on the use of Chinese language learning strategies by SAP students reveal that instrumental motivation is high. And English, which has a high language status and dominance, has affected the way Chinese language learning strategies is used and the way Chinese language is learnt in the educational system. Those factors discussed certainly have implications on Chinese language teaching and learning. The use of language learning strategies should go beyond the purpose of passing examinations, and there should be more opportunities created for SAP students to use Chinese in order to gain language proficiency. Since SAP students are selected from various schools after passing the PSLE examinations and meeting the criteria of admission, this group of research participants who are at their first year of secondary education, would have needed time to get exposed to the environment and programs in SAP schools. Further exploration on SAP schools could be suggested to understand how students use Chinese language learning strategies in individual schools and comparisons can be made to see how their programs are designed to promote language proficiency.

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Scaffolding: An effective approach for teaching English for health content purposes.

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Scaffolding: An effective approach for teaching English for Health content purposes.

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Abstract:

EFL students of all language proficiencies that are focused on studying Medicine or Engineering need scaffolding techniques and practical methodologies that build language competencies and bridge the understanding of content based material that is demanded of them. How can EFL teachers teach the language that students need to be successful in the field of Medical Science without necessarily being an expert in the field? This paper explores the application of teaching methodologies in an EFL for Medicine classroom that uses Vygotsky's scaffolding and the ZPD theory to create material that allows the students to practice and build the four integrated skills of English while at the same time building English language Schema of the content material needed to excel. This paper will argue that this approach is possible with all EFL learners, despite their level of English or TOEFL / IELTS score and that if this practice is implemented in foundation level courses at the beginning of the student's study, and then true learning of the language, skills and content will merge.

Introduction:

Global EFL and ESL English preparatory programs for Medical and Science universities have reached a problem in teaching EFL and ESL in the last few decades. How do they educate and train their students in their respective field of study while building and enhancing their language proficiency. If homogenous populations of English language learners are learning English as a foreign language in their country birth, then what role does English play in their professional and personal lives? If English is needed for a specific, professional purpose, should EFL students be learning only CALP (Cognitive Academic Language Proficiency) or should their English study be a balance between BICS (Basic Interpersonal Communication Skills) and CALP? These are questions that EFL educators need to pose, ponder, wrestle with and debate in order to create programs that are suitable for the needs of their students.

In order to respond to the inquiry on how programs can teach content needed for specific purposes in an English based classroom, one must first differentiate between both ESL and EFL and therefore define the specifications for teaching EFL to students learning English as a foreign language, not a second language. ESL is of course the field of teaching English to students learning English as a second language. ESL is catered to learners who have immigrated to or live in a country that uses English as the first or one of the primary languages for all aspects and functions of life. EFL is the teaching of English as a foreign language to a homogenous population of students within their home country, where English may not be the main language used for everyday functions and pragmatic situations of communicative exchange. Usually, the native language of the country is the language used functionally, whereas, English is the language used professionally and academically in professions that require a high aptitude for speaking, reading and writing in English. This creates a unique setting for the EFL students. The EFL teachers must be responsible for linking the student's own cultural perceptions, cognitive and meta-cognitive

first language abilities and academic skills to English. The first step is for the teacher to realize the role of English for these students. English for an EFL student is not necessarily for the utilization of these skills in everyday exchanges. It is for the specific purpose of using English in the professional realm that is related to their field, whether it is Medicine, Engineering or business. The majority of EFL students will probably not be using English to communicate in the functional aspects of their lives. They will use English for academic study and to engage in their professional stance such as a doctor or engineer.

Therefore it is pertinent that materials, text books, and the entire curriculum that is designed and implemented for EFL students are supported by the above premise. This is a serious issue because the textbooks are designed as ESL books and not EFL. They are socially and culturally irrelevant and do not meet the specific needs of the target demographic. They use poor scaffolding techniques if any and they assume that English is learned by linear points grammatically and linguistically, not as a whole language that is socially and peer/mentored influenced. Neither ESL nor EFL should be compartmentalized into neat and pretty blocks of learning functional language. ESL and EFL cannot be harnessed by a set of competencies that check off certain points as soon as they are thought. The vibrant and dynamic EFL classroom should be a place where learning specific content for the specific needs of the students takes place. This naturally occurs when solid scaffolding and use of the theory of the Zone of proximal development (Vygotsky) is embedded and then implemented into the curriculum. What proceeds is the student's gain of English language and academic skills infused with the knowledge, understanding and utilization of the content area material. When all this blends together, the EFL student blossoms in their individual development of their English proficiency skills (BICS) and content information in English (CALPS).

Teaching English for Content Purposes

Content and Language Integrated Learning or CLIL; (Subject Teaching through a Foreign Language) has gained popularity globally in the last few years. As English continues to be the Global language of choice for specific content and studies of various fields, students learning English as a Foreign Language are attuned that their skills and knowledge of their specific area of study lies in the reality that they must be proficient in English in order to engage in their particular discipline. Thus many types of English programs are implementing subject teaching content in English as a Foreign Language classes. Sometimes this takes the form of a Subject teacher utilizing EFL strategies and EFL teachers learning content in order to teach a particular subject through English. One obvious advantage for EFL instructors, who teach specific subjects such as Science, Math or History, is that the content is tailor made (Shelagh & Christine, 2007).

Teachers don't need to spend a lot of time and energy intuiting topics because the subjects are given. The topics are the content. This usually engages and motivates the students more and more because they view English as a means to an end.

Another benefit is that teachers can use the theory of Howard Gardner's multiple intelligences in implementing practical activities in the content classroom. When teachers instruct another subject through EFL, they draw on certain multiple intelligences that may be useful to students in learning the particular subject through English. It may be a linguistic, kinesthetic or mathematical/logical intelligence that is tapped into (Shelagh & Christine, 2007). The methodology of CLIL involves using pictures, charts, graphs and other visual materials to teach content and reinforce the language being learned. Lessons that support the language and learning needs are a chart to complete beside a reading text or a framework for writing activity. Identifying vocabulary and differentiating instruction are all useful technique. Lots of

repetition and consolidation can take place as well. A reading may need to be read several times; orally, listened to aurally, read in chunks with pairs or groups and then individually in order for the learners to be exposed to new lexicon, content specific material as well sentences (Shelagh & Christine, 2007).

Another strategy is utilizing the mother tongue. The use of code switching the ability to move between two languages is a necessary tool for the students to check for comprehension and knowledge of the exact ideas in their own language. This can be done orally in discussions, in translating what they read orally or in writing and can be a useful resource to prior knowledge, schema and clarification (Shelagh & Christine, 2007).

CLIL portrays a content area or EFL teacher instructing an EFL class in a particular subject.

However, what about institutions whose teachers strive to teach English for the purpose of enhancing the comprehension and ability to learn and master skills that are academic, content based? It is not the purpose of this type of teacher to teach the subject, but to support the subject by focusing on the linguistic aspects of what the learners need to know and be able to do in their subject courses. They create similar contexts and sometimes completely different ones utilizing the content specific concepts, vocabulary and skills needed to master the subject area.

For example, an EFL instructor in Saudi Arabia may introduce the concepts of the water cycle taken from a Life Science or Biology class. The instructor would focus on how the water cycle is affected in desert climates such as Saudi Arabia and how the water cycle is gradually being altered due to climate change. The instructor uses vocabulary they are learning in the Life Science course, but is teaching a reading class. Therefore, the teacher creates an adapted text with vocabulary that describes the Water Cycle in a socially and culturally relevant context and focuses on the linguistic reading competencies that his/her individual students need to practice and learn.

Connecting and utilizing Scaffolding and the Zone of Proximal Development to Teaching English for Content Purposes

How is teaching English for Content Purposes relevant to the idea of Scaffolding and the Zone of Proximal Development? Learning is social in nature. This is true for all kinds of learners and certainly true for EFL learners. Students learn cognitively and socially. This process is called interaction; where students and teachers engage in joint activities that focus on factors of shared interest and possess opportunities for learning. This interaction that takes place in the EFL classroom is socio-cultural and involves learning academic and language skills to learn the subject matter needed (Walqui, 2003)

One way that this process occurs is through scaffolding. Scaffolding is a teaching method whereby the instructor models the desired learning technique or task, then gradually shifts responsibility to learners. Scaffoldig instruction originates from Lev Vygotsky's sociocultural theory and his concept of the zone of proximal development (ZPD). "The Zone of proximal development is the distance between what children can do by themselves and the next learning that they can be helped to achieve with competent assistance"(Raymond,2000,p.176).It is a level of development achieved when learners engage in social activity.

Learners mediate and socially interact in order to develop and learn further. The Zone of Proximal Development is the apex in which this learning takes place (Walqui, 2003)

The ZDP is the distance between the precise development level of a learner attempting to solve a problem and the level of potential development as decided by problem solving under the adult guidance of a teacher or through the collaborative effort of peers. This theory was later adapted and interpreted for the use of teaching ESL and EFL (Walqui, 2003)

Scaffolding is directly linked to the ZDP. It comes about through social interaction in the classroom and works through the process of learners assisting others to figure out language and concepts that may be above their proximity level of competence and proficiency. It is best defined by Bruner who said it is, “a process of setting up the situation to make the child’s entry easy and successful and then gradually pulling back and handing the role to the child as skilled enough to manage it”(Bruner, 1983; p.60).

Scaffolding has pedagogical purposes such as providing a support structure for EFL learners in three stages:

Stage 1: includes a planned curriculum over time that is implemented through a series of ritualistic tasks.

Stage 2: incorporates the procedures used in an activity that is set forth in stage 1.

Stage 3: is the collaborative process of interacting which is the actual achievement of stage 2 (Walqui, 2003). For example; an instructor plays an audio of a scientific laboratory experiment and students must listen and take notes. This occurs over a period of two class periods. Then the next day the instructor gives the students a script of the audio lab experiment with missing words and phrases. They listen again and complete the script. Then they discuss the script and the procedural lab experiment and then in pairs they rewrite the lab experiment and explain it to the entire class. Finally, they write their own outline for a lab experiment, conduct it in their science class and then write a report on the outcomes and report back to their EFL class the findings. All of this may take several if not many class periods, depending on the proficiency level of the participants however, this is a classic example of how each stage in the scaffolding process functions.

In reading a content based text, EFL learners benefit from texts that are “amplified, not simplified”. A text chosen and adapted for EFL readers should be grammatically, structurally and lexically linked. Paragraphs should have sentences that contain multiple attachment points and vocabulary and phrases that are linked to the main idea. A paragraph can have redundancy, abundance and elaboration (Walqui & DeFazio, 2003)

Teaching English for Medical Purposes at Al-Ghad Colleges' Preparatory Program

Al-Ghad International Colleges for Health Sciences are new four year colleges located in different cities in Saudi Arabia. They have different specialties such as nursing, emergency, radiology, medical laboratory, health management and that esteems itself on being research and technologically driven in health sciences. Al-Ghad colleges have a one semester preparatory program where students can study intense academic and foundation English as well as the Sciences of Biology, Chemistry, Physics, in order to prepare them for rigors of study in their pathway of choice at Al- Ghad. The uniqueness of the program is that most of the instructors hold MA. The program is currently new and there are ten colleges and about (910) male and female students.

Ninety six percent of the student population is Saudi nationals, who speak Arabic as their first language. Most of them come from public and private high schools and have a low average G.P.A. However, many of them lack the foundational levels of English to perform at a high, potent academic level. They also struggle to adapt to a student centered, communicative, sometimes project orientated and peer/group guided style of instruction and learning. There is only one level of English and their course is for general English then these students are streamed into health Sciences courses.

Consequently, all of these students need scaffolding in language competencies and main science concepts. Many of them are still in the beginning stages of their speaking, reading and writing proficiencies in English. Some of the English faculty have linked themselves to the General Science instructors and are teaching English for Science in their Communication, Reading and Writing Courses. I use the main vocabulary terms and concepts in their health sciences courses (10 week quarters) and developed scaffolded lessons based on these terms and concepts. The philosophy is that even though the reading material, terms and science lectures are above their level of proficiency in English; they will respond and learn the language objectives that they need to attain by engaging in meaningful, scaffolded lessons that enable them to produce the language skills and scientific concepts. I worked to create lessons that target beginners and are scaffolded so that meaningful scientific ideas and language skills and competencies emerge and the student's language and knowledge of the scientific concepts they need emerge. I Applied the Theory of Scaffolding English for health Science in speaking, listening, reading, grammar and Writing classes. All English instructors were brought from different cities and trained how to teach the course according to the scaffolding theory.

The "Asthma" lessons began with a pre -listening exercise where the students have been directed to discuss questions on Asthmas in pairs or in small groups, then the teacher introduced the key vocabulary which is associated to the conversation, and let the students look up the dictionary if necessary. Students were asked to revise the key vocabulary then fill in the blanks with the right vocabulary from the box. Students listened to an audio of the semi biographical and informative reading text three times (in chunks or paragraphs and then discussed ideas and familiar words that they recognized in each paragraph) and then discussed what they thought was the topic and main ideas. They were asked to choose the right answer. When the main points were identified aurally, they made a list of them on paper and then listened once more; this time with the printed text displayed on a Smart board for the students to visualize and connect the audio to an actual text. As the students listened they would jot down words, phrases or sentences that connected to the main ideas they had previously listed. They would listen to the pronunciation of target words from the reading and practice pronouncing and reading them. Finally, they listened to the text a final time in chunks then they were directed to write the words they heard in the correct blank as they individually read a printed copy of the text. Finally, they did the post-listening exercise: students would break into groups; each with assigned paragraphs and discussed the main idea and key vocabulary of their paragraphs. This would be followed by a mini lesson of the simple present tense where students were trained to use the tense. (see pages 8-11)

The next step was to practice speaking in medical Situations because oral interactions play a crucial role in student progression. Based on the theory from "more oral to "more written language". (Walqui, 2010), students were shown a picture about a person who had ASTHMA and the instructor introduced the vocabulary by giving examples of how to use them in a dialogue. Then the instructor would ask the students questions to discuss the picture and allow them to refer to the vocabulary list. After that students would be given a medical problem to solve. Students were given more medical situations related to emergency and how to deal with it to expose them to as much vocabulary as they would need later on to do other language tasks and help them to carry out their career goals. The aim of this step is to help learners to focus on how language is used to convey points of view (Gibbson, 2009; Schleppegrell, 2009; Walqui and Van Lier, 2010). (see pages 12-18)

In the next set of lessons, the students explored the general topic of "ASTHMA" in a more culturally and socially relevant custom that they are all familiar with; the Arabian Incense (Bukhor). They listened to a brief audio about The correlation between home exposure to Arabian Incense (Bakhour) and asthma symptoms in Saudi Arabia. Then they read the short text and discussed in groups the main ideas and related vocabulary to ASTHMA. After group discussions about how asthma is correlated to Arabian incense, they would prepare a 2 minute oral presentation, in which they would present to the entire class their own point of view the claim that Arabian incense (Bakhour) is one of the common indoor smoke sources to which individuals are frequently exposed, and may be an important contributory factor to the observed high prevalence and severity of asthma in Saudi Arabia. By giving them this task, students are involved in teaching which is very important in students' development and at the same time establish a balance among students' tasks, the demands of a task, and the teacher support. (Walqui, 2010; Walqui and Van Lier, 2010). (see pages 19-20).

Since Scaffolding is based on a socio-cultural view of learning that states development is an outcome of learning and that instruction proceeds development, students are now expected to use all the knowledge from the listening, reading, speaking activities to write a paragraph describing with as much detail as they could, the indoor and outdoor risk factors that might cause high prevalence and severity of asthma in Saudi Arabia. For a homework assignment, the students wrote a second draft. After the instructor corrected errors, they wrote a third draft.

example of scaffolding and using the ZPD. This text became the final product and is an All support was finally stripped away and the reading and communicative exercises became product or task based orientated and the students were able to create their own text using the concepts and vocabulary of ASTHMA reading text. The original reading was above their capacity to read and comprehend, but was supported by a series of steps that involved practicing the basic skills of listening, reading and speaking as well as being able to speak about what they had read utilizing new vocabulary accurately. Finally, they demonstrated their understanding by practicing writing about their new found vocabulary and understanding of the topic and ideas in another context.

Unit 2

Asthma

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Sciences

Pre-Listening: You will hear a conversation about Asthma. Before you listen, discuss the following question with a partner or in a small group.

Q1: What is Asthma?

Q2: What causes an Asthma attack?

Q3: What else do you know about Asthma?

Level:	Topic:	Type:	Speakers:	Length:
2	Asthma	conversation	man	01:36

Key vocabulary:

Introduce the key vocabulary which is associated to the conversation, you may let the students look up the dictionary if necessary.

Asthma disease condition immune system risk factors
 breathe symptoms tightening wheezing pressure
 infection treatment sensitivity signs features
 exposure allergens inflammation case
 breath obstruction

I. Revise the key vocabulary then fill in the blanks with the right vocabulary from the box below.

Features - asthma — Immune system – triggers – tightening

- 1.Children are being exposed to more _____.
- 2.Asthma is a disease that causes _____ of air pathways.
- 3.Approximately 10% of children have _____.
- 4.Airway obstruction and airway sensitivity are common _____ of asthma.
- 5.Children don't have strong _____.
- 6.

Listening Exercises:



II. Listen to the conversation. Do not take notes. Choose the right answer.

- 1) What are some common symptoms associated with asthma?
 A. shortness of breath

- B. coughing
C. chest pain
D. all of the above
- 2) What age does asthma present at?
A. any age
B. childhood
C. 30s
D. 10-12 years
- 3) Asthma is _____ of the lungs.
A. a part
B. a disease
C. a risk factor
D. a symptom
- 4) Family history of asthma, regular lung infections, and exposure to tobacco smoke are all _____ of asthma.
A. risk factors
B. triggers
C. diseases
D. exposures
- 5) Recently, there has been an increase in asthma cases among _____.
A. young adults
B. IV drug users
C. the elderly
D. children

III. Listen to the conversation again. Write the words you hear in the correct blank.

(1).....is a disease of the..... (2) that is characterized by tightening of the air pathways. Common symptoms of asthma are wheezing, shortness of (3)...., coughing, chest pain, tightness or pressure. Many of these conditions are reversible with medication but not 100% reversible in all patients. Some common (4).....of asthma are inflammation, airway obstruction and airway sensitivity. Some (5)..... (6).....for asthma are a family history of asthma, regular lung infections, presence of allergies, exposure to tobacco smoke, low birth weight, and being male. The current rise in asthma cases among (7).....is alarming. Asthma may occur at (8).....age but is very common in children. Approximately 10% of children have asthma and that rate may rise in the future. Experts don't agree why the rate is increasing but here are some ideas:
- Children are being exposed to more (9)..... (things that bring on asthma

attacks; dust, tobacco smoke, pollution)

- Children don't have strong (10)..... (they aren't exposed to many childhood diseases.)

- Decreases in the rates of breast feeding may also play a role.

Asthma is a disease that causes many problems for the patient. However, it can be controlled. With the right information and medical attention, medical professionals can prevent many deaths.

Post-Listening Exercises:

- What are the main features of asthma?
- What are some triggers for asthma attacks?
- What information is important to tell the patient about Asthma?

IV-Fill in with the correct simple present tense

(1)Asthma (be) a disease of the lung that is characterized by tightening of the air pathways. Common symptoms of asthma (2) (be)..... wheezing, shortness of breath, coughing, chest pain, tightness or pressure. Many of these conditions (3) (be) reversible with medication but not 100% reversible in all patients. Some common features of asthma (4) (be)..... inflammation, airway obstruction and airway sensitivity. Some risk factors for asthma (5) (be)a family history of asthma, regular lung infections, presence of allergies, exposure to tobacco smoke, low birth weight, and being male. The current rise in asthma cases among children (6) (be)..... alarming. Asthma may occur at any age but (7) (be)..... very common in children. Approximately 10% of children (8) (have)..... asthma and that rate may rise in the future. Experts don't agree why the rate is increasing but here are some ideas:

- Children are being exposed to more Triggers(things that bring on asthma attacks; dust, tobacco smoke, pollution)

- Children don't have strong Immune system(they aren't exposed to many childhood diseases.)

- Decreases in the rates of breast feeding may also play a role.

Asthma (9) (be)a disease that causes many problems for the patient. However, it can be controlled. With the right information and medical attention, medical professionals can prevent many deaths. (Hospital English.com, 2011)

Medical Situations Speaking Activities





Unconscious (adj): Alive, but appearing to be asleep and unaware of the surroundings.

Example-I hit my head on the steering wheel and I was still unconscious when the ambulance arrived.

Critical condition (n): Requiring immediate and constant medical attention

You can't see her right now; she's in critical condition.

Asthma (attack) (n): a condition that causes a blockage of the airway and makes it difficult for a person to breathe.

I carry an inhaler when I run because I have asthma.

Fatal (adj): Causing death.

The bullet was fatal, it pierced his heart, and he died on spot.

Cardiopulmonary resuscitation (CPR) (n): Restoring a person's breath and circulation.

You saved your brother's life by performing CPR.

Life-threatening (n): When injuries and conditions are extremely serious.

The victim was shot in two places but the bullet wounds are not life-threatening

- What do you see in the picture?
- Describe the situation.
- What do you think is wrong with the person?
- What is CPR?
- When do people need it?
- What could happen when a person has an asthma attack?
- If you were in a situation where you have to take care of such a case, what would you do?
- What do people usually carry with them for breathing problems?

Problem solving

You are in a shopping area and it is very crowded. You see a person fall down in the middle of the crowd. What would you do?

1. Wait for the ambulance to come?
2. Put water on her/his face?
3. Check her pulse?
- 4.

Reasons:



Ambulance (n): a special vehicle used to treat and transport ill people.

Oxygen mask (n): a device, worn over the nose and mouth, to which oxygen is supplied from a cylinder or other source: used to aid breathing.

The man couldn't breathe, so he used an oxygen mask to help him breathe.

Stretcher (n): a device for transporting the ill, wounded, or dead, consisting of a frame covered by canvas or other material.

The man was put on a stretcher after he had a sudden heart attack.

Emergency mode (n): The use of light and sirens in an ambulance.

Cars cleared out the road for the ambulance because of its emergency mode.

Patient (n): a person staying in a hospital or medical facility or coming to visit a doctor.

The patients in Room 4 are not getting along.

Pain killer, pain reliever (n): a type of medicine that takes away some or all of the discomfort of an illness or injury.

You can take two pain killers every four hours.

Narcotic (n): a type of drug that stops pain or makes one sleep, often addictive when taken in large doses or in regular basis without a doctor's prescription.

Narcotics shouldn't be taken unless under supervision.

- Look at the picture. Where is the situation taking place?
- Are they in a hospital?
- How many people are there?
- What is the nurse doing to the patient?
- Is the patient conscious?
- Is she lying on a bed?
- What is on her face?
- What is it for?
- How could they know her heart condition?
- Have you ever worked in an ambulance?
- Can you describe the situation in detail?
- Do you have emergency services in your city?
- How would you contact them if you need them?
- Can you tell me the most important items that an ambulance should have?

Problem solving

You are in situation that a person needs emergency care but refuses to take any action? What would you do?

1. Shout at him/her to listen?
2. Call someone to talk to him/her?
3. Tell him not to get nervous?



Emergency (n): a medical problem that needs immediate attention.

It is important that children know which number to dial in case of an emergency

ill (adj): general term for any condition that makes a person feel sick for a certain period of time.

Illness (n)

Her illness went away when she started eating better.

Paramedic (n): a healthcare professional who works in emergency medical care, or the care of patients for conditions that require immediate or very prompt medical attention.

Physician (n): a doctor that practices medicine.

The physician prescribed a medicine to his patient.

Stethoscope (n): An instrument used by doctors for listening to the heart-beats and breathing sounds.

The physician used his stethoscope to examine his patient.

Critical condition (n): Requiring immediate and constant medical attention.

You can't see her right now; she's in critical condition

Vital sign (n): a sign of life.

Paramedics always check the injured vital signs.

- What is happening in the picture?
- Is there anyone in the stretcher?
- What are they rushing for?
- Where are they?
- How many people are there in the picture?
- What are they wearing?
- Do they look worried? Why?
- Are they part of medical team or paramedics?
- What do you think will happened next?
- Does it look like a critical situation to you? Why?

Problem solving

You are in a shopping mall. It is very crowded. A lady in front of you just fainted.

What will you do?

- 1- Help her immediately
- 2 Wait for the paramedic.
- 3-First check her vital sig.

4-

5-

Reasons:

iafor



[Click here to listen to the text](#)

The correlation between home exposure to Arabian Incense (bakhour) and asthma symptoms in Saudi Arabia

Asthma is a worldwide major health problem with significant variations in its prevalence and severity in different parts of the world. Many studies shown that asthma is common in Saudi Arabia. In addition, Saudi Arabia ranked among the top countries in global ranking of symptoms taken to indicate severe asthma.

Some prevalence of asthma risk factors in Saudi Arabia are: family history, sensitization to pollen and house dust mite, respiratory infections, and dietary habits, in addition to outdoor and indoor air pollutants including incense smoke. These factors may influence the pathogenesis and severity of asthma and require investigation not only to contribute to the understanding of asthma etiology, but also to plan measures for its control. In particular, it is important to explore the less characterized risk factors related to life style, culture and home environment which may be peculiar to different populations.

In Saudi Arabia and other Gulf countries, Arabian incense (bakhour) is one of the common indoor smoke sources to which individuals are frequently exposed, and may be an important contributory factor to the observed high prevalence and severity of asthma. A wide variety of substances are used to produce bakhour including frankincense, aromatic wood, herbs, flowers, essential oils, and perfumes burned using charcoal burner . Frankincense is a resin produced by oozing from incisions in the trunks of trees of the genus *Boswellia* that grow in the south of Oman .Other forms of incense are derived from sandalwood and are usually mixed with ingredients such as natural oils and perfumes .Due to its slow and incomplete combustion, incense burning produces continuous smoke, generating pollutants such as toxic gases and chemicals particles including polycyclic aromatic hydrocarbons, carbon monoxide, benzene, and isoprene that easily accumulate indoors, especially under inadequate ventilation .Exposure to incense smoke has been linked to asthma.

Here is some vocabulary related to ASTHMA:

- 1) Health problem
- 2) Symptoms
- 3) Severe
- 4) Prevalence
- 5) Asthma risk factors
- 6) Sensitization to pollen and house dust mite
- 7) Respiratory infections
- 8) Outdoor and indoor air pollutants

- 9) Pathogenesis of asthma and require
- 10) Investigation
- 11) Asthma etiology
- 12) Indoor smoke sources
- 13) Pollutants

How Asthma is correlated to Arabian Incense?

Do you

agree

Arabian

(bakhour) is one of

sources to which individuals are

frequently exposed, and may be an important contributory factor to the observed high

prevalence and severity of asthma in Saudi Arabia and WHY?

that

Incense

the common indoor smoke

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Study of Educational Impacts on Women's Tolerance of Gendered Violence in the Iranian Workplace

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Study of Educational Impacts on Women's Tolerance of Gendered Violence in the Iranian Workplace

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Every woman, man, youth and child has the human right to education, training and information. Equal right to education is explicitly emphasised in the “Universal Declaration of Human Rights”, “Convention on the Rights of the Child”, “International Covenant on Economic, Social and Cultural Rights”, “Convention on the Elimination of All Forms of Discrimination against Women”, “Convention on the Elimination of All Forms of Racial Discrimination”, and the “Convention against Discrimination in Education”.

According to the official statistics of Iran, education is equally available and accessible to females. Girls comprise 48.36 per cent of school students, and 67 per cent of university entrants are females. In other words, there is no discrimination against them as far as accessibility to education is concerned. However, gender discrimination occurs in the educational content and methods. School programmes, textbooks, and teaching methods are genderized, and stereotyped concept of the roles of men and women is introduced at all levels. The official statistics do not reflect these forms of discrimination. As a result, the educational system in Iran seems, outwardly, free from gender discrimination.

Inequalities in the field of education have had a deep adverse effect on women. Many women are influenced by gender roles so profoundly that they cannot even imagine themselves playing any role other than what is defined for them (Zanjanizadeh, 2006). The deep impact of gender roles on women has made them accept inequities as a part of life, and consequently face considerable problems.

Many studies have been done on gender-based education, as well as gendered violence. But adverse effects of discriminatory education on women's resistance to gendered violence have been neglected so far. The authors of this paper observed that execution of gendered violence in the workplace is common in Iran. It was also observed that many women tolerate the violence perpetrated against them, and their tolerance reinforces gendered violence.

The present paper reviews the impact of educational factors on women resulting in their tolerance of gendered violence in the workplace of Iran. The main objective of this study is to discover these factors. The other objectives are investigating how these factors have affected women, and identifying how effective these factors have been. The study aims at challenging the culture of tolerance of violence against women.

In this paper, education refers to home training, formal education and social stereotypes. The study shows that creating and reproducing gender roles by educational system have resulted in

women's tolerance of violence in the workplace. The research has also revealed that childhood training and education, educational system and environment, social pressures and stereotypes, have notable adverse impacts on women's responsiveness to gendered violence in the workplace.

The survey supported the hypotheses that: "Training and education are the most effective factors resulting in women's tolerance of gendered violence in the workplace of Iran.", and "Social stereotypes reinforce working women's tolerance of gendered violence".

1. Iranian Women's Conditions in the Workplace

The official policies of the Iranian workplace have had an extremely male-dominated structure in recent decades. Two separate spheres of activity for women and men have been created. The male sphere is typically outside home, taking part in activities that lead to his economic empowerment. On the other hand, the female sphere is usually inside home, taking care of household chores, bearing and rearing children (Monfared, 2007).

Besides, there is extensive occupational segregation by sex which is very closely linked to the training and educational system. In other words, women's employment options are limited to a number of socially acceptable occupations and professions such as teaching and nursing. Female occupations tend to be less valuable, offering lower pay, lower status, and fewer advancement opportunities than male occupations (ibid).

The latest official statistics (2010) show that women comprise 49.12 per cent of the country's population, 67 per cent of university entrants, but only 15 per cent of those employed. These statistics imply the male-dominated structure of Iranian workplace. Besides, the high percentage of female university entrants indicates that there is no discrimination against them as far as accessibility to education is concerned. But the discriminatory educational content-among other factors-has resulted in their inconspicuous presence in labour market.

Women occupy only three per cent of managerial positions. This proves occupational gender segregation. 80 per cent of working women work in education, and healthcare and medicine fields. It indicates that their traditional roles of teaching and nursing have transferred from home to society. Jobs of 89 per cent of working women are not relevant to their field of education.

The above mentioned data show that gender roles have resulted in inferiority of women in labour market. Female-dominated occupations put women in an oppressive situation where their exposure to gendered violence is increased. Their inferior status leads to their tolerance of violence which ultimately reinforces the violence against them.

2. Method

The research method was qualitative, using observation and in-depth interview as research tools. A qualitative approach seemed most befitting as the researchers intended to identify the profound psychological effects of training and education on women, and discover women's mental reasons for their tolerance of gendered violence. The study covered major universities of Tehran. 27

working women were purposively selected from the age group of 25-40, and from different educational and occupational levels.

3. Results

The main findings of the study are summarised as follows:

- All working women covered by the survey have suffered from direct or indirect gendered violence in their workplace.
- Perpetrating violence against women is resulted from gender-based education which considers men to be superior, and to have more rights than women.
- There is a direct relationship between women's occupational level and the measure of violence used against them. Women at lower level jobs are exposed to more violence.
- Gendered behaviour, which has its roots in education, has a strong adverse effect on their responsiveness to violence.
- Creation of gender roles by training and education leads to women's tolerance of violence.
- Gender-based training and education institutionalise women's tolerance.
- Their tolerance of violence is reproduced and reinforced by social stereotypes.

4. Discussions

The educational factors resulting in women's tolerance of gendered violence are categorised as home training, formal education and social stereotypes. During interviews, some non-educational factors were also identified a summary of which is given at the end of this section.

4.1. Home Training

The patriarchal system dominating Iranian society has led to male-dominated family structure where opposition to male members is usually considered as an inappropriate behaviour. A patriarchal family considers female members inferior to males. Females are expected to be soft, obedient, sacrificing and forgiving whereas males are expected to be strong, confident, demanding, and goal-oriented. These expectations make a deep impression on children at their tender age.

In a patriarchal family system, mother often obeys father and forgives his misbehaviour. Mother acts as a role model to girls, so they imitate mother's behaviour towards father and internalise tolerance of violent behaviour. On occasions, when girls try to oppose father, they are usually suppressed by mother. This suppression makes girls perceive opposition to males as an anti-value. They consider non-resistance to violence as a value and, in future, they behave in the same manner towards males in the workplace.

On the contrary, boys are often encouraged to be strong and resist violence. Besides, boys imitate behaviour of father-as their role model-towards mother and internalise using violence against females. The result of gender-based family training is development of a sense of superiority in boys and inferiority in girls.

Unequal norms and structures tend to be reproduced by mothers. It is highly probable that a woman, who has been raised and trained in a patriarchal family, raises and trains her children based on the same norms, structures and values. Since bringing up children is mothers' duty, gendered value system will be reproduced for generations. Many women have usually grown up with the idea that a decent woman has to obey the existing social norms and most probably, she transmits this belief to her daughter/s.

Every society is regulated by a series of interrelated signs, roles and rituals, Jacques Lacan termed this series the "Symbolic order". For a child to function adequately within society, he or she must internalise the Symbolic order. The more a child submits to the linguistic rules of society, the more those rules will be inscribed in his or her unconscious. In other words, the Symbolic order regulates society through regulation of individuals. As long as individuals speak the language of the Symbolic order- internalising its gender roles- society reproduces itself in fairly constant forms (Derrida, 1978).

The stereotyped concepts of the roles of women and men defined by the ideological system of Iran lead to persistence of inequities. Family, unknowingly, reinforces the ideological teachings by gender-based training. As the results of this study shows, women's tolerance of gendered violence makes them more liable to it. In addition, obstructing women in playing roles other than what is defined by patriarchal system decelerates their liberation.

4.2. Formal Education

In formal education, gender segregation and content of textbooks have strong adverse effect on females.

4.2.1. Gender segregation.

Gender segregation has been enforced at primary and secondary levels since Islamic Revolution in Iran at 1978. The higher education has also been subject to segregation by sex recently. This has a notable influence on reproducing gender roles. In a single-gender environment the roles and approaches instilled into children by home training are reinforced and reproduced due to the lack of opportunity to be in contact with the opposite sex. Gender roles get established firmly in single-gender educational system. Institutionalisation of gender roles leads to reproduction of "Symbolic order" and forms the basis for imposing ideological structures. In this manner, females' socialisation process is adversely affected.

On the other hand, single-gender education marginalises females and diminishes their chances of gaining clear perception of males. As a result females gain limited knowledge of dealing with males. Gender segregation also limits their opportunities to compare their abilities and talents with males', and consequently undermines their self-confidence and reproduces gender roles.

Gender segregation limits males' chances of interaction with females and gaining clear perception of them too. But the content of textbooks emphasises on males' superiority and prepares them for active social and economic participation. On the contrary, the content of education emphasises on traditionally defined role of women and does not educate them to

achieve an equal status in the society. As a result, they develop a sense of inferiority to men, which ultimately leads to their tolerance of gendered violence.

In future, when women enter labour market, they face the same value system they had experienced in family and school. Reproduction of gender-based expectations in the workplace reinforces the values defined for women like being obedient and forgiving. Hence, many of them do not resist gendered violence and consider tolerance of violence as a value.

4.2.2. Content of education.

Subjects studied in school are an important factor in the gender socialisation processes of children. In the educational system, students internalise the images and representations related to the opposite gender through learning and contact with official school norms.

Textbooks play an important role in shaping and socialising students. In Iran, a student's learning is deeply affected by the content of textbooks which emphasise the male and the female roles with scrupulousness. Men and women have assigned gender roles in their social and private lives (Afshani, 2009). They are presented as two different social individuals who complement one another and have specific gender roles. Men are clearly the superior sex and women are the second sex.

The father is responsible for more important tasks, activities that require higher technical abilities, and in relation with professional activities outside the home and the son plays the role of principal assistant to the father. The roles of the mother and the daughter are defined within the boundaries of day-to-day household activities (Paivandi, 2008).

According to a survey on textbooks, there is only one female name against four male names. It is noteworthy that the grade is in inverse proportion to the number of female names. In other words, as students go up from first towards last grade, the share of female names is reduced and the same of male is increased (Shaditalab, 1996).

In connection with the labor market, man is the "breadwinner" and, therefore, the "head" of the household. Women, who do not have the role of "breadwinner", must have "responsibility" for matters inside the home. A family's happiness and the "successful" upbringing of children are because of the woman's presence at home and her lack of economic activity (Paivandi, 2008).

Textbooks do not have a fundamental opposition to women's economic activity outside the home, but they consider such activities secondary compared to their family and maternal duties (ibid). However, economic activities belong more to the male world and women can find their way to these activities only marginally (Monfared, 2007). The textbooks reflect the official policies of the Iranian workplace, which has had an extremely male-dominated structure in recent decades.

The scarcity of images of women in the work environment is the good indication of the male-dominated nature of the textbooks and their view of women's role in the economy, especially since they compensate for this absence by depicting them in family matters, maternal responsibilities and housekeeping (Paivandi, 2008). Most of the pictures in the textbooks depict a

pivotal role for 'male'. A woman is often shown as a housewife, busy with domestic duties, while a man is busy with important and valuable tasks, taking part in economic activities. Women are mainly depicted washing dishes, ironing, stitching, etc. (Monfared, 2007).

Textbooks, moreover, create a value system that expects girls to be obedient, self-sacrificing, forgiving, tolerant, forbearing, etc. As a matter of fact, girls experience the same structures that they have seen in male-dominated family system, and gender roles are established in this way. As a result, girls regard resistance to existing conditions in general, and violence in specific as an anti-value. This ultimately leads to their tolerance of gendered violence.

The gender-based educational system considers role of wife and mother as the major and the most valuable role of women (ibid). It creates a sense of guilt in women to work. Besides, when working women face violence in the workplace, they feel they deserve it because they have not been fully committed to their main role.

On the contrary, the content of education attributes qualities like strength, capability, resistance, disobedience, etc. to boys. Hence, unlike girls, boys consider obedience and tolerance of violence as an anti-value. This value system reinforces violence against females and degrades females to second citizens.

4.3. Social Stereotypes

In addition to family and school, social stereotypes have deep impacts on individuals' socialisation process. Scientific studies show that many of the characteristics attributed to boys and girls not only influences others' behaviour and attitude towards them, but also their own mentality (Najirad, 2003). In fact, children's attitude towards themselves becomes a part of their stable mental structure by a process of internalisation. Children interpret and justify their and others'-including opposite sex's- behaviour based on these mental structures. This process influences various aspects of their personal, as well as social life. These evaluation structures affect girls' and boys' life in short and long term (Monfard, 2007).

In many cases, the influence of gender conceptions is constant. For example, females usually ascribe their success to external factors such as simplicity of work or luck, whereas they consider their failure as a result of their inabilities.

During socialisation process, girls conform to social stereotypes which expect them to be inferior. These stereotypes make females believe that they should not stand on higher positions than males and if they do, they will be rejected by society. According to some studies girls defend themselves against what is called "fear of success" by not entering so-called masculine disciplines like engineering, and not fully utilising their talents, in order to be in harmony with society's expectations. Fear of success refers to being afraid of having a very high level of performance which is probably unacceptable by the society. As a result, many girls who are highly talented are afraid of competition with boys (ibid).

Generally, gender stereotyping is one of the main reasons for women's lack of motivation to take high level jobs. In other words, gender stereotypes inspire women with a sense of inferiority which is one of the factors preventing them from getting higher positions (Seyedan, 1999).

A woman needs to be a wife and/or mother in order to be considered as a “complete woman” by society. She is expected to give lower priority to her educational and career achievements. As per hidden stereotypes, competition with men in so-called masculine fields is an anti-value. In addition, society shows less appreciation for women’s success. According to social stereotypes, a woman is expected to refuse more responsible jobs, like management, which is in conflict with her main role of being a perfect wife and mother. As a result, women’s motivation for improvement and success is suppressed. All these expectations lead to their occupying lower level jobs and put them in an oppressive situation where they are more likely exposed to gendered violence.

Social stereotypes reinforce the adverse effects on women by expecting them to show a face-saving behaviour which protects male family members’ reputation. Society emphasises on protecting family’s reputation as one of the females’ responsibilities. Hence, they prefer to tolerate the violence instead of taking some action that may ruin their male family members’ reputation. In other words, they regard tolerance of violence as a face-saving compromise.

On the other hand, taking care of female family members and protecting them is considered as males’ responsibility. Therefore, in many cases, the fear of being blamed for not protecting women makes men prefer to hide any kind of violence perpetrated against their female family members. This fear makes many of them prevent women from participating socially and economically. In this way, many women are denied the right to play constructive roles in the society. This develops a false consciousness among women that makes them consider violence as an inevitable part of entering labour market that is “male sphere”.

4.4. Non-educational factors

During interviews, some non-educational factors that reinforce women’s tolerance of gendered violence were also identified which are summarised as follows:

- **Lack of family support.**

In many cases, the male family member- mainly father or husband- prevents a woman who has faced violence in the workplace from working. As a result, many women do not even discuss the problem with family members due to their non-supportive behaviour. Women usually prefer to compromise and tolerate the situation in order to save their occupational lives. Obviously, their tolerance makes them more liable to gendered violence.

- **Lack of legal support.**

The legal system which is based on the ideology dominating Iranian society is not very supportive towards women. They are usually to blame for their wrong behaviour, seducing men, etc. This kind of attitude is based on the ideology that often considers women responsible for men’s moral decline.

In addition, the patriarchal system considers men as “breadwinners” and the main providers for the family means. The perception that men are the sole breadwinners perpetuates the secondary status of women in the labour market. Women’s employment is regarded as occupying male sphere. Thus, working women who have faced violence in the workplace are usually treated as if they are guilty of threatening men’s right to employment. In the cases where the legal system is supportive of women, the complex legal procedure usually makes them withdraw their complaints.

However, the factors mentioned above are also influenced by training and education. Family’s and legal system’s attitudes towards women are based on ideological teachings and social stereotypes reproduced by gender-based educational system.

5. Recommendations

The government is a key actor in preparing and controlling school curricula, and the educational environments lack the freedom to criticise the content of textbooks. The current gender-based educational system is deliberately created by the government. Therefore, the researchers’ recommendations are limited to some indirect solutions. These recommendations are as follows:

- Social workers and child psychologists are recommended to encourage and guide parents to reform gendered family training. They should raise parents’ awareness of gender roles and their adverse effects on children.
- Children’s book authors are recommended to:
 - Redefine gender roles and value system. For example, the characteristics such as forgivingness, self-sacrifice, tolerance, etc., should not be only attributed to females. Likewise, qualities such as strength, confidence, etc. should be attributed to females too.
 - Build confidence in girls and emphasise on girls’ resistance to violence in their books.

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Researching on Non ethical Usage of Information Technologies by Teacher's Training School Students

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Abstract

The aim of this research is to determine the ethic problems which are appeared by developing information technologies and the opinions of the teacher's training school students to this matter. The research was conducted with 350 students who were students of the different branch of Selçuk University Technology and Design Faculty in Konya in 2010-2011 education-instruction years. There were five factors in the research data. The SPSS 17 program was used to analyze the collected data. Frequency, percent aging, mean, standard deviation, Kruskal Walis H Test and correlation analysis were used in this research. The result of the research revealed that the students who don't know using computer and the students who use computer very well use information technologies more unethical. The students who use internet very well handle information technologies unethical and the students who use internet passable (mesial) handle information technologies more ethic than the others. Outcomes of the research also show similar results for intellectual property factor.

Keywords: Information technologies, ethic, computer, Internet

1. Introduction

With the growing prevalence of computer and internet, almost every faculty students has an internet access in Turkey. According to Internet High Commission (IHC), the percentage of internet owners is 40% in Turkey at the end of 2009. In other words, 30 million Turkish people have own an Internet access. The number of internet users is still increasing.

Internet access is nearly one of the easiest ways to achieve unlimited knowledge. The information circulating on the Internet are personal correspondences, passwords, codes written on various topics, as well as articles, advertisements, on topics such as product presentation. The reliability of the information has been, so easy to access to information, about the various problems in an environment (Şeker, 2005: 84-85).

The security issue much more came on the agenda on our lives via impact of ICT in recent years. Personal rights, intellectual property rights, trade secrets, system quality, quality of life and responsibility-liability issues include security issues. Is Credit card account accessed? Does the virus destroy our computers? Are deposit accounts safe? Is unauthorized computer using in our workplace closed? Is the company's information in security? These security issues that were always outside lower our quality of life (Dedeoğlu, 2001: 16-17).

Any of the parties involved in the process of Internet access, comes together even being virtually and geographically very different areas. This talent of accessing is forcing the borders of our life incredibly. In this content, internet-related legislation such as freedom of speech and censorship issues, many times leads to an important dilemma (Spinello, 2006). New Turkish Penal Code recognized some internet crimes which shown under the heading of "Crimes in the field of information between the computing system" and are the system block, break, destroy or change data, bank or credit card abuse, child pornography crimes, crimes against electronic signatures, spam, events, violations of intellectual property right (Tarcan, 2005).

In this context, the aim of this research is to determine the ethic problems which are appeared by developing information technologies and the opinions of Technology and Design Faculty Students to this matter. Can Technology and Design Faculty Students use information technologies in ethic way? How are their behaviors for using in an ethic way? These questions are determined as a problem. This problem is examined with two subtitles: Can students' using information technologies in an ethic way indicate certain differences according to their level of using computer? And can students' using information technologies in an ethic way indicate certain differences according to their level of using internet?

2. Methods

2.1 Research Model

Relational scan model that including the comparative investigation between variables, is used in the research. Scan model aimed to describe the situation in the past and still last. Correlation type aimed to determine degree of relation between two or more variables in an

research (Büyüköztürk, 2007: 220).

2.2 Populations and sample

Purposive sampling method was observed in this study. Purposive sampling can be helpful for discovery and explanation of facts and events in many cases. In this sense, The sample were 350 students who had taken vocational courses and computer courses in Konya Selçuk university Technology and Design Faculty at 2010-2011 academic year. The reason of choosing these students was because the more high their using information technology skill, the more understand and answer the questions of scale.

2.3 Data Collection Tools

In the research, ‘unethical computer using meter’ which was prepared by Namlu and Odabaşı (2007) is used with the aim of determining students’ opinion and behaviors that are related to use information technologies in an ethic way, survey of research composed with two chapters. There are individual questions in first chapter and computer usage behaviors’ questions in second chapter.

2.4 Data Analysis

The SPSS 17 program was used to analyze the data. While doing questions’ statistical analyzing, frequency, percent aging, mean, standard deviation, Kruskal Walis H Test and correlation analysis are used for examining the importance of relations between students’ level of using internet and their level of using computer(Büyüköztürk, 2007: 220). Because of missing 36 scales, there were 314 scales in the research.

3. Results

3.1 The relationships between levels of student computer use and non ethical use of information technologies

Factors according to levels of student computer use are given in Table 1.

Table 1: Factors According to Levels of Student Computer Use Statistics (n=314)

Factor	N	Mean	Std. Deviation	Minimum	Maximum
Intellectual property	314	40.1975	14.17257	15.00	74.00
The social impact	314	31.7070	11.54115	18.00	82.00
Safety-Quality	314	22.8631	9.21991	14.00	67.00
The accuracy of the network	314	17.2866	6.24326	8.00	39.00
The accuracy of information	314	7.3662	3.59040	4.00	20.00
Total	314	119.4204	38.50441	59.00	271.00
Computer Use & non ethic usage	314	3.75	.844	2	5

In this part, because of a non-parametric distribution of students, N values given in Table

2, Kruskal-Wallis test was applied in order to see whether there is a significant difference (0.05 significance level) between factors. Scores are given in table 2 according to students' levels of computer use and factors. There are significant relationships between Levels of computer use by students and non ethical use of information technology on intellectual property and the total score.

Table 2: Non ethical use of information Technology-Computer Use Level, Kruskal-Wallis Test Results (n = 314)

Factor	User level	N	Mean Rank	sd	X²	P
Intellectual property	Low	26	152.48	3	12.104	0.007
	Medium	83	128.82			
	Good	149	169.76			
	Very good	56	169.71			
	TOTAL	314				
The social impact	Low	26	141.62	3	7.122	.068
	Medium	83	137.98			
	Good	149	166.83			
	Very good	56	168.98			
	TOTAL	314				
Safety-Quality	Low	26	180.02	3	2.368	.500
	Medium	83	139.20			
	Good	149	161.85			
	Very good	56	162.61			
	TOTAL	314				
The accuracy of the network	Low	26	164.58	3	5.527	.137
	Medium	83	143.91			
	Good	149	162.54			
	Very good	56	160.94			
	TOTAL	314				
The accuracy of information	Low	26	164.10	3	2.349	.503
	Medium	83	144.64			
	Good	149	162.18			
	Very good	56	161.04			
	TOTAL	314				

Total non ethical usage	Low	26	158.10	3	8.189	.042
	Medium	83	133.48			
	Good	149	168.11			
	Very good	56	164.58			
	TOTAL	314				

3.2 The relationships between levels of student internet use and non ethical use of information technologies

Factor that defines the level of the students on the basis of the views of internet usage statistics in Table 3 are given in.

Table 3: Factors According to Levels of Student Internet Use Statistics (n = 314)

Factor	N	Mean	Std. Deviation	Minimum	Maximum
Intellectual property	314	40.1975	14.17257	15.00	74.00
The social impact	314	31.7070	11.54115	18.00	82.00
Safety-Quality	314	22.8631	9.21991	14.00	67.00
The accuracy of the network	314	17.2866	6.24326	8.00	39.00
The accuracy of information	314	7.3662	3.59040	4.00	20.00
Total	314	119.4204	38.50441	59.00	271.00
Computer Use & non ethic usage	314	4.09	.725	2	5

In this part, because of a non-parametric distribution of students, N values given in Table 4, Kruskal-Wallis test was applied in order to see whether there is a significant difference (0.05 significance level) between factors. Scores are given in table 4 according to students' levels of computer use and factors. There is significant relationship between Levels of internet use by students and non ethical use of information technology on accuracy of the network.

Table 4: Nonethical use of information Technology - Internet Use level, Kruskal-Wallis Test Results (n = 314)

Factor	User level	N	Mean Rank	sd	X ²	P
Intellectual property	Low	8	208.63	3	6.082	0.108
	Medium	46	133.20			
	Good	171	160.61			
	Very good	89	159.49			
	TOTAL	314				
The social impact	Low	8	221.69	3	7.635	.054
	Medium	46	135.95			
	Good	171	163.23			
	Very good	89	151.86			
	TOTAL	314				
Safety-Quality	Low	8	183.50	3	2.368	.500
	Medium	46	143.97			
	Good	171	162.23			
	Very good	89	153.08			
	TOTAL	314				
The accuracy of the network	Low	8	196.88	3	10.772	.013
	Medium	46	120.59			
	Good	171	166.28			
	Very good	89	156.17			
	TOTAL	314				
The accuracy of information	Low	8	176.25	3	5.421	.143
	Medium	46	129.85			
	Good	171	162.94			
	Very good	89	159.66			
	TOTAL	314				
Total non ethical usage	Low	8	208.88	3	6.618	.085
	Medium	46	133.26			
	Good	171	163.20			
	Very good	89	154.45			
	TOTAL	314				

The results were examined separately for each factor. The accuracy of the network factor

is seen to differ significantly.

4. Discussion

The students who indicated his/her level of using computer as 'very good', then it was concluded that they used information technologies in an unethical way. Same results are valid for intellectual property factor.

According to Ghazali (2003), Friedman was done two researches with high school students about "Intellectual Property" and "Privacy". It was stated that students cannot see Computer file's privacy or Intellectual Property Rights such as privacy that is unrelated with computer and intellectual property rights that are unrelated with computer. (Ghazali, 2003: 76).

When examining results of Ghazali's researches', it was seen that there were 5 different fields which students back out of ethic behaviors. These are; misuse the telephone lines, humiliate the teachers by using private web pages, infringe copyright and license requirements, commit a fraud, be hacker for fun (Ghazali, 2003: 247).

The results of the research aimed that to betray the level of the teacher training school students' using information technologies in an ethic way. Our research results which are to display the level of the teacher training school students' using information technologies in an ethic way show similarities with Intellectual Property Rights.

When examining similar research results which is done with teachers by Erdem (2008), the teachers whose using computer level is 'good' and 'very good', behave more unethical than intermediate level user. (Erdem, 2008: 81-83). This result shows similarities with the study "Examining behaviors of secondary school students' using computer in unethical way".

According to Erdem's research, teachers' using internet level does not affect their behaviors of using information technologies in an ethic way (Erdem, 2008: 85-87). This result shows differences with the study "Examining behaviors of secondary school students' using computer in unethical way".

5. Conclusions

This study, aims to define Technology and Design faculty students' ethical use of information technologies, reveals the following conclusions:

It is concluded that information technology used by more unethical purposes side of students who stated their levels of internet use better than computer use.

Second conclusion is concluded that information technology used by more unethical purposes side of students who stated their levels of computer use as "good" on factor of Total non ethical usage. In students who stated their levels of computer use as "medium", "very good" and "low" use of information technology non-ethically is decreasing with depends on their level of computer use. Similar result was seen for only the factor of intellectual property on the basis of the factor no significant differences in other factors have not been identified.

Third conclusion is concluded that significant relation was seen for only the factor of accuracy of the network on the basis of the factor, no significant relation in other factors have not been identified. As aforementioned factor information technology used by more unethical purposes side of students who stated their levels of internet use as "good". In students who stated their levels of internet use as "very good", "medium" and "low", use of information technology non-ethically is decreasing with depends on their level of internet use.

In accordance with the results, these are preferred: From primary school to college, computer ethics lessons are taken into syllabus besides computer lessons at all levels of the education.

We have to make teachers and families conscious of using information technologies in an ethic way and to encourage them to be a good model for their children.

Ethic problems can evaluate with similar studies by examining other schools.

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**THE ASIAN CONFERENCE ON EDUCATION (ACE 2011) ON OCTOBER
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TOPIC OF SUBMISSION:

Adult, Vocational, Distance, and Professional Learning

PAPER TITLE:

Feeding students or not: An experience of a non-native teacher in a state-owned telecommunication conglomerate in Thailand

Keywords: adult learner; game; English at work, non-native English (NNE), Thailand

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Feeding students or not: An experience of a non-native teacher in a state-owned telecommunication conglomerate in Thailand

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1. INTRODUCTION

1.1 Current Thailand Context

Currently, increasing globalization and exchange of ideas and peoples across national borders has made linguistic competency in English as a second language (ESL) *a prized asset* and in many cases *a necessity*. Even though Thailand has never been colonized, English, *a world language*, is taught to people primarily for economic reasons (Fasold 1987, 1990). During the economic boom and digital era, English is not only a tool to gain access to modern technology but also a key to professional accomplishment because the workplace demands communication with foreigners (Dickson & Coming 1996), especially for economic reasons (Fasold 1987). The status of English as a *lingua franca* becomes even more obvious with the forthcoming enforcement of the ASEAN Economy Community (AEC) Agreement in 2015. Concrete evidence is that more and more Thai government agencies and private sectors have put in their job screening process the score of 550+ TOEIC (Test of English for International Communication) as an essential precondition for job application eligibility. According to the document on Strategy in Production and Developing Workforce of the Nation in the Second Decade of Education Reform, B.E. 2009-2018 reported by the Office of the Educational Council, Ministry of Education (2011, p. 13), newly-emerging industries require people with high proficiency in foreign languages with economic significance including English, Chinese, Japanese or Southeast Asian languages. Aside from linguistic competence, these labors also need to be well equipped with computer literacy at the effective user level. Therefore, those who do not have access to state-of-the-art technology nor English proficiency as a prerequisite skill may experience limited opportunities for employment because English-speaking abilities are preferred, particularly by international companies.

Due to the aforesaid high unemployment rate, job competition in the labor market becomes severe and parents wish their children the best in education, thereby sending their children to bilingual or international programs. Thus, on one hand, new graduates are well prepared in the area of English communication. On the other, the unemployed or new graduates have high motivation enough to learn English because they want to be employed (Crandall 1979). Most members in this group tend to have high proficiency in English. However, for the employed adults especially government officials, learning English tends to be an *individual choice* rather than a part of the *compulsory education* or the company's *strict requirement*. Specifically, in Thailand, state-owned jobs are regarded "a job for life," resulting in low motivation for any self-adjustment. In reverse to their employees, many state enterprises and government agencies, or even academic institutions have moved on with their privatization plans in order to diminish red tape and encourage businesslike implementation.

Despondently, most of their employees still do not recognize the fact that they have to adapt themselves to cope with the company's modernization processes. In today's world, those who can understand English tend to be more privileged than those who do not. Even worse, both

private and government agencies tend to prefer flexible or multi-skilled people rather than loyal or long-serving ones. At a telecommunication conglomerate like TOT Public Company Limited, where the present study was conducted, for example, employees who are 45+ years old were being strongly encouraged to think about their early retirement just now. Therefore, senior employees who still want to work for the company need to readjust themselves to the ever-changing world and the globalized mainstream. Many of these long-time employees may be faced with some difficulties learning English at the age in the neighborhood of 40s.

This paper will depict how the author, as a non-native-English-speaking novice teacher at a state-owned telecommunication company, tried to encourage her 40-year-old adult learners to eagerly learn English and regard English learning as a lifelong process. The findings from this study may help other novice NNE teachers to deal with adult learners in a more lively and effective way.

1.2 Characteristics of Good Language Learners and Adult Learner

Many researchers in adult education have found similar findings that adults can succeed in learning English as a second language when the material they learn matches their real-life expectation (Burt, Peyton, & Adams 2003, p. 22). Nunan (1999, p. 59), for instance, pointed out that good language learners should have three important characteristics: motivation, a preparedness to take risks, and the determination to apply their developing skills outside the classroom. His assertion is not very far from what Professor JoAnn Crandall has found in 1979. She wrote, “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). According to the aforementioned professors, adults learn well when they practice in a meaningful communicative activity and do not experience extreme stress or anxiety. They enter into learning activities through multiple channels. Nunan (1999, p. 15) stated, “Adults can learn best when the content is personally relevant to past experience or present concerns and the learning process is relevant to life experiences”. However, as these adult learners have to work while learning a second language, they may often face the problem of “busy,” “a lack of time,” “a tight schedule,” etc. even those who live in the US, where English is required (Krashen 1985). As a non-native English instructor responsible for teaching English at a state-owned company, I have to find a way to *motivate* these adult learners to learn English attentively. **Games** may help!

1.3 Why games?

Many teachers have found games can help their learners, especially children, learn. Games are fun and children love to play games. Through games, children can perform experiment, discovery, and interaction with environs (Lewis&Bedson 1999). They contend that games can stimulate young children to learn English. It brings the target language to life. Games make children learn without their noticing (Mei & Yu-jung 2000). Games allow students to learn English while enjoying themselves (Kim 1993). Because language learning is hard work and requires great efforts, games can produce constant efforts when students practice language skills (Wright et al 1984; Ersoz 2000). Games can reduce anxiety, making English acquisition more likely (Richard-Amato 1988). Even shy students can participate positively and without stress (Mei & Yu-jung 2000).

Alex Case (2008) set out the following major reasons why games should be used in an adult class. In his opinion, games allow adults to gain learning experiences in a more energetic way:

more drilling/ controlled practices, better memory, class spirit, realize their performance via game points, a natural way of learning, competition & motivation. Case emphasized that most students, regardless of their ages, like games. Based on the aforementioned studies, I believe that games may link adult learners' experiences to their past. For some, games allow students to redo what they might have done when they were young. For some, games may help them recall their good experiences in learning English. For others, games help them learn in a relaxing and non-threatening environment. Games will allow these adults to naturally learn English with fun and do repetitive grammar drills without boredom. Thus, I decided to introduce *games* into my grammar course.

As *games* are usually viewed and believed to be language learning activities for young children (see Lewis & Bedson 1999; Toth 1995; Wright et al 1984; Lengeling & Malarcher 1997; Nguyen & Khuat 2003; Uberman 1998, among many others), their applications in the adults' English classroom is thus significant and worth examining. To date, there has been little research on Thai adult learners at work and their attitude towards the use of games as part of in-class curriculum.

1.4 Scope of the Paper

This research paper consists of five sections. **Section One** is the introduction which covers the significance of English in current Thailand, characteristics of adult learners, and role of games in an English classroom. **Section Two** reviews the history of English learning and teaching in Thailand, and **Section Three** describes the forthcoming ASEAN community. **The next section** describes the methodology used in this study. **Sections Five and Six** report the findings and discussions of the study as well as some recommendations.

2. ENGLISH EDUCATION IN THAILAND FROM PAST TO PRESENT

At present, under the educational reform of 1999, English is taught in Thai public schools from first through twelfth grades (Kaopatuntip 2005). More specifically, because a nation cannot participate effectively in a global economy without English, the National Education Plan (2002-2016), based on the 1997 Constitution, was implemented with an emphasis on English learning in conjunction with bilateral and multilateral organizations such as the United Nations Education, Scientific and Cultural Organization (UNESCO), the International Association for the Evaluation of Educational Achievement (IEA), and the Asia-pacific Economic Cooperation (APEC), among others. Thus, it is understandable that among the educational reforms, the development of bilingual and international schools is of significant importance (Office of the Educational Council 2004, pp. 80-84).

After the crisis, the high cost of an overseas education resulted in the increasing establishment of international elementary and secondary schools as well as universities in the home country. The Office of the Educational Council (2004 & 2008, p. 149) reported that there were 46 international schools (elementary and secondary private schools that only use English) in 1999, 67 in 2002, 89 in 2003, 91 in 2004, 101 in 2005, 106 in 2006, and 108 in 2007. The number roughly doubled from 1999 to 2007—in only less than 10 years. Similarly, higher education (both private and public) provided by universities, institutions, colleges or other types of institutions had 356 international programs in 1999, 465 in 2002, and 521 in 2003. As mentioned in Education in Thailand 2007 (p. 146), in 2006, 844 international programs were offered by 53 higher academic institutions, in which 609 programs were provided by 30 public universities and

the rest by 23 private ones. These numbers can tell that the number of international programs has steadily increased at all levels.

To go through the economic crisis, the Office of the Educational Council (2004), another type of English program emerged—the bilingual programs in Thai elementary and secondary schools. At the elementary level, bilingual schools are, thus far, confined to private institutions, whereas secondary bilingual education is found in some public schools. According to the Office's report, bilingual schools focus on using English in communication, while simultaneously teaching Thai. Like international schools, the number of Thai schools wishing to offer bilingual programs nearly doubled from 104 in 2003 to 198 in 2004.

The increase number of English and bilingual programs have confirmed the growing need of Thai graduates with higher proficiency in English for better communication in trade and other relevant activities. The economic reason and rising unemployment rate requiring people to be fluent in English becomes even more earthly when the ASEAN Economic Community is plan to become fully formed in 2015.

3. THE FORTHCOMING ASEAN COMMUNITY IN 2015

Most recently, a fresh key cause which has driven Thailand's entering into the English mainstream society is its becoming part of ASEAN (Association of Southeast Asian Nations) community in 2015—only four years from now. The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967. The ten Member States of the Association comprises Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. The ASEAN Secretariat is based in Jakarta, Indonesia. According to the Roadmap for an ASEAN Community 2009-2015, the free flow of professionals and skilled labor involved in cross-border trade and investment-related activities will be greatly facilitated (ASEAN Secretariat 2009, pp. 29-30). Likewise, core competencies and qualifications for job/occupational and trainers skills required in the priority services sectors (by 2009) will be mutually developed. Standard job requirements in other service sectors will be further carried out and completed by 2015. Accordingly, there will be high mobility in the cross-border labor market where English is expected to be an international language used in communication. This is the inevitable change we need to accept and prepare ourselves for.

Responding to the foregoing roadmap, many universities and educational institutes thus have tried to prepare their current students not only with content-based subjects and cutting edge of technology but also linguistic competence so that they become attracted by recruiters. For the company, having employees with high proficiency in English certainly enhances opportunities of customer acquisition while creating a positive image to a conglomerate in the global market. For employees, having high English proficiency means a career ladder and greater responsibility. Hence, many large international companies in non-English speaking countries like Thailand have made many endeavors to develop expert users of English for effective communication at work.

As widely well-known that teaching English to young learners is hard enough, it is even harder to teach adult learners. Non-native English instructors need to apply many strategies to attract her students' attention while slightly pushing them towards language learning success. Next is the

methodology part which aims to describe the research design, research question, participants, and data collection/analysis used in the present study.

4. METHODOLOGY

4.1 Research Design/ Data Collection/Analysis

In this study, the author acted both as the participatory researcher and the teacher of a grammar course. Her major strategy used in attracting adult learners to go back to school and relearn English in a more effective manner is to reward students' achievements. The 2-page questionnaire was distributed at the farewell party of the advanced grammar class. The party took place a month after the class was over. All participants were happy to see each other again after the course was over. They were asked to complete the questionnaire in either Thai or English as they wished. Four-scale options, i.e. Like most, Like very much, Like a little, and Dislike were employed. Percentage of each option was then calculated to find significance of their preference. Open-ended questions for free expression of opinion are also provided for students' free articulation. 100% of the participants were willing for further in-depth interview.

4.2 Research Question

The study addressed two major questions which focused on the role of gaming and rewarding systems applied in the classroom:

1. Do adult learners like to play games?
2. What game do adult learners like most?
3. What reward do they prefer?
4. What extra-curricular activity do adult learners like most?
5. Can games motivate adult learners to learn English?

Throughout six months of teaching an advanced grammar class, the author found that the game and rewarding system may work as a good motivator at the outset. What's even more important at the later time is student's self-motivation. To be specific, in addition to the class spirit, each student has eventually developed the sense of love of study by themselves through the time of their in-class learning. Before going into the other details of the participants, an overview of the Advanced English Grammar course will be provided.

4.3 Nature of AEG Course at TOT Academy

The Advanced English Grammar (AEG) course is a free in-house training course provided to only TOT people who failed WSI test. At TOT, the entire English Grammar course takes one and a half years. AEG students had to take the basic and intermediate courses first. AEG started from 1 February – 28 June 2011, totaling 120 hours. The class met on Thursdays for 6 hours a day (from 9 to 16 hrs) for 20 weeks. The course was provided at the company's training center for the purposes of pulling out the students from their routines. Nevertheless, in an urgent case, students are permitted to go back to work because it is about 30 minutes far from the headquarters.

In this course, Macmillan English Grammar in Context: Advanced by Michael Vince (2008) was used as the main textbook. It is important to note that despite the one-year experience in ESL grammar classroom, the textbook is still deemed difficult for some of the participants in the present study in the areas of grammar and vocabulary. As Nunan (1999) put it, adult learners will

learn only what is meaningful to them. To apply their developing skills outside the classroom in Nunan's viewpoint, I encouraged my students to read outside class. To be specific, instead of simply teaching English grammar, the class was assigned to read two books outside the classroom and reading-aloud became a morning session for each class. The two reading books were: *Peaks and Valleys* by Spencer Johnson, M.D. (2009) and *Who Moved My Cheese?* (1998) by the same author. In the basic and intermediate levels, students were assigned to read the book *It's Not How Good You Are, It's How Good You Want To Be* by Paul Arden (2003). Both Spencer's books were chosen because they shared the same theme as Arden's notions of positive thinking, great creativity, & strong determination. The two books, *Peaks & Valleys* and *Who Moved My Cheese?*, were written by the same author, which will help learners to familiarize themselves with the style and lexicon used by the author.

For the games used in AEG, it is worth mentioning the games introduced in the two prerequisite grammar courses—at the basic and intermediate levels. During the basic level, the singing contest was used to 91 students. At the intermediate level, the class became much smaller to—41 and the games consisted of dictation and speech contest. At the advanced level, three extra activities were given as follows: reading-aloud contest, timing grammar game, and publication of essays in an English-language newspaper. All these game winners were rewarded.

4.4 Participant

Questionnaires were completed and returned from Twenty-five students out of the entire 30 (male: 6, female: 24) in the “Advanced English Grammar” course provided at TOT Academy, TOT Public Company Limited, formerly Telephone Organization of Thailand. Their ages were between 38 and 49, with an average of 44 yrs. To take this grammar course, the students had taken a test at Wall Street Institute (WSI) and could not pass its requirement to study at WSI. Thus, they were considered to have low English proficiency. After their failure to enroll in WSI course, they had taken and passed the “Basic English Grammar” and Intermediate English Grammar” courses at TOT Academy for a year in total. Unfortunately, because the number of participants is small and the proportion between male and female students is not very large (20:5), the author did not look into the difference in gender term. Despite such limitation research needs to be conducted.

Before going into the other details of the methodology, some facts about TOT employees are worth stating.

Many TOT adult learners have (very) limited time for education. Krashen (1985) pointed out the same situation even in the US where English is required, few adults spent 100 hours in adult literacy classes; most dropped out during the first few weeks. Adults learn what they want to learn (Nunan 1999). Many TOT employees do not see the importance of learning English or having high English proficiency because most of their work does not *directly* require this competency or direct contact with foreigners. Many adults have low motivation to learn English because English proficiency is not one of their KPIs or required competency at work or brings about any rewards and/or incentives. This is also true for most of TOT employees. Because of the low frequency of jobs requiring English competency, many adults prefer asking people around to do the job requiring English competency for them rather than doing it on their own. Their easy excuse is that they are old and do not need to learn any more. They are afraid of

starting to learn English at an old age. They don't want to look stupid. Yet, I firmly believe in the old saying: "No one is too old to learn!"

5. FINDINGS AND DISCUSSION

This section will offer answers both quantitatively and qualitatively to the research questions above.

5.1 Do adult learners like to play games?

Table 1: Do you like playing games in our English class? (N = 25)

Answer	Percentage
YES	100%
NO	0%

This finding confirmed Case's (2008) emphasis on games as the favorite for most students, regardless of their ages, like games.

5.2 What game do adult learners like most?

Table 2: What kinds of games do you like the most? (N = 25)

Game	Most (%)	Very much(%)	A little (%)	Dislike(%)
1. Reading aloud contest	44	48	8	0
2. Timing grammar game	56	44	0	0
3. Essay publication	32	60	8	0

Table 2 has clearly shown that "Timing grammar game" is the most favorite game among the adult participants in the present study, with 100% of "most" and "very much" responses altogether. It is good to hear from the students' own voices about how they truly feel. From the open-ended questions, some students added:

- Games have provided a wide variety of activities. Coupled with knowledge gained in the classroom, games can help me develop an ability to use the language.
- Games help to test learners' accuracy in grammar. They are much fun. There should always be games like this.
- Games help to build up English skills because there are always new words to learn. Reading and speaking games also help me improve my listening skill at the same time.
- Games help me to think faster. Continuously playing games helps me develop my English skills.
- Fun, fun, fun! I gained knowledge while learning without my noticing.
- Games help me memorize than reading books.
- Games keep my brain alert all the time. It helps me to think faster; thus, it gave me fun. It made feel like learning English. Sometimes, games help me memorize much better than just reading books. I can memorize the images I think of when playing games.

- English Reading contests made me know whether we read it correctly or not. In reading contest, I have learned that good readers also needed to express their feelings as well. All games are useful in their own way.

5.3 What reward do adult learners prefer?

Table 3: What reward do you prefer? (N = 25)

Reward	Most (%)	Very much(%)	A little (%)	Dislike(%)
1. Chocolate	68	24	8	0
2. Thai snacks	20	64	12	4
3. Foreign snacks	40	44	16	0
4. Eggs	48	32	16	4
5. Preserved plums	24	40	28	8
6. Books (grammar guides, dictionary, etc.)	96	4	0	0

Generally, the findings has reveled a very positive attitude toward rewards. There were some exceptions for Thai snacks (16% for a little and dislike altogether), foreign snacks (16%), eggs (20%), and preserved plums (36%). Thai snacks may be too familiar and easy to find—too native. The course was provided in Thailand; therefore, Thai snacks are not interesting and attractive much. Foreign snacks may cost exorbitantly high and this may have made the students feel too considerate toward the buyer—their teacher. Eggs and preserved plums offer negative attitudes because 50 eggs were given to those who got zero points. According to Nunan (1999) and Crandall (1979), adult learners will learn successfully in a non-threatening environment and without fear of humiliation. When the rewards convey a negative sense, then they embarrass –r even humiliate learners without the teacher’s noticing. Based on the teacher’s observation and talks with some students, those who got zero looked happy and fun in class. In reality, they might have felt deeply embarrassed. Likewise, preserved plums literally mean “the lowest or the last.” In class, those who got the lowest scores would be given a big jar of preserved plums. The negative connotations of both rewards may be the best explanation of about why both eggs and plums received the two most unfavorable percentages among all the five rewards. The best reward tends to be the book. Below are some comments from the students themselves.

- Rewards are cute and impressive.
- All rewards are good but the teacher has to spend a lot of money on this, which made me feel considerate. Only eggs are enough. Eggs make me feel full enough.
- I like books the most because I can go back and read them at home.
- Rewards attract students to learn more enthusiastically. We usually brag about rewards we got. It was much fun.
- Books are like gold. Knowledge gained from the book is endless.
- I love all rewards, but because the teacher paid for it. I think rewards should not be that expensive. It should be a little souvenir, or hand-made.
- I have never thought of buying books. However, after I was rewarded with a book, I saw its importance. Now, I use it everyday. My rewarded dictionary is worn out right now.

5.4 What extra-curricular activity do adult learners like most?

Table 4: What extra-curricular activity do you like most? (N = 25)

Activity	Most (%)	Very much(%)	A little (%)	Dislike(%)
1. Lunch after tests	56	36	8	0
2. Special party	68	20	12	0

Games can effectively bring about class spirit (Case 2008). This study has also found the same results. Most of them love lunches and/or special parties, e.g. farewell party. A very low percentage of “a little like” came from the fact that many lunches and parties were paid by the teacher or the course coordinator. Culturally, Thais are considerate towards other people’s generosity. Such cultural sense ingrained since young can best explain the findings. The participants’ comments thereof are follows:

- I want some more special parties. I have never laughed like this for a long time. I love to have lunch together.
- When we all have lunch, we keep talking about activities and lessons. Having lunch together made us all classmates feel closer.
- Extra-curricular activities help us learn in a relaxing way. It made our learning more effective.

5.5 Can games motivate adult learners to learn English?

Based on the author’s observation, students *always* asked for games when they felt exhausted with grammar drills or when they felt sleepy. It is worth noting that adult learners have their own idealized self-concept of learning English and they react to each experience as they perceive it, not as the teacher presents it (Nunan 1999), it is thus quite impossible for the teacher to force them to play games if they don’t like the activity themselves.

Around 53% (16 out of 30) furthered their English studies by enrolling in Basic Thai-English Translation at TOT Academy now. Some of the rest took the test at WSI and could pass the entrance exam. The translation course is quite stressful because students are required to be well-equipped with good grammar and word power. At the end of the day, however, students ask whether they can play some games.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

According to many ESL researchers and gurus, games have played a positive role in encouraging students to learn, especially beginning ESL learners or students with low proficiency. Regardless of ages, most students love game (Case 2008). The present study has found the similar result. Games can be used with ESL adult learners. As adults have their own cognitive styles, the teacher should incorporate their opinion into the lesson plan development and class activities as much as possible. As can be seen in the findings, even the reward type can affect the student’s attitude toward the class and lead to positive/negative attitude toward the learning. Also, some games may be too difficult for adult students, e.g. essay publication, the teacher should tell them directly why the activity must be carried out. Teachers should be also more sensitive about choosing the rewards which can either promote or demote their students’ learning.

6.2 Recommendation

Work in this area is limited and preliminary. Nonetheless, research needs to be further conducted, especially with ESL learners. More experiments with different groups or courses are thus encouraged. The participants should be larger. A more systematic controlled experiment should be conducted. For instance, there should be two classes run simultaneously. The first group of students plays games while the other does not. Then, the attendance rate, the scores, etc. can be meaningfully compared.

NOTES:

1. I am deeply grateful to all the thirty advanced grammar students at TOT Academy, TOT Public Company Limited, Thailand, from 1 February to 28 June 2011 for their useful information and active participation in this study. Special thanks also go to Ms. Chalika Sukhavachana, who was always there for me, encouraging me to teach. My pedagogical development could not have occurred without positive reactions, direct questioning, and constructive comments of these nice people. I owe them a great deal.
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**Linguistic Reflections on the *Shinshu* Model: Examining Principles of
Teacher/Childcare Provider Education from within the Local
Community**

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(Community, Culture, Globalization and Internationalization)

Linguistic Reflections on the *Shinshu* Model: Examining Principles of Teacher/Childcare Provider Education from within the Local Community

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The purposes of this study are (1) to briefly introduce an ongoing research project about the development of a model of childcare provider and teacher education, (2) to present its primary achievements to this point by giving a clinical example concerning language acquisition of children, and (3) to raise several questions that reflect the research's progress from the level of theoretical principle, in hopes that these questions will bring a philosophical viewpoint to bear on the duration of the project.

The project has been proposed and implemented by a joint team of faculty members from Ueda Women's Junior College (Ueda, Japan) and the Faculty of Education, Shinshu University (Nagano, Japan) and is subsidized by the Ministry of Education. The team's ultimate mission is to realize an educational system in which students become childcare providers and teachers in the community, with a vision of a children's upbringing from infancy to primary education.

Although the project has gone quite successfully so far, several theoretical questions have raised as the project proceeds. These questions touch the core value of the project, and, thus, examine the team's fundamental understanding of children's development. Two main issues that this study focuses are how

linguistic problems are dealt with by experts at local educational/childcare facilities in the community, and, accordingly, how problems about children's acquisition of language call for reconsideration of teacher/childcare education from the level of principle. This study tries to elucidate the nature of these issues from the viewpoint of ordinary language philosophy.

I. INTRODUCTION

The purposes of this study are: (1) to briefly introduce an ongoing research project about the development of a model of childcare provider and teacher education; (2) to present its primary achievements to this point by giving a clinical example concerning language acquisition of children; and (3) to raise several questions that reflect the research's progress from the level of theoretical principle, in hopes that these questions will bring a philosophical viewpoint to bear on the duration of the project.

II. OVERVIEW OF OUR RESEARCH PROJECT

The project has been proposed and implemented by a joint team of faculty members from Ueda Women's Junior College (Ueda, Japan) and the Faculty of Education, Shinshu University (Nagano, Japan) and is subsidized by the Ministry of Education. The team's ultimate mission is to realize an educational system in which students become childcare providers and teachers in the community, with a vision of a children's upbringing from infancy to primary education.

This concern originated from a shared sense of urgency: Problems of child rearing and primary education are becoming increasingly complex and severer in a divergent and globalized society, even in traditional rural communities such as Ueda and Nagano. The number of children who are diagnosed with neurobehavioral developmental disorder is increasing and support for minority students is becoming more evident than it used to be.

Our tentative conclusion is that higher educational institutions can contribute to addressing these issues by reconsidering the education of childcare providers and

teachers. We raise questions such as ‘Is there any way to bridge the boundaries between preschool facilities and primary schools?’ and ‘How could existing facilities in a community organically collaborate to support parents?’

Based on such interests, we coined the term ‘*Shinshu* Model’ to describe the education system we are devising. *Shinshu* is a traditional name of the region, which has been roughly assimilated into a territory now called Nagano Prefecture¹, in which the both cities of Ueda and Nagano are located. Thus, the implication of the term is two-fold: On the one hand, the research project tries to excavate and revitalize the potential resources of the province to which it historically relates. On the other, the renewed potential of the community can work as a herald of educational reform for the other parts of the nation, in which communities are facing with difficulties related to child rearing in an age of globalization.

Although the duration of ministry’s subsidy is three years, namely, from academic year 2009 to 2011, the treaty for cooperation between Ueda Women’s Junior College and Shinshu University assures a ten-year effort to realize the ideals of our research project.

III. ACHIEVEMENTS OF A SYMPOSIUM

Now that the officially subsidized period is approaching to the final stage, certain results and achievements have been accumulated. Let us focus on one of the major accomplishments: a symposium held on December 11, 2010 in the city of Nagano.

The basic concept of the symposium, we called ‘Symposium for the Support of Child Rearing’ (*kosodate-sien shinpojiumu*), was to host a panel discussion with four individuals: a pediatrician, to represent an opinion on child rearing from the medical side; a director of a public childcare facility, who could speak about the frontline of a public support for child rearing; a primary school teacher who was in charge of a special language class for minority students; and a commissioned welfare volunteer, who could provide a non-profit, non-governmental viewpoint about the community’s child rearing.

The discussion, chaired by a psychology professor from our team, went quite successfully. It was rich with resources for further elaboration, but, here, two points will be highlighted. Both points were hinted at by the paediatrician’s—Dr Kesashi

Aonuma's—comments during the symposium.² First, he mentioned that many parents are confused by the varied diagnoses by different experts. For example, in the case a child who seems to have difficulty in learning, a psychologist might say that it is a symptom of a learning disorder. The same child might be diagnosed by a paediatrician as having hyperactivity disorder and a psychologist may see her as having Asperger's syndrome. Thus, the parents are forced to choose the opinion that seems to be the most reliable.

Second, Aonuma mentioned that children with autism spectrum disorder have difficulty in learning language, even though they can communicate with others through their native language. For example, such a child can understand what stomachache is and say 'I have a stomach ache' (*onaka ga itai*, in Japanese). Nevertheless, when his parent replies 'Oh, you broke your stomach' (*Ah, onaka wo kowashita no ne*—this is a common expression in Japanese for having a stomach ache), the child cannot understand what his parent is saying. To him, breaking one's stomach is interpreted literally, like breaking a machine or a toy house. He does not understand this because his stomach is not working as it supposed to at the moment, but it is not destroyed like a broken toy house. According to Aonuma, this kind of difficulty in language learning seems to have something in common with the cultural barriers that minority students face when they learn Japanese as a second language.

IV. LINGUISTIC ISSUES THE PROJECT RAISES

This research raises two questions: (1) How can we make sense of experts' varied diagnoses (or names) for the same child's difficulties? (2) Does Aonuma's association between children with autism and non-native speakers make sense? (And why or why not?)

Let us begin by focusing on the latter question, which relates to the issue of a child's acquisition of language. It is often understood that learning a language expands the amount of one's vocabulary and grammatical knowledge. In this sense, however, neither child in Aonuma's example has any problem in acquiring Japanese: Both know what the stomach is and what breaking something means. Some might say, of course, that the issue is not about words and grammar, but about (phrasal) idiom. Still, one question

remains: why do these children have trouble understanding idiom, despite their semantic and grammatical knowledge? Possible responses are: ‘because it is, accidentally, a tricky one’ or ‘because it is cultural’. Why is it tricky and cultural, then? In other words, what constitutes complexity, either operational or cultural, in language learning?

Stanley Cavell, in his essay ‘Must We Mean What We Say?’ examines the plausibility of a method of ordinary language philosophy and discusses a widespread confusion about knowing what a word means, i.e., about how we learn a language. He says that people tend to forget how elaborate the learning process is, and then continues:

We tend to take what a native speaker does when he looks up a noun in a dictionary as the characteristic process of learning language But it is merely the end point in the process of learning the word’ (Cavell, 1969, 19).

Replacing the word ‘noun’ with ‘idiom’ in the statement above, Cavell’s point is relevant to our concern. It seems unproblematic to understand that the children mentioned in the symposium have trouble determining what ‘*onaka wo kowasu* (literally means ‘breaking stomach’, technically means ‘having stomach trouble’)’ means because they just do not have that idiom in their (mental) dictionary. Even so, why do some children have certain idiom in their dictionary while others do not? Of course the total amount of exposure to the language counts. If that is the case, however, Aonuma’s point may be reduced to the issue of time. The consequence of such an assumption may result in a simple conclusion: the longer you are exposed to the language, the more competent you become as a speaker of that language. This sharply opposes the paediatrician’s focus on the peculiarity of language acquisition found in children with autism and of non-native Japanese speakers.

In contrast, Cavell’s view highlights the complexity of language learning, rather than conceives it to be a matter of expanding knowledge mechanically. Cavell describes a scene in which a person comes across the word ‘*umiak*’ when she is reading in her armchair (Cavell, 1969, 19). She takes up the dictionary and finds the definition of the word, possibly something as ‘*noun*. an Eskimo open boat made of wood and skin, traditionally rowed by women. —origin: Inuit *umiaq*.’ Following the sequence of events in the armchair, Cavell claims that people tend to forget what learning a language is.

Although many would think that looking up a word in the dictionary is the pervaded part of one's language learning, it constitutes the end point (ibid.). Those who take up a dictionary and hunt for 'umiak' are those who are prepared to learn what 'umiak' means. Thus, what is happening here is not merely adding new vocabulary to one's linguistic capacity, but also recollection and reorganisation. As Cavell states that when we turned to the dictionary for 'umiak' we already know everything about the word *except* 'its combination' because 'we knew what a noun is', 'what boats are and what an Eskimo is' (ibid.). It is safe to say, at this point, that learning, and even researching, language cannot be narrowed down into accumulating facts and mastering rules. This kind of oversimplification is the result of forgetfulness, as we have discussed. As Cavell puts it: 'We forget that we learn language and learn the world *together*' (ibid.). This is why he calls taking up a dictionary as the end point in knowing a word.

Now that the characteristics of the process of language learning have been elucidated, how could we make sense of Aonuma's concern? In order to respond to this question, it is helpful to look at the background of Cavell's argument, i.e., why he, above all, had to address the 'elaborate' (ibid.) quality of the learning process. Cavell, a professor emeritus at Harvard University, explores his unique view of language and education from the viewpoint of Emersonian Moral Perfectionism. Despite the fact that his coinage of the term 'perfectionism' was primarily clarified in his book entitled *Conditions handsome and Unhandsome: The Constitution of Emersonian Moral Perfectionism*, which was published 1990, his thinking and writing on education stemmed from his reading of ordinary language philosophy especially of the work of his mentor J. L. Austin. It started when Cavell attended Austin's lecture at Harvard in 1955.³ Espen Hammer emphasises the significance and necessity of elucidating Cavell's initial reception of Austin's work (Hammer, 2-3). Cavell's enterprise of thinking about the nature and implications of ordinary language philosophy, as Hammer continues, 'sets the trajectory of all his subsequent work, including the most recent' (ibid.). In this regard, Hammer focuses on an essay, 'Must We Mean What We Say?', as Cavell's 'first single-handedly written philosophical article' (3).

Hammer pointed out that Cavell's essay at stake exhibits his uneasiness about the oppression of the positivistic view in mainstream philosophy at the time, namely, the late 1950s (2), 'Cavell attempts to defend [J. L.] Austin's methods (and the Oxford philosophers in general) against criticism leveled by Benson Mates, a well-known

logical positivist' (3-4), Hammer says. Mates' strategy is to choose two representative scholars in ordinary language philosophy, namely Gilbert Ryle and Austin, and to criticize them (including the school of ordinary language philosophy itself), saying that their arguments counter and contradict one another on the basic understanding of language.⁴ Although Cavell admits that there is a difference between the positions of the two Oxford philosophers, he is skeptical about the alternative methodology that the positivists insist. Mates assesses that the inconsistency of ordinary language simply lies in the absence of evidence (Hammer, 5). Thus, for the positivistic viewpoint, the only way for the Oxford philosophers to make further discussion possible is to 'leave their armchairs and start doing empirical linguistics' (ibid.). Cavell questions, 'But is our only intelligent course *at this point* to take a poll?' (Cavell, 1969, 4 [original emphasis]). In his view, it is the positivistic reduction of the ordinary (use of language) to science that makes philosophy oppressive. Our self-understanding of language does not solely come from discovery of facts collected by researchers. Rather, as found in the Socratic dialogues, philosophy helps to remind us of what we already know and live. Cavell says:

We feel we want to ask the question, and yet we feel we already have the answer. (One might say we have all the *elements* of an answer.) Socrates says that in such a situation we need to remind ourselves of something. So does the philosopher who proceeds from ordinary language: we need to remind ourselves of *what we should say when*. (Cavell, 1969, 20)⁵

Hammer relates this necessity of continual reminding to human forgetfulness about language (Hammer, 11). 'The idea that ordinary language philosophy explores the ordinary as forgotten, lost, or repressed comes to figure as a major theme throughout Cavell's writings' (11-12).

Here, it is evident that Cavell finds the tendency of positivistic theorists oppressive with regard to their assimilating the issue of human language into a matter of ostensive knowledge (about words and its use), evidenced by purely objective (hence somehow inhuman) proof. Such a narrow view of language leads to a narrow view of language learning, and, accordingly, of education.

Cavell distinguishes among three types of statements that ordinary language philosophers made: (1) statements that produce *instances* of what is said in a language.

For example, ‘We do say . . . but we don’t say . . .’; (2) statements that make explicit what is *implied* when we say what statements of the first type instances; and (3) statements that *generalise* the statements of the first two types (Cavell, 1969, 3). He explores the conception that the normativity of natural language, contrary to the positivistic view, is not something to be captured or settled by factual evidence, but instead is to be confirmed and to be proven by native speakers’ statements of the first type (32). He then writes:

Since saying something is never *merely* saying something, but is saying something with a certain tune and at a proper cue and while executing the appropriate business, the sounded utterance is only a salience of what is going on when we talk (or the unsounded when we think); so a statement of ‘what we say’ will give us only a feature of what we need to remember. But a native speaker will normally know the rest; learning it was part of learning the language (32-33).

Cavell reminds us of the fact that acquiring a language is not equated with becoming capable of the first type statements. Of course a learner might, sooner or later, reach the point at which she could say, ‘we do say “*onaka wo kowasu*” when something is wrong with our stomach’ or ‘we don’t say, however, “*me wo kowasu* (to break one’s eyes)” when something is wrong with our eyes’. Nevertheless, rote memorization of this sort of information does not necessarily lead one to become a competent speaker of the language. Expressed words and sentences, which manifest themselves as statements of the first type make sense only because they implement ‘appropriate business’ with ‘a certain tune and at a proper cue’ (ibid.). To put it differently, being knowledgeable about the first type statements is analogous to being familiar with the domains that the other two types of statements elucidate.

Returning to our initial concern, childcare provider and/or teacher education could find what the discussion above hints at. Facing the difficulties of child-rearing in the community, specifically with regard to linguistic problems, future carers and educators need to pay attention not only to what children say and do not say, but also to what makes their voicing words or a sentences possible and plausible. The presence and absence of language does not merely provide something by which to estimate their factual knowledge about words and their usage. Rather, how we appreciate the

occurrence of, and confusion towards, speech or silence relates to how we make ourselves understood in the world and in our participation with our community.⁶ Otherwise, the elaborate aspect of acquiring of human language might be overlooked and it shall be reduced to efficiency-oriented task of collecting of information and skills.

V. THE TASK OF CHILDCARE PROVIDERS/TEACHERS AND THEIR EDUCATION IN THE COMMUNITY

Finally, what could our project do to explore the betterment of education of childcare providers/teachers, with a focus on elucidating the notion of the '*Shinshu Model*' in the changing community? One answer is to help trainee childcare providers/teachers learn patience so that they can carefully explicate how children, including those who have various needs, 'learn language and learn the world *together*' (19). To childcare providers/teachers who share this view, language is neither a mere tool of teaching nor a substantiated component of learning objectives. Like the air we breathe, we live and think in it—we merely forget about it while our conversation proceeds smoothly. When we stumble, some take up a dictionary or some try to confirm what we say by exchanging statements of the three types: some coin a term as an effort to elaborate one's (understanding of the) world by adding a piece of language. Terminology such as 'a learning disorder', 'hyperactivity disorder', 'Asperger's syndrome' exhibits how people, experts included, have seriously engaged with children who do not seem to learn in the way adults supposed.⁷ To future childcare providers/teachers, learning these concepts is not 'the characteristic process' of their learning, but rather 'the end point in the process' (ibid.). This point, however, is critical one. Cavell notes that there are two cases in which people align a word and the world:

What seemed like finding the world in a dictionary was really a case of bringing the world to the dictionary. We had the world with us all the time . . . ; but we felt the weight of it only when we felt a lack in it. Sometimes we will need to bring the dictionary to the world (20).

The first case is taking up a dictionary when one, while reading, comes across an

unknown word. The second is coming across an unknown phenomenon and asking someone or looking into it by reading further. In either case, Cavell continues:

What you need to learn will depend on what specifically it is you want to know; and how you can find out will depend specifically on what you already command. How we answer the question, 'What is X?' will depend, therefore, on the specific case of ignorance and of knowledge (ibid.).

Here, patience counts again in the education of childcare providers/teachers. They need to be helped to experience their education not by being provided a set of answers, but rather by knowing what their questions are and examining what ignorance and knowledge comprise these questions. Therefore, a question of 'What is X (e.g., autism)' recurs to a learner as long as she is changing (and, thus, going through her education), and accordingly her knowledge and ignorance towards the world and others change. The '*Shinshu Model*', therefore, shall be characterised itself by ongoing practices of bringing the dictionary (of children, of future childcare providers/teachers, and of educators of them) into the community and vice versa. That aims not only raising their vocabulary as educational experts, but also expanding their world and lives as professionals in the community. That would, hopefully, help align the conduct of learning in higher education with the community in which it takes place.

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NOTES

¹ A prefecture is an administrative entity of local self-government in Japan. 'State' or 'province' seem to be counterpart terms in Euro-American countries. Japan consists of 47 prefectural subdivisions.

² Dr Aonuma's comments are quoted from the recorded video data of the symposium, with his permission. The original comments are made in Japanese, and the authors of this paper translated them into English.

³ Cavell says in an interview, ‘. . . J. L. Austin appeared at Harvard to give the William James Lectures in 1955 and to offer seminars in other of his interests. Then I had the experience of knowing what I was put on earth to do. . . [I]n responding him I found the beginning of my own intellectual voice’ (Conant, 30).

⁴ The example that Mates focuses is the employment of the term ‘voluntary’. Whereas Ryle says that ‘In their most ordinary employment “voluntary” and “involuntary” are used . . . as adjectives applying to actions which ought not to be done’ (Cavell, 1969, 3), Austin goes against such generalisations and argues that, as found on an occasion of saying ‘The gift was made voluntarily’, making a gift is not always something that ought not to be done, or something which is always someone’s fault (4).

⁵ The emphasized expression, ‘what we should say when’ originates from Austin’s characterisation of ordinary language philosophy. He says that proceeding from ordinary language is tantamount to examining ‘*what we should say when*’, and so why and what we should mean by it (Austin, 181 [original emphasis]).

⁶ Murakami attempts to elucidate the uniqueness and characteristics of the world that children with autism live in, with his refined way of phenomenology (Murakami, i-ii).

⁷ In Wittgenstein’s scenes of instruction, what is primarily described is a (continuity and resignation of) conversation between an adult and a child, who does not respond in the way that the former expects, e.g., § 185 in *Philosophical Investigations* (Wittgenstein, 63e-64e). This theme is often discussed in Cavell’s subsequent works, most notably in a section titled ‘Normal and Natural’ in *The Claim of Reason* (Cavell, 1979, 111-125).

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Cover page

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Practical Consideration of Pair Problem Solving in Computer Literacy Education

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Abstract

Direct instruction to students enrolled in a computer literacy program at the undergraduate level frequently involves difficulties due to varied knowledge levels and skills among the students, as well as an increase in the number of unmotivated students. An available solution is the pair problem-solving approach which can prove to be effective as an effective method.

This report shares the findings of an investigation regarding the efficacy of pair problem solving, as compared to individual problem solving in computer literacy education. Furthermore, the paired approach analysis was able to extract specific criteria for successful pairs.

The research, which included two (paired and individual) 15-minute practical examinations and questionnaires, a test on basic scholastic ability, and a survey on PC experiences, was conducted with approximately 280 students from three universities who were enrolled in a computer literacy program in 2008 and 2009.

The results reveal that the overall scores of the pairs exceeded those of the individuals. Moreover, more than 90% students found pair problem solving to be a positive experience. From the viewpoint of learning effectiveness, it is worth mentioning that the most effective pair combinations included those with a small difference in basic academic ability, a large difference in PC experience, and a partner of the opposite sex.

1. Introduction

With the advent of declining university enrollments, university instructions are becoming difficult to be followed because of different cognitive and behavioral characteristics observed in students, such as lower academic ability and intellectual curiosity (Figure 1). The skills needed to operate a computer have diversified and the computer literacy gap has expanded. Because of this, there have been arguments for the necessity to

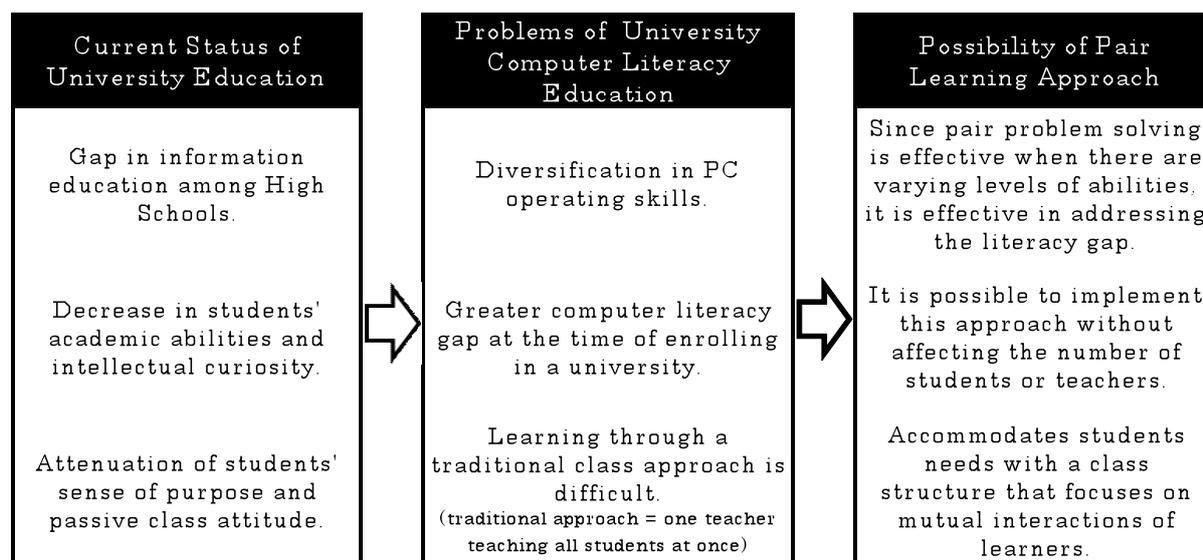


Figure 1 Background of Research

strictly review educational content and methodology particularly for computer literacy education (Murakami et al., 2008). Given the current situation, interactive and participatory approaches for effective instructions that focus on the student have been taking place. It has been reported that cooperative learning is very effective in research and in practice, particularly for pairs and small groups. Therefore, the expectations from these methods are increasing (Yasunaga, 2008, Tachibana et al., 2010).

The effects of the pair approach within information education suggest possibilities, such as encouraging information literacy, and stimulating students' desire to learn, (Takahashi et al., 2004) as well as improving their ability to complete tasks, solve problems, and learn independently (Terakawa et al., 2005). On the other hand, there are indications that depending on the pair combination, there may not always be an effect on learning or that there might be issues with developing methods to form effective pairs (Kaneko et al., 2007, Takahashi et al., 2010). However, regardless of the numerous reports on the subject, there is a lack of understanding of pair combinations or combination criteria because there are few studies that deal with this issue. Keeping this in mind, the authors of this study introduced a pair approach into university computer literacy education in 2008. They examined the effectiveness of this approach by comparing individual problem solving with pair cooperative problem solving and verifying the effects pair combinations have on the results. Thus far, it is evident that pair cooperative problem solving improved the overall task achievement level and was particularly effective for students with lower grades and with mixed-gender pairs (Uchida et al. 2010). The students' assessment of pair learning was high, indicating that this method was effective in meeting students' needs (Uchida et al., 2010). However, this method also has certain disadvantages such as striking differences observed between pair results and either no or negative effects with certain pair combinations.

This study first reports the problem solving results with pairs from a pair combination criteria perspective based on the results of pair solving approach in class, conducted from 2008 to 2009. It also focuses on the problem-solving process as an index for learners' awareness toward working as pairs as well as the quantitative changes in utterances among pairs, as a means to examine the issues of problem solving for selected pairs. Finally, the study considers the pair learning effect from the amount of utterances and survey results to determine how cooperative problem solving is effective through conversation and student trends.

2. Method

The subjects of this study were enrolled in a computer literacy program in 3 departments of 2 private universities in Aichi Prefecture. A total of 7 classes and 280 students participated each year for 2008 and 2009. In April, students were surveyed on pair combination criteria and in July, experimental classes were held for pair testing (Figure 2).

1) Pair Combination Criteria

In 2008, students were surveyed on their basic academic ability, computer experience, interest in computers, and typing speed in order to gain basic data regarding the pair combination criteria. Of these four criteria, a prior study has acknowledged the relationship between basic academic ability and scholastic performance of students after enrolling in university, adapting to university education, and scores in the national exams. Three other items reflected computer literacy before university, which is the basic premise for computer literacy education, and were included because objective data on them is relatively easy to obtain.

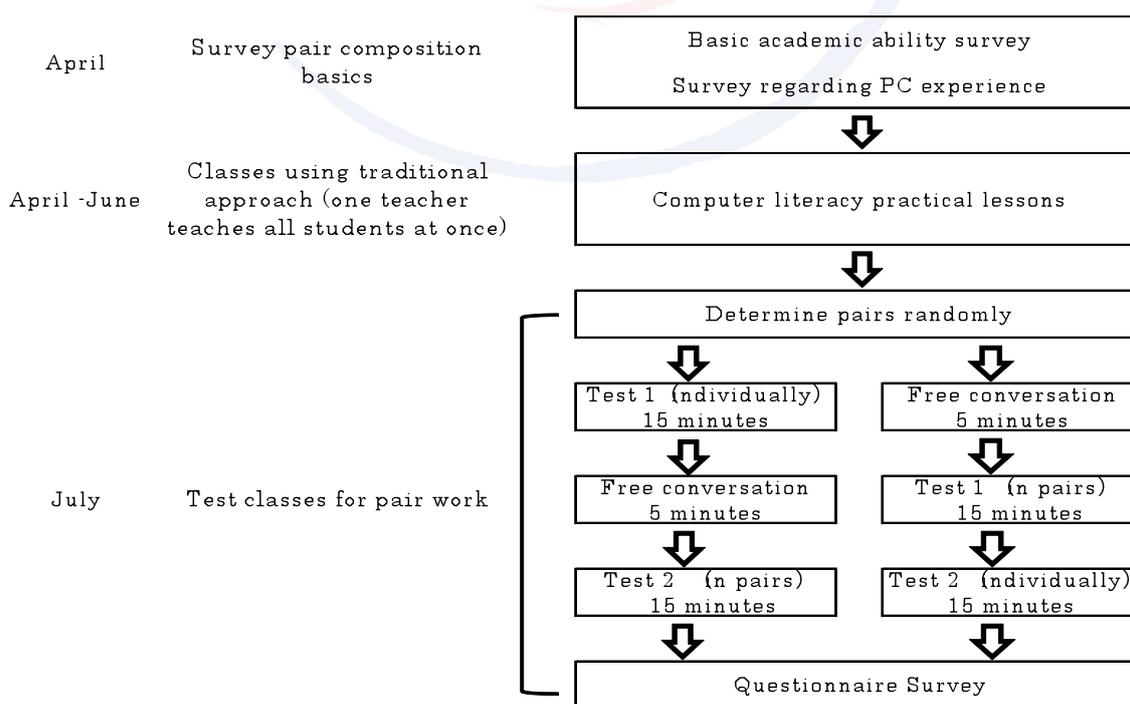


Figure 2 Outline of the Study

Given the results of 2008, the 2009 survey focused on 2 indicators; basic academic ability, which implied involvement in problem solving and performance in pairs, and computer experience before university.

The basic academic ability survey consisted of 20 math and *kanji* (Japanese character) problems and used an adjusted difficulty level so that performance would approximate a normal distribution. Math problems were composed of basic math problems developed to measure university students' academic abilities. *Kanji* problems referenced the *kanji* test that measures basic Japanese ability. The survey lasted 20 minutes and surveys were collected individually for each participant.

The survey on computer experience before university had 20 multiple-choice questions about the Internet, software, and computer usage inside and outside the school. In the 2008 survey, there were few questions and the multiple choice answers varied based on the question. The 2009 survey improved on these two issues. The survey time lasted 5 minutes and surveys were collected individually for each participant.

2) Pair Problem Solving

After 8–10 practical computer literacy classes, students were tested (Test 1 and Test 2) individually and in pairs for 15 minutes (22 questions) based on word-processing proficiency. Pair groupings were randomly selected to determine the effect of pair combination criteria. Then, students in each department were divided without bias per class. Approximately half of the students took Test 1 individually followed by Test 2 in pairs. The remainder of the class took Test 1 in pairs followed by Test 2 individually. In each of the divided groups, almost all students were in the same year of school and from the same academic discipline. Since one teacher taught the same material to both groups, the difference between the groups is presumed to be negligible. During the test, students solved problems in pairs and individually, and the results were collected individually for each participant. According to preliminary investigation, the dispersion for Test 1 and Test 2 was set to a certain level adjusting the difficulty level so that the average variance of correct responses differed by 15 to 20 percent. Furthermore, in order to eliminate the issues with testing order in 2009 and 2008, the tests were conducted in the reverse order (switching Test 1 and Test 2).

Before the pair test, students were given five minutes for free conversation to develop smooth communication for each pair's first encounter. Twenty minutes of conversation was recorded from the time free conversation began to the end of the pair test. After the test, the students took a survey about their method of problem solving in pairs. The 2009 survey improved upon the issues with multiple choice expressions that were apparent during the 2008 study. The survey time lasted 5 minutes and surveys were collected individually for each participant.

3) Analysis of Results

The analysis of the results employed a standard deviation as a standardized score to comparatively examine the values from Test 1, Test 2, basic academic ability, and computer experience. The amount of utterance was determined by converting the conversations recorded during the pair tests into text. The number of times students spoke was treated as the amount of utterances and the number of characters was treated as the utterance character count. The analysis of the pair results used in this study consists of the values that were calculated by subtracting the individual test scores (standard deviation) from each subject's pair test scores (standard deviation), added according to pairs.

3. Results and Interpretation

1) Outline

Looking at the results from the individual and pair practical tests 1 and 2, the pair tests (average standard deviation: 50.65 in 2008 and 51.62 in 2009) surpassed the scores from the individual test (average standard deviation: 49.34 in 2008 and 48.36 in 2009) ($\rho = 0.0015$ for 2008 and $\rho = 0.0001$ for 2009). As an overall trend, this indicates that the task achievement level improves through pair problem solving. However, from an individual perspective, there was either no difference between the pair and individual results or the pair results were negative for close to 40% of students. On examining the relationship between pair and individual tests, trends were indicated in which pair problem solving had relatively less effect for students who scored high in the individual test, while students who scored lower improved (Figure 3). Previous research has also extrapolated that working in pairs is more effective for students with lower grades.

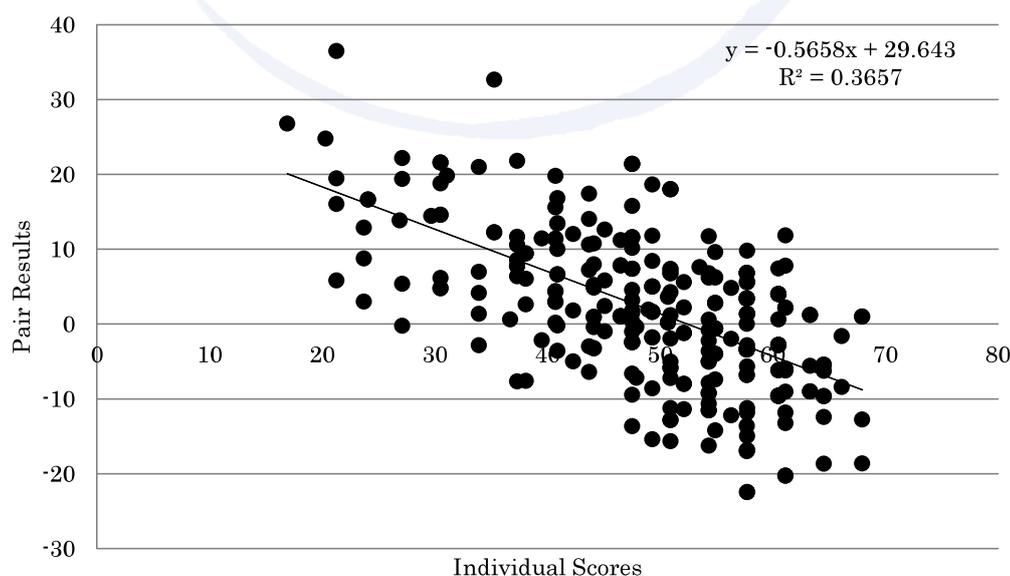


Figure 3 Individual Scores and Pair Results

Table 1 Pair Results and Pair Combination Criteria

Pair Combination Criteria	H (High Pair Results)			L (Low Pair Results)			t value	ρ
	n	m	s.d.	n	m	s.d.		
Basic Academic Ability Difference	92	8.85	6.24	36	14.45	8.29	3.63	0.001 **
Difference in PC Experience	92	8.88	6.81	36	7.17	6.86	1.26	0.211

** $\rho < .01$

2) Criteria for Pair Combination

As for the criteria for pair combination, analysis was conducted for two indicators suggested to be effective in the 2008 study, computer experience before university and basic academic ability (Table 1). Group H with a pair score above +10 and Group L with a score below -10 were selected in order to examine the characteristics of the pair learning effect. A comparison of groups H and L indicated that the basic academic ability gap was small. The reason for this is that the gap in basic academic ability reflects the level of high school that students came from, the academic discipline, desire to learn, and class attitude. It is possible that these disparities affect the amount and quality of communication in pair testing. On the other hand, trends indicated that the gap in computer experience was greater in Group H and lesser in Group L, although the difference between the two was insignificant. The idea was that students with richer experience taught the students who lacked experience, which made the pairs more effective. However, the hypothesis is that for pairs with a lower computer experience, students would get stuck or need help in the same places, and although they consulted each other, they could not solve the problems.

In addition to the two indicators—basic academic ability and computer experience before university—it was clear that gender was a factor in problem solving and performance. Males uttered less overall and male gender pairs were less effective, while mixed-gender pairs were more effective (Table 2). On the other hand, females overall were more vocal, although the result was that females vocalized more with same gender pairs as opposed to mixed-gender pairs. However, females achieved greater results with mixed-gender pairs as opposed to same gender pairs. Furthermore, there was a high correlation between the amount of utterances and the pair results with females than with males. The outcome determined that mixed-gender pairs are more effective, followed by female pairs with male pairs being the least effective.

Table 2 Pair Results by Gender and Amount of Conversational Utterance

	Pair Gender	Pair Results	Amount of Conversational Utterance
Male	same	0.85	2138.3
	mixed	6.3	2114.8
Female	same	1.68	2200.1
	mixed	4.3	2127.4

From the above results, it can be concluded that the most effective pair combinations have a small gap in basic academic ability, a large gap in computer experience, and a partner of the opposite sex.

3) Pair Learning Effect and the Amount of Utterances

The vocal data (roughly 100 per year) collected during the pair test was converted into text. The conversation was analyzed by the amount of utterances and the character count of the utterance.

There was a strong correlation ($r = 0.98$, $y = 19.3x$) between the amount of utterances and utterance character count. The average number of times students uttered during the 15 minute, 22 question (Q1–Q22) pair test was 106.0 and the average utterance character count was 2107. In other words, it was evident that there were 7 conversational exchanges every minute and they spoke roughly 20 characters at a time. Moreover, depending on each pair, the utterance character count was disproportionate (highest was 4733 characters and lowest was 83 characters) and there was a large difference between the test results. Examination of the relationship between the overall utterance and pair results showed that vocal pairs were more effective (Figure 4, $r = 0.42$).

Looking at utterances for each question, there was more utterance for Q2 (insert a page number in the center of footer) in Test 2, which had a character count of 342, than Q9 (create an autoshape, and insert characters) in Test 1, which had a character count of 188. From these results, we can conclude that depending on the pair, there was a communication gap and a significant increase in utterances for problems with functions including a lot of steps or functions that were used less frequently during the class.

Looking at the changes in utterances over time, utterances increased in the latter half of Test 1, which had a higher average score, and the utterance was particularly high for Q13–Q18. In contrast, Test 2 had higher utterances for Q1–Q11 with significant reduction in the latter half. Furthermore, there was a difference between Test 1 and Test 2 for the pair learning effect by problem. While it was more effective in questions

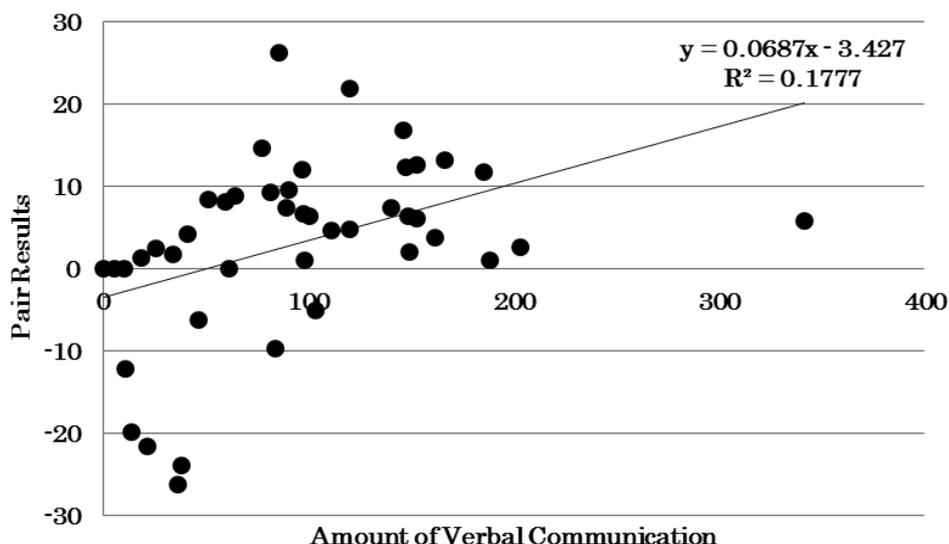


Figure 4 Relationship between Pair Results and Amount of Conversational Utterance



Figure 5 Pair Results by Each Question (● -Test1 ○ -Test2)

Q13–Q18 for Test 1, Test 2 indicated negative values for Q16–Q21, which was lower than individual scores (Figure 5). Compared to Test 1, the difficulty level for Test 2 was slightly higher. This led students to spend more time communicating during the pair test, leaving less time for them to solve problems in the latter half of the test.

As demonstrated above, the amount of utterances changed during problem solving for each pair depending on the difficulty level of the problem and their time management skills, suggesting that it impacted the positive effect of working in pairs.

4) Learner Awareness for the Pair Test

Judging from the results of the survey conducted after the pair test, a relationship between the effectiveness of pairs and a trend toward awareness of the pair test was considered. In 2008, the survey included 10 items in 2008, whereas it comprised 11 items in 2009. Analysis of the significant difference

Table 3 Survey Items with Significant Differences from Pair Results

Survey Item	Pair Result	n	m	ρ	Judgement
Easier to solve as a pair than individually	H	174	2.41	0.0001	**
	L	86	1.99		
Consulted during the pair test	H	174	2.54	0.0017	**
	L	86	2.25		
A free conversation time before the pair test is necessary	H	98	2.33	0.0028	**
	L	42	2.66		
There was sufficient time for the pair test	H	76	0.28	0.0053	**
	L	44	0.07		
Communication during the pair test was useful	H	174	2.69	0.0174	*
	L	86	2.52		

Table 4 Survey Items with No Significant Difference with Pair Results

Survey Item	Pair Result	n	m	ρ	Judgment
Pair works were easy to understand	H	76	1.47	0.3193	
	L	44	1.41		
Free conversation time was sufficient	H	98	2.72	0.2808	
	L	42	2.66		
Pair approach works well	H	98	2.65	0.2677	
	L	42	2.60		
Interest in computers	H	76	1.82	0.2673	
	L	44	1.72		
Friendly interaction with partner	H	98	2.50	0.2096	
	L	42	2.60		

between Group H, which was highly effective in terms of the pair learning effect, and Group L, which was less effective, was conducted with respect to these questionnaire items. The results of the common items from 2008 and 2009 were totaled together.

First, Table 3 shows the items that pointed the significant differences. These results infer a willingness to solve problems cooperatively and communicate with each other, and whether or not they had sufficient time determined how effective pair learning was. As such, a positive attitude and increasing participation awareness of cooperative problem solving, expanding the ability to communicate, and improving time management skills are essential to promoting effective pairs.

We can interpret from the survey items (Table 4) where there was no significant difference between confidence in the class and students' interest toward computers, and these items are unrelated to the effect. Free conversation time beforehand, the pair testing evaluation, and students' interactions that were high across the board, are useful suggestions for setting up pair approach classes.

4. Summary

The results from the two-year experimental classes with pair testing provided the following findings within computer literacy education at university.

- 1) Pair problem solving was higher than individual problem solving and it confirmed that pair task achievement was higher overall. On the other hand, from an individual perspective, working in pairs was ineffective or less effective for nearly 40% students.
- 2) The study inferred that the combination of criteria such as mixed-gender pairs with similar academic ability and differing computer experience was highly effective.
- 3) The study discovered characteristics such as a greater discrepancy in the amount of utterances for certain pairs and remarkable increase in utterances for questions involving functions with more process steps or functions that were used less frequently in class.
- 4) Amount of utterances changed depending on the difficulty level of the problem or their time management skills, indicating an impact on the effect of working in pairs.
- 5) The study suggested that it is possible to improve pair learning results by improving students' participation awareness and positive attitude toward cooperative learning, as well as improving their ability to communicate and time management skills.

Further detailed analysis of the issues related to the pair learning approach will be conducted to resolve factors that affect the positive effect of pair learning. In addition, this study captured the pair learning effect through short-term experimental classes and consideration of further long-term application is necessary.

5. Supplementary Notes

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**EMPOWERING MUSEUM GUIDES TO TAKE PART
IN CULTURAL HERITAGE PRESERVATION**

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Empowering Museum Guides to Take Part in Cultural Heritage Preservation

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ABSTRACT

Nowadays, museums as places to keep invaluable cultural and historical artifacts tend to experience great decline in their attraction, especially for the younger generation. There might be some factors contributing to this unfavorable condition, and one of the factors might be due to the limitation of museum guides. Their duty, among others, is to tell museum collections to museum visitors. However this duty might not be easy, Their working system might not be fully supportive; their educational background may not be relevant; they may also receive less appreciation from their society. Within the context of Yogyakarta – a city of students and culture (there are approximately forty museums in the city) - the writer voices her concern related to the unfavorable condition. In spite of all managerial efforts and city board endeavors to uplift the educational and cultural functions of museums, the writer thinks that museum guides should be involved and empowered.. Efforts to better the condition could have brought about more desired results if they had been supported by educational institutions, for example, by providing necessary training. Thus, by adapting theories on transformative learning, simplified participatory approach and task-based instruction, the writer designs a training for museum guides to improve their communicative skills to deliver information about museum collections (in progress)

Key words: museum guide, transformative learning, communicative skills, task-based and participatory approach

1. Introduction

Visiting museums in Yogyakarta, Indonesia during holiday time should have been an enlightening and inspiring experience, however, the writer's visit to some museums (July 2011- August 2011) have caused the feeling of concern since some museums are in a state of neglect. For Yogyakarta people, especially, the young generation, museums are not favorite places to visit. Some museums that are still frequently visited by groups of visitors are not in better conditions. There are reasons contributing to this condition such as unattractive physical condition of museums, monotonous and

boring explanation about museum collections provided by museum guides, no attractive exhibitions and programs to attract visitors, and so forth

Concern and participation of relevant parties to find out solutions for museums should be supported due to the vital roles of museums related to research, conservation, communication, and education. These roles are the manifestation of one of the principles of ICOM code of ethics for museums (2010) which states that “ Museums have an important duty to develop their educational role and attract wider audiences from the community, locality, or group they serve. Interaction with the constituent community and promotion of their heritage is an integral part of the educational role of the museum.” Of equal importance is the cultural information provided by museums through their collections that reflect “cumulative deposit of knowledge, experience, beliefs, values, attitudes, meanings, hierarchies, religion,, notions of time, roles, spatial relations, concepts of universe, material objects and possessions acquired by a group of people in the course of generations...” (Samovar and Potter 1994 in FLOTE handouts used in February-June 2011) that should, ideally, be shared and handed down to young generation.

Seemingly, a comprehensive approach is needed to solve the problem. The considerate government officers, competent museum management, caring society members, and, last but not least, educational institutions should take part in the efforts to better the museum condition.

Concrete actions to overcome the problem need to be done. One of them is the efforts to empower museum guides. As often complained, not all museum guides are competent to deliver information about museum collections to visitors effectively and interestingly. Is there any support that can empower museum guides as spearheads to take part in cultural heritage preservation more effectively? Do museum guides need any training that can improve their communicative skills to describe and explain museum collections to visitors of different age groups, background knowledge, and cultural backgrounds? These questions seem to be relevantly discussed at present.

The paper describes the writer's experiences (assisted by two groups of young instructors/ English teachers-to be) in designing an English program to improve museum guides' communicative skills (note: the programs are still being implemented). The design and report on its implementation will be evaluated and followed up (hopefully) with a wider scope study involving more related units to support the empowerment of museum guides in cultural heritage preservation endeavors. Therefore, the paper will be divided into sub parts, namely, introduction, a brief description of museums in Yogyakarta, museum guides, empowering museum guides, designing a language program, implementation, and concluding remarks.

2. A Brief Description of Museum in Yogyakarta

There are approximately forty one (41) museums in Yogyakarta. They can be classified into three categories. The categories are museums of art and culture, museums of science, museums of history and independence war (data from the interview with a coordinator of BARAHMUS Indonesia conducted in May 2011 and

en.wikipedia.org/wiki/List_of_museums accessed on 22 November 2011) . The museums are located in different parts of Yogyakarta Special Region Province. However, only two are listed in Wikipedia the free encyclopedia.

There are two famous museums of art and culture in Yogyakarta. These museums are frequently visited by flocks of visitors: domestic and foreign visitors, school students and adult visitors. They are Sonobudoyo museum and Ullen Sentallu museum. The first is under government management, and the second is privately owned.

In the second category, Biology museum, Merapi volcano museum, and some other museums are worth mentioning. Biology or Biological museum belongs to Faculty of Biology of Gajah Mada university – a well known state university in Yogyakarta. In the museum which is located in the central part of Yogyakarta city, visitors can learn about biological collections such as collections of herbarium, wet and dry preservation of various floras and faunas, aquariums, and so forth.

The Merapi Volcano Museum is located at the southern slope of Mount Merapi. It is considered a new and interesting tourist object which can attract thousands of visitors annually (data informed by the museum management on 16 November 2011). Its functions, among others, to support conservation and education activities related to volcanic disasters and earthquakes.

The third category consists of museum of history and independence war. One of them is Jogya Kembali Monument or Monument to the Recapture of Yogyakarta. The monument also known as MONJALI is located in the Ngaglik sub district, Sleman, near the North outer ring road of Yogyakarta. It has a museum inside in which visitors can see ten dioramas of key moments in the revolution, a list of 420 revolutionaries, and other information related to Indonesian independence fights taking place, especially in Yogyakarta (*en.wikipedia.org/wiki/Monument_Yogya_Kembali*). During Soeharto regime, MONJALI was (often) a must-visit for groups of school students conducting study tours to Yogyakarta.

The above mentioned museums are managed differently. Some are managed by government (e.g. MONJALI and Merapi Volcanoe Museum), and others are managed by certain foundations or institutions (e.g. Biology museum). Interestingly, there are two famous museums in Yogyakarta which are privately owned. They are Batik Museum which belongs to the family of Dewi Hadi Nugroho, and Affandi Museum which is managed by the children and grandchildren of the deceased maestro in painting named Affandi.

Although the museums are managed differently, they have a forum called Badan Musyawarah Museum abbreviated as BARAHMUS. BARAHMUS Yogyakarta arranges and holds a monthly meeting for all museum management in Yogyakarta. It has also made efforts to coordinate exhibitions to promote museums. One of the events was “Museum Goes to Mall” which was held at the biggest mall in Yogyakarta on 5 October 2011. In the event, mall visitors could join talk shows about museums, or just watched and asked questions about museum collections. According to the committee,

the event was meant to promote museums so that more and more visitors would come to museums to see, know, and learn about museum collections which, seemingly, have been becoming less and less interesting for many people, especially young generation.

3. Museum Guides

In such a condition as described in the previous part, it is relevant to raise the question “what about the condition of museum guides?” Museum guides can be spear ends to promote museums and to enhance the museums’ communication and educational roles. Are they ready? Are they equipped with relevant knowledge and skills? Can they deliver information about museum collections to visitors communicatively and interestingly?

The Guideline of the BC Museum of Mining (www.britanniainemuseum.ca accessed on 20 June 2011) states that museum guides should have the following characteristics so that they can involve in any communication effectively. They should have confidence to meet and talk to various visitors. Ideally, they have outgoing personality so they will enjoy meeting a lot of visitors. They should enjoy working with visitors of different ages. In addition to having relevant knowledge related to the museum they work in, they should also be proud to be an ambassador of the museum

While visiting some museums, the writer and her students conducted informal interviews with museum guides and observations to collect information about their academic background, working experiences, working status, professional training received, and facilities to support their jobs. The information is provided in the following paragraphs.

The museum guides’ working experiences are ranging from one year till more than ten years, and one senior museum guide is going to retire in 2012. Their academic background is mostly non historical background (economics, French language); some museum guides used to study tourism; one is a graduate of communication department.

The museum guides working at museums belonging to government are usually civil servants, or, at least, their status to be civil servant is being processed. Others working at privately owned museums have their status as full timers or part timers.

Having different working experiences, academic backgrounds, and working status, how well can they work as museum guides? Do museums have facilities to support the museum guides in delivering information and escorting visitors? It seems that some government museums and privately owned museums already have sufficient facilities: nice and artistic buildings, some air conditioned and well lighted rooms, This paper does not discuss that aspect any further.

Various academic backgrounds imply that the majority of the museum guides need to be equipped with relevant pre-service and in-service trainings. A kind of training they probably need is a training to improve their communicative skills to describe and explain museum collections to visitors. Thus, the question is how to design a language program (mainly conducted in English) to improve the communicative skills of

museum guides in Yogyakarta to support their participation in cultural heritage preservation.

4. Empowering Museum Guides

In order to empower the museum guides, the writer proposes a language program to improve the communicative skills of the museum guides. The language program is designed based on the museum guides' needs, and by considering relevant pedagogical and linguistic theories.

Considering that museum guides belong to a group of adult learners, the writer decides to implement 1) theories of transformative learning and participatory approach (Mezirow 2003, Cranton 2002; Larsen- Freeman 2000) to motivate them to learn and to create meaningful learning activities for them. Some of Nunan's theory on task-based teaching (2004) are also adopted to enable the learners to learn performing real life tasks as museum guides.

In order to design a language program for the museum guides, the writer needs to conduct a needs analysis first. Afterwards, the theories previously mentioned are packed in a language program designed by following the steps suggested by Borg and Gall (1983).

4.1 Transformative Learning

According to Mezirow (2003), transformative learning is “learning that transforms problematic frames of reference to make learners more inclusive, discriminating, open, reflective, and emotionally able to change”. The museum guides who are adult learners might have established their own frame of reference about learning English. They might think that learning English is burdensome, that mastering English does not change their life into better condition, that describing and explaining museum collections to visitors of different age groups is tiresome. In such a psychological condition, any technique to teach English to them might be fruitless because there is no internal and external motivation at all. However, the transformative learning might be implemented to transform the problematic frame of reference of museum guides to grow their motivation and open-mindedness in learning English.

The goal of learning can be to achieve instrumental, communicative, or emancipatory knowledge. Instrumental knowledge is reflected in cause-and-effect relationship, namely, when a learner successfully learns something and then he can create and do something. This kind of learning may take place in successful learning of trading, technologies, and sciences.

Another goal of learning is the achievement of communicative knowledge that is the understanding of oneself and others, and the social norms of the community or society in which the learner lives. Further, according to Cranton (2002:64), “communicative knowledge is derived through language and validated by consensus among people. The acquisition of communicative knowledge is a goal in the study of human relations, political and social systems, and education”.

The last category of learning goal is emancipatory knowledge, or in other words, the self-awareness that frees us from constraints. Emancipatory knowledge is the result of critical reflection which is reflected, for example, in critically questioning about the role of technology and the underlying assumption of a system. This emancipatory knowledge can be “an explicit goal in life skills learning, literacy programs, self-help groups, women’s studies courses, and community action groups. The acquisition of emancipatory knowledge is transformative ” (Cranton 2002: 64)

More specific steps to implement the transformative learning are introduced by Cranton (2002: 66) through the following steps: creating an event, articulating assumptions, doing critical self-reflection, being open to alternatives, engaging in discussion and discourse, revising assumptions and perspectives, and acting on revision. The steps are described in the following subpart.

4.2 Stages of Transformative Learning

Creating an event aims at bringing about a catalyst within learners or the museum guides so they can experience transformation. This can be done by exposing them to discrepant viewpoints described in films, novels, documentaries, poems which portray unusual experiences interestingly. Exposing them to various sources that provide different viewpoints about a topic can encourage them to search for an unusual way of understanding the topic which might be different from the understanding they already possessed. Then, they are asked to express the transformation they experienced by drawing or creating and reading a poem.

Referring to Brookfield (1990 in Cranton 2002: 67), the writer thinks that **articulating assumptions** can be done by asking critical questions to the learner. The learner is encouraged to describe what he believes and how he came to believe it. For example, he can be asked, “Do you think learning (including learning English) when you are old will be hopeless? “Is your opinion based on your experience or someone else’s experience? “Do you know the success story of someone (a singer) when she is already 47 years old?” In this study, asking the museum guides to write a story of how they become and have developed into museum guides can reveal their articulating beliefs.

Further, it is advisable to ask them to write reflective journals to enable **critical self-reflection** to take place. Critical self-reflection refers to questioning and examining assumptions in terms of where they came from, the consequences of having the assumptions, and why they are important. In practice, the museum guides can be asked to recall their best or worst experience, usually within a specific context, such as their worst learning experience or their best interaction with a visitor. They describe what happened, who was involved, why it was the best or worst experience, and how it could have turned out differently.

Being open to alternative viewpoints is the next stage. Learners may have and state their assumptions and reflect on them but hesitate when they face accepting alternatives. The teacher can help by creating a safe and enjoyable ways for them to try on different points of view. In transformative learning, teachers should create safe and enjoyable ways for learners to try on different points of view. A simple technique to train it is through role play in which learners can try an alternative perspective without giving up their own perspective. Thus, it is good for learners to take roles having opposing perspectives to their own.

Role play can be practiced in a simple way in this study. While learning to speak in English the museum guides can be assigned to take various roles, for example, the head of the museum, visitors, and so on.

In addition to joining regular discussions, learners are encouraged to **engage in discourse**. By doing so, teachers can help learners experience two different ways of communicating – discussion and discourse. Being able to engage in optimal discourse, learners can learn to have accurate and complete information, think freely but honestly, open their minds to alternatives, accept different perspectives, critically examine ideas, and accept consensus (Mezirow 1991 in Cranton 2002).

Revising assumptions and perspectives is next stage of the transformative learning. This stage needs support from their teacher by providing supportive opportunities to keep contact with each other. Simply, museum guides can exchange e-mail addresses and telephone numbers. The purpose is to enable them to link up with discussion groups, have access to professional associations, or other resources.

The last stage is **acting on revisions, behaving, talking, and thinking congruently** with the results of transformative learning. Having finished any training, learners still need support to keep on improving themselves. In a simple way, museum guides can be asked to write their plans to keep on learning English. Ideally, the plan should be checked regularly: which part has been realized, which part has not been realized and why.

It is advisable for museum guides to form a kind of association which holds regular meetings for them, informs necessary information, and empowers them, especially those who are potential and eager to develop, to the utmost. The purpose is to maintain the transformative spirit already established among them.

4.3 Participatory approach

The stages of transformative learning described previously require learners' participation to make the transformative learning happen successfully. The learners are encouraged to explore their condition, identify, analyze their problems in order to create a new frame of reference and to reach better condition. Therefore, the writer decides to adapt some theories of the participatory approach in language teaching-learning.

Referring to the work of Paulo Freire about meaningful education, Larsen-Freeman (2000) states that the participatory approach/PA used in language teaching shares some characteristics of the content-based approach. The approach uses contents which are relevant and meaningful to learners, and all language forms taught should be related to the contents. The contents should not only include subject matter texts, but might also be related to issues relevant to learners.

The training for museum guides cannot implement PA fully due to some reasons. Firstly, it was discovered in the needs analysis that the input competence of the museum guides was quite low so teaching-learning materials related to museum collections, activities, events, and so forth (contents) should be selected and graded carefully. In addition, the language forms deliberately taught should support the learning of contents. Secondly, it was not possible to include discussions on serious issues relevant to the museum guides' jobs and lives due to limited language (English) mastery.

The only opportunities to implement simplified PA is by asking and encouraging the museum guides to write reflections of what they want to reach, what they have reached, and what they could do to reach what they want to reach better. Also, in the last meeting of the training, the museum guides were asked write their suggestions for museum management as to what can be improved and how to improve it.

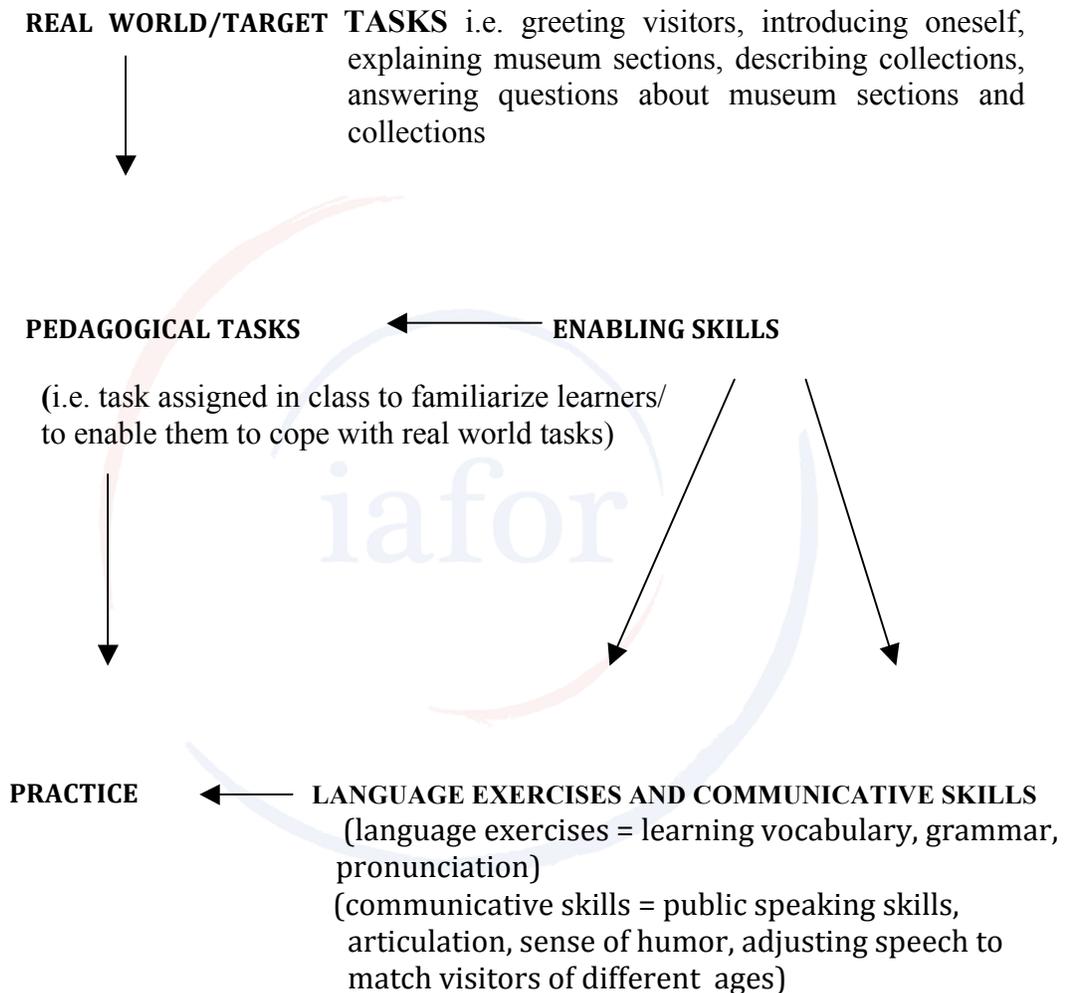
4.4 Task-based Instruction/task-based language learning

Briefly stated, Task-based Instruction/TBI prepares learners to be able to perform meaningful tasks resembling real life tasks by using the language they learn (Nunan 2004). The goal of implementing TBI is the learners can reach fluency in using the language while focusing on the tasks they to conduct.

In the training, TBI was implemented by providing assignments and exercises which are related to the job of museum guides. They have to start greetings visitors at gateways, then they have to escort visitors to different museum parts or rooms while describing and explaining museum collections, maps, diagrams, dioramas, and so forth.

While focusing on the tasks and making efforts to complete the tasks successfully, the learners should use the language they learn. In this training, having done a review on English alphabets, the museum guide of Merapi Volcano Museum continued to learn vocabulary related to volcanoes, for example, magma, cater, acid rain, eruption, lava dome, and other words related to volcanoes. The museum guides also learn how to explain a chart in English. A simplified TBT diagram is provided on the next page.

SIMPLIFIED TASK-BASED INSTRUCTION FOR MUSEUM GUIDES



4.5 Communicative Skills

In practice, museum guides should possess the skills to communicate museum collections to visitors to reach two objectives, namely, 1) to rekindle the past of those who share similar background knowledge, and 2) to tell meaning to foreign visitors and those who do not have similar background knowledge yet. Thus, psycholinguistically, museum guides should know to whom they addressing the explanation (Clark and Clark 1977) .

More specifically, according to the Guidelines of the BC Museum of Mining, museum guides should have the skills to listen effectively to visitors, to answer various questions, to use question of various types, to adjust commentary to different groups of visitors, to share perspectives while conducting conversational tours, to perform public speaking (www.britanniainemuseum.ca accessed on 20 June 2011). In brief, the communicative skills required of museum guides are not just one way communication, that is, from the guides to visitors, but the communication should, sometimes, be two way communications because visitors may also ask questions to the guides.

Furthermore, the guides may sometimes ask questions (a kind of small quiz) to create interaction and fun among visitors. They should also be able to adjust the way and language to deliver information to different groups of visitors depending on their ages, backgrounds, etc. The source of information is not always the museum guides because sometimes, visitors may know better than the guides. Therefore, the guides and visitors may involve themselves in discussions to share their perspectives to each other.

Do the majority of museum guides in Yogyakarta already possess the communicative skills? Can they explain museum collections and deliver the explanation effectively? The answers are, seemingly, not yet. Thus, they need to be equipped with better communicative skills.

5. Designing A Language Program for Museum Guides

All theories about transformative learning, simplified participatory approach, task-based instruction will function as underlying theories of the language program designed by using Kemp's model (1977). A preceding needs analysis/NA based on Hutchinson and Waters principle (1984; Gao 1987) was conducted through informal observations and interviews with some museum guides. The example of the instrument to collect data is provided in appendix A.

5.1 Needs Analysis/NA

The results of NA was, surprisingly, beyond the writer's expectation. In one museum (Museum no 1), the writer and her students could meet one museum guide but could not interview her. Instead, the head of the administrative bureau was willing to be interviewed, and very helpful because she was more experienced and, seemingly, knew the needs of the guide in learning English.

It was also revealed during informal meetings that the museum guide was prepared to be a museum guide through a brief training only. Having no academic background relevant to the job of a museum guide, she was so motivated to learn and master all information and knowledge about the museum. It should be noted that she never joined any training to improve her English. She only learned English at school and college (general English).

Another NA conducted at another museum (Museum no2) provided different data. There were three museum guides, and one was very active in using English to talk with foreign visitors. The guides used to study tourism. They have been working for some years in the museum.

Museum no 2 consists of some units, and each has its head of unit. The writer could only meet one of them who was helpful and enthusiastic in providing English training for museum guides. He let the writer and her team go on with the informal NA, then, began the training.

Based on the results of NA, the writer concludes that all museum guides have had sufficient, even more than sufficient, knowledge about the museums they are working in at present. They have had experiences in delivering museum tours for visitors. However, they conduct the tour and provide information about museums mostly in Indonesian language. They expect to be able to improve their speaking skills, and able to use technical terms in their field to explain the museum sections and collections better. Some language functions are very important for the museum guides to enable them to perform their tasks as museum guides such as greeting, introducing, asking and giving information, describing objects and person, and explaining. The museum guides should be able to use all language functions fluently. In addition, the guides should master language elements (specific vocabulary, basic sentence patterns and tenses, and acceptable/comprehensible pronunciation).

5.2 The Language Program

The language program is designed based on the results of NA and a simplified Borg and Gall's steps (1983). The number of museum guide to be trained is 3 guides at Museum no 1 and 1 guide at Museum no 2. The programs for both museums are eight-meeting programs of which every meeting is 100 minutes. The program is conducted at their work place during working hours.

The targeted competences in the program are 1) the museum guides are able to greet and do self-introduction in English correctly, 2) the museum guides are able to deliver information and explanation about museum sections and collections correctly, 3) the museum guides are able to respond visitors' questions about museum sections and collections correctly, 4) the museum guides are able to do simple question and answer activities on daily topics, 5) the museum guides are able to identify the main ideas from specific information of any article related to the museums. Competences no 1- no 4 are dealing with listening and speaking skills whereas competence no 5 is dealing with reading skills. In order to support the museum guides' efforts to achieve the targeted competences (language skills), they also learn specific vocabulary, basic sentence patterns, and comprehensible and acceptable (if not yet accurate) pronunciation. All of these are labeled language goals.

In addition, there are also learning goals to reach by the museum guides. The learning goals are 1) the museum guides are able to develop their confidence in using English in their communication with visitors, and 2) the museum guides are able to develop and maintain their motivation to learn English.

Having limited time to learn and insufficient input competences, the museum guides will learn only three topics or units with a language focus (vocabulary or pronunciation/grammatical item) in every unit. The techniques to teach them are drills at the beginning, followed by semi communicative activities (various exercises, role plays).

The media used are handouts, pictures, and realia available at their work places (e.g. maps, charts, diagrams). Their learning achievements are assessed through their performance and a simple written test.

5.3 Implementation

First, it should be noted that the language programs at the two museums are still being implemented. Therefore, the description of the program implementation is not final yet. Both programs are joined by three museum guides and some librarians (Museum no1), and one museum guide and some security guards (Museum no 2). The museum management's reason to mix them up in one group is merely efficiency. The effect is some reluctance on the part of the librarians and security guards.

The two programs are carried out by two groups of instructors who are the seventh semester students, and currently taking English for Specific Purposes course. Their activities to design and to implement the design will be reported as their final assignments. They have finished the second meeting. For a clearer description of the training, the activities conducted in the first and second meeting by each group are described as follows.

Museum no 1

Meeting 1

The topic was greeting and self-introduction. There was no problem for them to follow the lesson. Interestingly, one of the guides was very active asking questions such as “What's the difference between happen and event?”, or “What's the difference between signature and sign?”

Meeting 2

They learned how to give directions. Again, there was no serious problem except that the museum guides needed to practice sufficiently to make them fluent in giving directions. They needed practice to take different roles to ask and give directions. However, the class was attended only by the museum guides.

Museum no 2

Meeting 1

During a pre- activity, it was identified that the museum guide could not differentiate the number 30 (thirty) from 13 (thirteen). She had problems in articulating and spelling English letters. Thus, numbers and English alphabets should be reviewed.

Meeting 2

She learned how to describe A Map of Volcanoes in Indonesia by using a realia. She learned basic simple sentence patterns, for example, “ There is/ are....”, “It has/ They have...”, and Number 1 / This is....”

To some extent, she could be considered successful because she could describe the map using the simple sentence patterns learned with some grammatical mistakes but the description was comprehensible.

Referring to the language goal formulation, the writer thinks that the museum guides have achieved partly. In terms of the learning goals to achieve, the museum guides have been more confident to talk in English with the instructors. Only one museum guide of Museum no 1 (who asked a lot of questions in meeting 1) has been always confident in using English with anybody. In terms of motivation to learn English, the museum guides seem to have no problem in developing and keeping their motivation which can support their lifelong learning process. It seems that the theory of transformative learning is not urgently needed since all museum guides are ready to be more open, willing to emotionally change, and reflective (hopefully) because they will be assigned to write their reflections upon their life experiences and achievement (in the coming meetings).

6. Concluding remarks

Efforts to empower museum guides to take part in cultural heritage preservation can take various forms. One of them is by improving their communicative skills at their work places, that is, the competences to describe museum collections by using English language. The improved communicative skills may result in higher confidence and motivation to keep on learning within the museum guides. Thus, the museum guides can start to form their learning community which, ideally, should be supported by educational institutions because the guides may face difficulties.

To involve young instructors who are university students at the same time is intentionally expected to bring about more positive effects. They are usually enthusiastic and good motivators. They take part in the training to fulfill the academic requirement to implement theories into real teaching. At the same time, they can also learn and re-learn the knowledge, information, and culture which have been familiar to them and become their identity.

The training needs to be evaluated upon its completion by experts of interdisciplinary studies, for example, experts in English teaching, museum science, museum managers, and so on. It is expected that the training can be followed up with a series of relevant

trainings for museum guides to empower them.



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----- Handouts of FLOTE (Foreign Language Other Than English) course by Prof. David Reeve Conjoint Associate professor UNSW conducted in Februari-June 2011.

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Guideline of the BC Museum of Mining. Accessed on June 20, 2011, from www.britanniamuseum.ca

The website of Brooklyn Museum New York. Accessed on July 3, 2011





APPENDICES

Appendix A

Instrument

Interview Questions

Name :

Age :

Sex :

Working experiences : years and Months

Answer the following questions briefly

1. What is your academic background?
2. How long have you been working as a museum guide?
3. Have you ever received any training for museum guides?
4. Do you think you master the communicative skills to support your job?
5. What other languages, beside English, do you speak?
6. Is this museum frequently visited by foreign tourists?
7. Do you experience problems in communicating with the foreign tourists?
8. What do you do to communicate with the foreign ?

Choose the most important topics (you may choose more than one topic), and give numbers to indicate your priority

- a. Greetings
- b. Self-introduction
- c. Description (object, person, experiences)
- d. Chronologically told stories
- e. Past experiences
- f. Directions
- g. Question and Answer
- h. Warnings

Appendix B

Material (example)

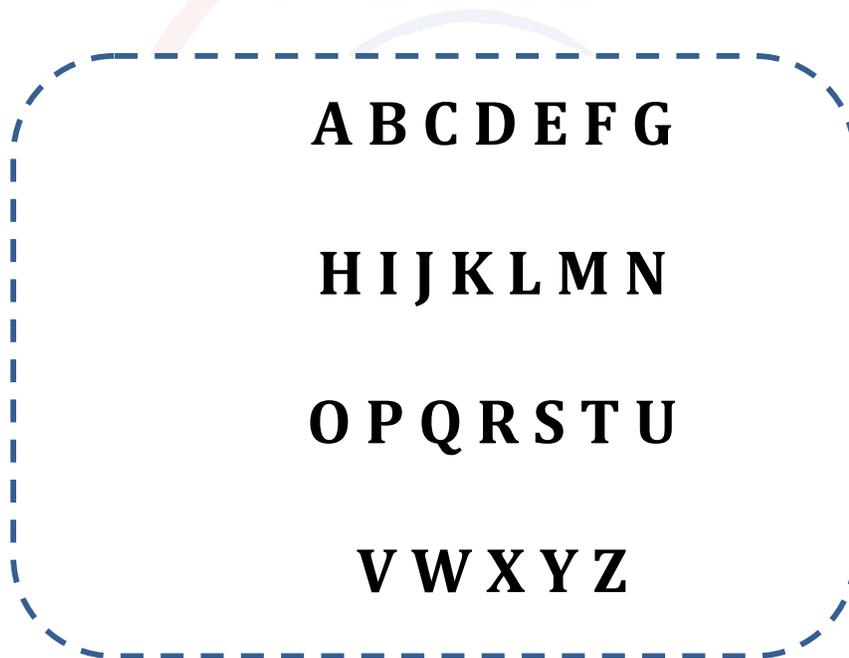
LESSON 1

LETTERS & NUMBERS



I. LETTERS

Listen and repeat!



How do you spell it?

- | | |
|---------------|--------------|
| 1. MERAPI | 6. BOYONG |
| 2. VOLCANO | 7. SLEMAN |
| 3. DWI | 8. THEATRE |
| 4. QUEEN | 9. FREDERICK |
| 5. YOGYAKARTA | 10. JEFFREE |



MINI QUIZ

Listen the spelling and guess the words!

1. _____
2. _____
3. _____
4. _____
5. _____

II. NUMBERS*Please circle the number you listen!*

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Exercises

a. Personal information (name and age)

One day, you see a little girl who is crying in the museum. Because you are a guide of the museum, you try to help the girl by asking:

Dwi : Hello my name is Dwi, I am a guide here. Can I help you?

Claudia : I'm lost! I want Mama and Papa...[crying]

Dwi : I will help you, what is your name?

Claudia : My name is claudia.

Dwi : How do you spell your name?

Claudia : C-L-A-U-D-I-A

Dwi : How old are you?

Claudia : I'm 7 years old.

Number of people, things

A tourist is asking you about the number of volcano in Indonesia.

Tourist : How many volcanoes in Indonesia?

Guide : There are about**volcanoes** in Indonesia
.....are **active volcanoes** and**inactive volcanoes**.

b. Time

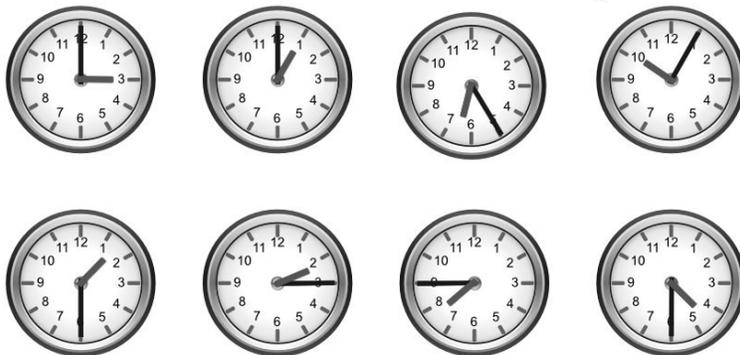
Imagine if there is a tourist asks about the time.

Mr. John : Excuse me, what time is it now?

Hana : It's 10.15. (It's ten fifteen)

Exercise

Let me know what time is it now?



c. Date

What date is today?

January 2012						
Mon	Tues	Wed	Thur	Fri	Sat	Sun
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Example :

17th of November : seventeenth of November

November 17, ...: November seventeen

Cardinal number: 1st 2nd 3rd 4th 5th 11th 21st



d. Year

2011 : Two thousands and eleven/ twenty eleven

1942 : Nineteen forty-two

1807: Eighteen o-seven

Read aloud this short article!

Merapi Eruption - November 1994, Indonesia



In the morning of the 24th of November 1994, a lava dome with a volume of 2.6 million m³ collapsed over a 7 hour period, producing *pyroclastic* flows that travelled up to 6.5 km to the south. The flows killed 64 people in the Boyong valley close to the communities of Turgo and Kaliurang. Lahars were also generated as a consequence of heavy rainfall falling on unconsolidated ash deposits. In response to the fatalities, a 10 km stretch of the Boyong River was evacuated, leading to 6,000 people being housed in temporary accommodation. In addition, a further 2,700 people from communities located at high elevations on the volcano were permanently resettled.

The production of *pyroclastic* flows due to explosive eruptions and dome collapses continued until mid-1998, with major events occurring on 11 and 19 July, but with no further casualties.

Source: <http://www.interragate.info/notable-past-event/5161>

III. VOCABULARY BUILDING

No	Indonesian words	English
1	<i>tombol</i>	
2	<i>korban</i>	
3	<i>Gunung aktif</i>	
4	<i>Gunung mati/ tidak aktif</i>	
5	<i>Magma</i>	
6	<i>Lahar</i>	
7	<i>Hujan asam</i>	
8	<i>Meletus</i>	
9	<i>Kubah lava</i>	
10	<i>Tempat pengungsian</i>	
11	(You can find other important words)	
12		
13		
14		
15		



Intercultural Sensitivity of Foreign Teachers in Thai Public Secondary Schools

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Bangkok, Thailand

The logo for the International Association for Foreign Language Research (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 circular graphic composed of two overlapping, semi-transparent arcs: a larger, light blue outer arc and a smaller, light red inner arc. The overall design is clean and modern.

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The topic of this research is the Third Annual Asian Conference on Education

Intercultural Sensitivity of Foreign Teachers in Thai Public Secondary Schools

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Abstract:

Teachers unfamiliar with living in an intercultural society can create discomfort when teaching students (Young, 2001; Ference & Bell, 2004; Yeh et al, 2005). This research aimed to measure the agreement levels of intercultural sensitivity of foreign teachers in Thai public secondary schools. The questionnaires were based on the Chen and Starosta (2000) model regarding intercultural sensitivity, with the five-point Likert scale indicating the degree of agreement. The five dimensions measured were: Interaction Engagement, Respect for Cultural Differences, Interaction Confidence, Interaction Enjoyment, and Interaction Attentiveness. The questionnaires were distributed to 20 EMS foreign teachers while teaching in Thai public secondary schools in Bangkok. The results revealed the high mean scores of "Interaction Attentiveness", "Interaction Engagement", and "Respect for Cultural Differences" respectively, meaning most of the foreign teachers identified an effort in attempting to learn different cultures and had positive intercultural collaboration towards teaching and living in Thai public secondary schools. The results suggested that the foreign teachers can reduce their cultural discomfort when they adjust themselves to the Thai educational tradition and feel they are a part of a school. The suggestions of this research also help minimize foreign teachers' lack of ease in intercultural settings.

Keywords: Intercultural Sensitivity, Chen and Starosta Model (2000)

1. Introduction

Among the rapid growth of job competition, English is emphasized as one of the significant language in order to gain the advantage. Since the international investors have gradually come to Thailand, it is no doubt that Thai people are facing the international interactions. Although the education of Thailand has formerly regarded the significance of English language and allowed Thai schools to set up the policy for promoting English language learning, the English proficiency of Thai students remains unsatisfactory in comparison with many countries in Asia such as Singapore, Philippine, and Malaysia (Wiriyachitra, 2001; Bolton, 2008). The rise of the English speaking competence of neighbor countries brings the Thai education a big challenge to enhance Thai students' the positive outcomes of English learning.

The global trend of job competition leads to the urgent need of international communication skill. English communication seems to be the most important dimension because the speaking skill affects all other skills of the use of English language (Ur, 1996). Zimmerman identified the importance of getting along with the host culture as a key success to comprehend intercommunication. Lack of opportunity to practice English speaking of Thai students is a

prominent problem to advancing in communication. Hence, to improve Thai students' English communication must be frequently speaking with the native speakers. However, Thai schools' circumstance does not provide chances for the students to strongly engage in English communication since the official language used is Thai language only. Yet, the instruction in Thai public secondary schools is mostly Thai. One common policy in accordance with such an emphasis on English communication is hiring foreign teachers; however, in the public schools foreign teachers are not mainly employed. Therefore, Thai students do remain few chances to communicate with foreign teachers. At the same time, the schools do not often share the information and hear foreign teachers' voices in schools because of the language and cultural barriers.

Miscommunication can often occur because of the cultural differences. Culture affects language acquisition. Teachers cannot motivate students to learn the English language they have no idea about the culture of the native speakers or English-speaking countries (Pulverness, 2003). At the same time, the unfamiliarity and misunderstanding often take place in the different cultural settings. Foreign teachers, employed in Thai public schools, are from various countries. They, who are not familiar with Thai people, may interpret some Thai students' behaviors as the negative responses in classes, and may lead to discomfort in teaching and living with Thai colleagues. The misinterpretation and discomfort affect the unwillingness to teach (Young, 2001; Gay, 2000; Ference & Bell, 2004; Yeh et al, 2005). Sileo and Prater (1998) revealed enthusiastic participation of African students towards American teachers. The teachers, who were not ready to teach in the different cultural classrooms, evaluated them as the disruptive behavior in class.

The unawareness of cultural diversity brings the negative relationship between foreign teachers and students. Some foreign teachers showed their nervous feelings towards the cultural diversity. In some Taiwan elementary schools, foreign teachers faced the challenges in the norm of English accent, teaching phonics, class size, students' doubts in teachers' teaching skills and racism (Chen & Cheng, 2009). In Thailand, foreign teachers teaching English stated that they faced the heavy teaching loads, a big class size, students' insufficient English language skills and foreign cultural knowledge, and the inconvenience of instructional equipment and technology (Biyaem, 1997). These cases created the foreign teachers' intercultural sensitivity which should be greatly noticed.

Measuring intercultural sensitivity is regarded as an important term in many workplaces. The business people rated the quality of intercultural sensitivity as the most important factor for success in oversea countries (Frankenstein & Hosseini, 1988). In educational area, lack of intercultural acknowledges may impact where teachers teach, as well as how they teach. Gay (2000) illustrated that if teachers were centered, the classrooms was likely one way expectation. Students did exist as the passive learners. If they were mistaken, the centered teachers would evaluate them as the misbehaved students. Hollins and Guzman (2005) reported that prospective teachers held negative attitudes and beliefs about different cultures and were unwilling to teach in urban schools, schools that tend to be more ethnically diverse than suburban or rural institutions.

This is a prominent problem since intercultural sensitivity of teachers is an aspect to help students reach their high academic achievement. Nieto (2008) showed the positive results that when teachers had the high intercultural sensitivity, they seemed to be aware of cultural diversity in classes. Teachers who were aware of the cultural diversity tended to learn more about their students' cultures. As a result, they understood more and were able to solve some

classroom situations. Also, students showed the appreciation to those teachers since they thought that those were willing to teach and help them achieve their goals. Diller and Moule (2005) also stated that learning other cultures is the only way to connect to people. Attempting to understand other cultures help teachers be assured of what they interact with.

The purpose of this research was to measure the level of intercultural sensitivity of foreign teachers in Thai public secondary schools in Bangkok. In Thailand, research on measuring the intercultural issue was often conducted among students (Laopongharn & Sercombe, 2009; Deyo, 1975; Knutson, 2004). Few measured the intercultural sensitivity of the teachers, particularly the foreign teachers who play the important role in developing English language communication.

2. Review of Literature

Intercultural sensitivity is an important dimension for people to work or live in intercultural workplaces where the cultural differences occur. In order to understand the importance of measurement intercultural sensitivity, it is potential to comprehend its concept. Bronfenbrenners, Harding, and Gallwey (1958) defined the word “sensitivity” into two parts: sensitivity to the norms of group and to individual differences. Moreover, Chen and Starosta (1997) implied the intercultural sensitivity as a level of personal interpretation towards the different situations. Intercultural sensitivity was also referred to the individuals’ reactions towards the people from different cultures (Bhawuk & Brislin, 1992). Measuring the level of intercultural sensitivity meant to find out the ability to discriminate and experience the cultural diversity (Hammer et al., 2003). Bennett, Bhawuk and Brislin suggested the importance of intercultural sensitivity towards intercultural communication that people effective on living in different cultural context are those who interest in, engage, and tend to learn other cultures.

Over the past years, instruments for intercultural sensitivity measurement were designed. Bhawuk and Brislin (1992) created the instrument called Intercultural Sensitivity Inventory (ICSI), using the concepts of individualism and collectivism, to measure the intercultural sensitivity of the students at the East-West Center. The participants were from various countries: United States, Australia, Japan, China, Korea, Taiwan, Indonesia, Malaysia, India, Nepal, Philippines, and Thailand. Results showed the reliability and validity of ICSI and the conclusion was that people can be encouraged to adapt their behaviors into different culture where they are living so that they will achieve their goals.

A model frequently cited in the literature which was relevant to teachers working with students from various cultures was Intercultural Development Inventory (IDI) which was based on the Developmental Model of Intercultural Sensitivity (Bennett, 1993). Hammer and Bennett (2003) designed IDI for measuring intercultural sensitivity in various areas. The IDI instrument consists of main five-point stages: Denial/defense, Reversal, Minimization, Acceptance/adaptation, and Encapsulated Marginality. The validity and reliability of IDI had been accepted in research focusing on the intercultural sensitivity measurement (Greenholtz, 2000; Paige et al., 2003; Hammer et al., 2003; Yuen, 2009).

Although the IDI is an internationally recognized and validated scale at measuring intercultural sensitivity, it was not possible for it to be employed by the present study due to length of stay of sample group. This research selected the Intercultural Sensitivity Scale (ISS) developed by Chen and Starosta (2000). The model consists of the 24 items in the scales

which are divided into five dimensions: (1) interaction engagement (e.g. “I enjoy interacting with people from different cultures”), (2) respect for cultural differences (e.g. “I think people from other cultures are narrow-minded”), (3) interaction confidence (e.g. “I am pretty sure of myself in interacting with people from different cultures”), (4) interaction enjoyment (e.g. “I get upset easily when interacting with people from different cultures”), and (5) interaction attentiveness (e.g. “I am very observant when interacting with people from different cultures”). The validity and reliability of the Intercultural Sensitivity Scale (ISS) had been appeared in research on intercultural sensitivity measurement conducted by Nieto (2008). Moreover, the confirmatory of the validity of the model had been evaluated on other research related to intercultural sensitivity measurement (Chen & Starosta, 2000; Fritz & Mollenberg, 2001)

3. Methods

Respondents

20 foreign teachers from EMS agency participated in this research. They have been teaching English only in Thai public secondary schools in Bangkok. Foreign teachers of EMS agency were from various English-speaking countries such as the United States, England, New Zealand, Australia, Africa, Philippine, Russian Federation, and Hong Kong. The foreign teachers from Hong Kong and Philippine were not the target respondents because they are Asian countries. They may be closer to and more familiar with Thai culture. The representative of the EMS team helped randomly distribute the questionnaires to the foreign teachers in the schools where the EMS teachers were employed in the first semester of the academic year 2011.

Instrument

This research used the questionnaires based on the Intercultural Sensitivity Scales, developed by Chen and Starosta (2000). The questionnaire was split into two sections:

1. **Demographic Information of the Respondents** contained questions relating to the respondents personal information: gender, subject taught, country of resident, and length of teaching in Thailand.
2. **Intercultural Sensitivity Measurement** questionnaire comprised 24 statements regarding the intercultural sensitivity of the respondents. The intercultural sensitivity scale developed by Chen and Starosta (2000) was used in the questionnaire. This scale served to measure the intercultural sensitivity level of the respondents with 24 items under five major factors: “Interaction Engagement”, “Respect for Cultural Differences”, “Interaction Confidence”, “Interaction Enjoyment”, and “Interaction Attentiveness”. The respondents were asked to rate their level of agreement on intercultural sensitivity with the five-point Likert scale. Paige et al., (2003) noted that the Likert scaling technique scored statement which indicated the degree of agreement. Five-point Likert scale therefore was adapted and summarized in Table1.

Table 1
Five-Point Likert Scale

Rating	Mean	Agreement Level
5	4.51-5.00	Very high
4	3.51-4.50	High
3	2.51-3.50	Not sure
2	1.51-2.50	Low
1	1.00-1.50	Very low

Procedure

A random sampling method was employed. The public secondary schools, located in Bangkok, where the EMS foreign teachers were teaching, were randomly conducted by the representative of the EMS agency. Only one school was conducted by the researcher. The 20 questionnaires based on the Intercultural Sensitivity Scale (Chen & Starosta, 2000) were also accompanied in the end of June, 2011. After, all completed questionnaires were gathered and analyzed by the use of Descriptive Statistics. The percentage was used to analyze the demographic information, whereas the mean scores were used to analyze the agreement level of intercultural sensitivity.

4. Findings

Demographic Information

Table 2 shows the demographic information of the respondents in this research. This section presented the information of 20 EMS foreign teachers teaching English in Thai public secondary schools in Bangkok. The information was comprised of gender, subject taught, country of resident, and the length of teaching experiences in Thailand.

Table 2
Demographic Information of the foreign teachers

Gender	Teaching English Subject	Country	Length of Teaching Experiences in Thailand
---------------	---------------------------------	----------------	---

Male	70%	Yes	100%	US	30%	1-3 years	55%
Female	40%	No	0%	England	20%	Less than 1 year	40%
				New Zealand	15%	More than 3 years	5%
				Australia	15%		
				Russian Federation	10%		
				Africa	10%		

As seen in the table, the findings of the demographic information showed that the percentage of male respondents was the highest (70%). All of the respondents (100%) taught English subject. Most of them (30%) were from America, whereas Russian Federation and Africa were the least group (10% each) of respondents. The largest group (55%) of respondents has been teaching English in Thailand for 1-3 years, whereas the smallest group (5%) of them has been teaching English in Thailand for more than 3 years.

Intercultural Sensitivity Measurement

The main findings analyzed the Intercultural Sensitivity Scale (Chen and Starosta, 2000) which presented the five dimensions: Interaction Engagement, Respect for Cultural Differences, Interaction Confidence, Interaction Enjoyment, and Interaction Attentiveness. Table 2 shows the mean scores of the five dimensions. The mean scores were finally ranged from 2.20 to 4.23. The high mean scores on this research indicated that foreign teachers in Thai public secondary schools in Bangkok had the high agreement towards these five dimensions of intercultural sensitivity in understanding and awareness of the value and norm of Thai cultures.

Table 3

The mean score of five dimensions of Intercultural Sensitivity of the foreign teachers

Dimensions	Mean	Agreement Level
1. Interaction Attentiveness	4.23	High
2. Intercultural Engagement	3.90	High
3. Interaction confidence	3.72	High
4. Respect for Cultural Differences	2.50	Low
5. Interaction Enjoyment	2.20	Low

As seen in the table, the mean scores of intercultural sensitivity on “Interaction Attentiveness” were rated at the highest agreement (4.23). This showed that the foreign teachers in this research had a high agreement level of effort in attempting to know more about Thai people and subsequently learnt from them during interaction and communication. Next high agreement level (3.90) is “Intercultural Engagement”. This was an evidence indicated that foreign teachers would like to participate and be open-minded with Thai

people. In addition, the high agreement level (3.72) fell in the “Intercultural Confidence”. This showed that the foreign teachers felt confident when interacting with Thai people.

Attempt to learn other culture is a positive way to understand the different cultures (Zimmermann, 1995). As seen in the table, the foreign teachers had the readiness effort to know more about Thai people. They possessed the high intercultural sensitivity in terms of being very observant, obtaining the other culture information as much as possible when interacting with Thai people. Table 4 subsequently illustrates the high level of agreement in terms of “Interaction Attentiveness”.

Table 4
The mean score of Interaction Attentiveness of the foreign teachers

Item	Mean	Agreement level
I am very observant when interacting with people from different cultures in every aspect of communication.	4.75	Very high
I try to obtain as much information as I can when interacting with people from different cultures.	4.50	High
I am sensitive to my culturally-distinct counterpart’s unclear meanings during our interaction.	3.44	Not sure
Average	4.23	High agreement

The dimension “Intercultural Engagement” is referred to the willingness to communicate in intercultural context. Table 5 demonstrates the high agreement level of foreign teachers towards the dimension. The findings indicated that they were willing and open-minded, waited to form the impression, and gave the positive responses when interacting with Thai people.

Table 5
The mean score of Intercultural Engagement of the foreign teachers

Item	mean	agreement level
I enjoy interacting with people from different cultures.	4.5	High
I tend to wait before forming an impression of culturally-distinct counterparts.	4.3	High
I am open-minded to people from different cultures.	4.75	Very high
I often give positive responses to my culturally different counterpart during our interaction.	3.5	Not sure
I avoid those situations where I will have to deal with culturally-distinct persons.	2.2	Low
	4.15	High

I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.

Average**3.90****High agreement**

Confidence in communicating with others was another success dimension. Table 6 demonstrates the positive outcomes of the foreign teachers in Bangkok towards self-confidence. They showed their surety, knowledge, sociability and confidence when interacting with Thai people.

Table 6

The mean score of Interaction Confidence of the foreign teachers

Item	mean	agreement level
I am pretty sure of myself when interacting with people from different cultures.	3.75	High
I find it very hard to talk in front of people from different cultures.	3.5	Not sure
I always know what to say when interacting with people from different cultures.	3.75	High
I can be as sociable as I want to be when interacting with people from different cultures.	3.75	High
I feel confident when interacting with people from different cultures.	3.85	High
Average	3.72	High agreement

Concerning with the two dimensions felt in the low agreement levels, there were negative and the ethnocentric points. Table 7-8 illustrates the disagreement in dimension "Respect for Cultural Differences" such as the items "other cultures are narrow-minded", "I do not like to be with people from different cultures", "I find it hard to accept the opinions of people from different cultures", and "I think my culture is better". Also, the dimension "Interaction Enjoyment" contained the items "I get upset easily when interacting with people from different culture", "I often get discouraged", and "I often feel useless when interacting with people from different culture". The foreign teachers in this research showed the disagreement on these items.

Table 7

The mean score of Respect for Cultural Differences of the foreign teachers

Item	mean	agreement level
I think people from other cultures are narrow-minded.	2	Low
I do not like to be with people from different cultures.	1.5	Very low

I respect the values of people from different cultures.	3.65	High
I respect the ways people from different cultures behave.	3.8	High
I find it hard to accept the opinions of people from different cultures.	2.05	Low
I think my culture is better than other cultures.	2	Low
Average	2.5	Low agreement

Table 8

The mean score of Interaction Enjoyment of the foreign teachers

Item	mean	agreement level
I have a feeling of enjoyment towards differences between my culturally distinct counterpart and me.	3.65	High
I get upset easily when interacting with people from different cultures.	1.7	Low
I often get discouraged when I am with people from different cultures.	1.7	Low
I often feel useless when interacting with people from different cultures.	1.75	Low
Average	2.2	Low agreement

5. Discussions

Learning different cultures is important since the intercultural sensitivity can help succeed overseas working (Frankenstein & Hosseini, 1988). This research found that foreign teachers attempted to learn more about Thai people. The findings indicated that foreign teachers were ready to be observant, obtain the Thai culture as much as they could when interacting with Thai people. They would like to get along with Thai people on any occasion. Zimmermann (1995) pointed out that getting along with the owners of one culture is a key to successful communication. Another aspect showed their positive attitudes to get along with Thai people was the attempt in engaging with Thai people. They were open-minded, and gave the positive interaction to Thai people. They waited to form an impression to Thai people. This might be because the foreign teachers learned Thai culture by observing the schools' environment. They can see Thai students showing the Thai greeting called "Wai" in the morning on every official days. In Thai public secondary schools, Thai teachers will stand to wait for students' greeting. Hence, every morning the foreign teachers will notice the Thai students' behaviors when interacting with teachers. Again, after a class Thai students have to pay respect to their teachers. Foreign teachers can observe their reactions towards the elders or teachers such as the "Wai" which is considered as expressing gratitude towards an elder.

Living in the unfamiliar society can create the discomfort. Obtaining intercultural information helps minimize these feelings. This research showed the high positive agreement level of confidence of the foreign teachers since they showed the confidence when they were asked about Thai culture. Though most of the foreign teachers participating in this research have been teaching in Thai public secondary schools less than three years, they were sociable, knew what to say, and felt confident when interacting with Thai people. This might be because they can observe the activities regularly set. As mentioned, foreign teachers can have chances to observe Thai greeting. Moreover, they can observe what Thai people do by joining other traditional activities. The regular activity in the morning in Thai public secondary

schools is that Thai teachers and students are standing on the national anthem playing at 8.00 am. As interviewed a foreign teacher, he was confident in interacting with Thai people because he already knew how to do it. Moreover, foreign teachers can join the annual activities such as Sunthorn Phu's day (referred to the important and famous poet during the RamaII – RamaIV reign), Teacher's Day or "Wan Wai Koo" in Thai, Candle Festival, and Loy Kratong Festival. Thai public secondary schools traditionally demonstrate those activities representing the Thai cultures and allow foreign teachers to participate in. The findings in this research might be consistent with the study of Nieto (2008) in terms of the use of Intercultural Sensitivity Scale developed by Chen and Starosta (2000) and the careers of the respondents. Nieto found that the instructors in the university level had the high intercultural sensitivity, especially the "Interaction Engagement". This was the positive results as the instructors showed their cultural awareness in classrooms. Students did appreciate the instructors who tended to acknowledge their cultures because the students thought that those teachers would like to help them achieve their goals.

However, cultural diversity can create the discomfort and the unwillingness to teach for the teachers who have less experienced living in other cultures. Westrick and Yuen (2007) emphasized that "teachers who have spent more than three years in other cultures tend to acknowledge the in-depth information of cultural diversity and are able to operate in a more complex manner than those who have never experienced other cultures". The majority of foreign teachers in this research had the less experience in teaching in Thai cultural settings. Although the findings revealed that they had attentiveness, confidence, and enjoyment towards living and learning Thai culture in Thai public secondary schools, they know only Thai cultural surface. Problems in teaching students from different cultures in other criteria possibly occur all the time even inside and outside classrooms (Sileo & Prater, 1998; Gay, 2000; Mohon, 2006; Nieto, 2008) such as the unfamiliar circumstance and environment already appeared in many research related to the intercultural sensitivity (Biyaem, 1997; Chen & Cheng, 2009; WeiWei, 2010); e.g. the different accent of foreign teachers, thought of racism, large class size, inconvenience of teaching instrument in classroom, and heavy teaching load. Consequently, the academic outcomes of the students were not met the satisfactory. Moreover, Thai students' behaviors in class may affect foreign teachers' negative sensitivity. For example, they may smile while being scolded. Smiling may not mean that they ignore to your words. Rather, they do not want to show the aggressive manner to the teachers. This is a bit complexity of Thai culture occurred in classroom that foreign teachers may misinterpret.

One of the responsibilities of teachers is to offer themselves and their students the intercultural society due to the globalization. Suggestions in accordance with the findings of this research is that the Thai public secondary schools should pay attention to the aspects of intercultural sensitivity of the foreign teachers who are vital playing the important role in developing Thai students' English proficiency. Thinking and teaching corporately help minimize the lack of ease intercultural settings. It is crucial time for Thai public secondary schools to promote the programs related to learning cultural differences for foreign teachers; as well, for Thai students so that they can learn other cultures and improves their intercultural communication for their future world.

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A COMPARATIVE STUDY OF MANAGEMENT STYLES OF MALE AND FEMALE HEADS AT SECONDARY SCHOOLS LEVEL

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ABSTRACT

No doubt leadership style plays an important role in educational management for bringing about change in circumference of educational institutions, which will make learning more effective of higher quality for all. The present study was designed to assess the situational management styles of the heads of the institutions at secondary schools level. For this purpose 50 heads of the institutions from the institutions of Federal Directorate of Education, Islamabad were taken as sample of the study randomly (25 males, 25 females). A 35 items questionnaire on likert scale was constructed and pilot tested. The reliability of the instrument was 0.79 (Cronbach alpha). Data was collected and analyzed by using mean score. The main findings of the study were: the female heads of the institutions were more careful for the task and achieving the objectives of the school. There was no significant difference between the management styles of the male and the female heads of the institutions concern for the people. There is a contradiction in management styles of the male and female heads of the institutions which were not performing according to the situation. It was recommended that the heads of the institutions need special training to meet the ground realities of the situations, Motivational incentive for heads of the institutions to overcome their slackness and urge to prepare them for job.

Key words: management styles, heads of the institutions, concern for task, concern for people.

Introduction:

The past and present history is full of management competence. Our forefathers erected huge mansions, watercourses and caravan routes. They knew well as how to manage and be managed. At present national and multinational organizations are visible and viable because of management system. Management is the obligation of executives and necessity of managers in order to make organization grow and prosper. The main purpose of management is to achieve the objectives of the organization. According to Reddy (2004, p.1), "Management is the process of designing and maintaining an environment in which individuals working together in the groups efficiently accomplish selected aims." No organization can be run without management. Organization is social in nature, established to achieve some common objectives. "Organizations are social units deliberately constructed and reconstructed to seek specific goals." (Bhoomireddy, 2004, p.8)

Management functions as planning, organizing, and controlling, linked together with leading. Planning determines what results the organization will achieve; organizing specifies how it will achieve the results; and controlling determines whether the results are achieved. Throughout planning, organizing, and controlling, managers exercise leadership (Donnelly and Gibson, 1986, p.4). Leadership is the ability of an individual to influence, motivate, and

enable others to contribute toward the effectiveness and success of the organizations of which they are members (House, 2004, p.15).

No organization or institution can work effectively without proper management, to achieve the set objectives of education, school management is required. Educational management is an active aspect and an important area of the field of education. There is close relationship between the management of education and the purposes of schools. Education serves the society and management has to do with the education. "Educational management plays vital role in the qualitative and quantitative improvement in educational system in the country. Effective management is the pre-requisite for bringing the educational systems to meet the challenges of modern era and constant changing scenario." (Shami, 2006, p.1)

Head of the institution is the immediate manager and leader of the school teachers. He or she is not only responsible for the higher efficiency and productivity of his or her school but also the take care of the professional requirements of the staff members. There should be a balance between the production and people orientation. The heads of the institutions perceive themselves showing cordiality towards their teachers, which sometimes is nullified by the teachers. "It is widely recognized that one of the key factors influencing school effectiveness is the nature and quality of the leadership and management provided by the school management." (Goal, 2005, p.1)

Management practices directly affect the performance of the teachers. This is a matter of influence. Democratic style is, many a time, considered the best one where the management affairs are shared among the teachers and principals. Authoritative heads of the institutions do not share their management affairs and are not ready to invite their staff members in the decision making process. According to Dassler (1982, p.35), "It is always recognized that a happy worker is a better worker."

There are three levels of management upper level, middle level, and lower level. Upper level management in education include; policy makers, planners and education directors. They only prepare the educational policy and make arrangements to implementation. In middle level management, head of the institutions are included. And in lower level management, the teachers are involved. This level of management is considered the most important level to implement the policy.

In this study the researcher was concerned with the middle and lower level of management. The heads of the institutions depend upon teachers to implement the policy for gaining the specific objectives. To do this he or she adopts different management styles according to situation. The best known model of situational leadership was developed by Paul Hersey and Ken Blanchard, the management guru who later became famous for his "One Minute Manager" series. They created a model of situational leadership that allows one to analyze the needs of the situation, and then adopt the most appropriate leadership style. It has popular with managers over the years because it is simple to understand, and it works in most environments for most people.

Statement of the problem:

The study was focused on a comparative study of management styles of male and female heads at secondary schools level.

Objectives:

The following objectives were framed for this research study:

1. To assess the situational management styles of the heads of institutions on Hersey and Blanchard's situational management model.
2. To compare the management style of male heads versus female heads.
3. To make suggestions for improvement in secondary school management.

Population:

All the heads and teachers both males and females in federal government secondary schools of Islamabad constituted the population of the study.

Delimitation:

Due to limited time and resources of research, only urban area was focused in this study.

Table : 1 Showing the summary of secondary schools by location and gender

Gender	Urban	Rural	Total
Male	17	27	44
Female	18	32	50
Total	35	59	94

Sample:

In this study 53% secondary schools (25 males+25 females) of the target population, were selected by using Stratified random sampling from both male and female federal government secondary schools in Islamabad with equal representation. The schools of urban areas as well as schools of rural areas were selected to make the sample as representative as possible.

Table : 2 Showing he summary of the selected sample secondary schools by location and gender

Gender	Urban	Rural	Total
Male	11	14	25
Female	11	14	25
Total	22	28	50

Table : 3 Showing the summary of the sample heads and teachers by location

Respondents	Urban	Rural	Total
Heads	22	28	50
Teachers (BS-16)	22	28	50
Teachers (BS-14)	22	28	50
Total	66	84	150

Sources of data:

Researcher personally visited the sample schools to collect the data through questionnaire about the management style of the heads of the institutions of the federal government secondary schools in district Islamabad.

Instruments for collecting data:

The research instrument for collecting data was questionnaires. Two same questionnaires consisting 35 close ended statements (20 task-oriented, 15 people-oriented) were developed on five point Likert rating scale from always to never were included in it. One for heads and other for teachers to know the management styles of the heads.

Table : 4 Showing the Items related to each major area of the study

S#	Nature of items	No. of items
1.	Task-oriented	20
2.	People-oriented	15
Total		35

Validations of instruments:

- Pilot testing
- Improvement and finalization of instrument

Pilot testing:

After preparing the questionnaire on the basis of existing literature and studies along experts' opinions, these were distributed among 10% of the target population.

Improvement and finalization of instruments:

The questionnaire was revised in the light of feedback received after pilot testing.

Analysis and interpretation of data:

The data was tabulated, analyzed and interpreted in the light of objectives of the study. For analysis of data, mean scores were used as statistical tools.

Table : 5 Showing the Assessment of management style of male heads

Respondents	Task-orientation	People-orientation
Heads of the institutions	3.8	3.8
Teachers (BS-16)	3.6	3.5
Teachers (BS-14)	3.6	3.6
Average	3.7	3.6

According to the Hersey and Blanchard's situational model when the teachers can do the job and is motivated to do, then the leader can basically lead them to it, trusting them to

get on with the job. Teachers at this level have less need for support or frequent praise and heads of the institutions should focus on low task and low relationship and perform his/her role as delegating, but in this study he is performing his role as selling which was not needed. Although the management style of the heads is high in the context of task-orientation and people-orientation but not according to the situation.

Table : 6 Showing the Assessment of management style of female heads

Respondents	Task-orientation	People-orientation
Heads of the institutions	4.1	3.9
Teachers (BS-16)	3.8	3.5
Teachers (BS-14)	4	3.7
Average	4	3.7

According to the Hersey and Blanchard's situational model when the teachers can do the job and is motivated to do, then the leader can basically lead them to it, trusting them to get on with the job. Teachers at this level have less need for support or frequent praise and heads of the institutions should focus on low task and low relationship and perform his/her role as delegating, but in this study he is performing his role as selling which was not needed. Although the management style of the heads is high in the context of task-orientation and people-orientation but not according to the situation.

Table: 7 Showing the Mean difference in management style of male and female heads (concern for task-orientation)

Gender	Strength	Mean
Male	25	3.712
Female	25	3.944

The table indicates that the mean score of female heads is greater than the male heads which mean that the component of concerning to the task is greater that of male heads and a visible difference is seen there. So the female heads are more careful for the task and objectives of the school.

Table: 8 Showing the Mean difference in management style of male and female heads (concern for people-orientation)

Gender	Strength	Mean
Male	25	3.652
Female	25	3.654

The table indicates that there is no significance difference between the mean score of female heads and the male heads it means that the male and female heads are equally treating to their team members.

Findings:

1. The female heads of the institutions were more careful for the task and achieving the objectives of the school.

2. There was no significant difference between the management styles of the male and the female heads of the institutions concern for the people.
3. There is a contradiction in management styles of the male and female heads of the institutions which were not performing according to the situation.

Recommendations:

1. The heads of the institutions need special training to meet the ground realities of the situations.
2. Motivational incentive for heads of the institutions to overcome their slackness and urge to prepare them for job.

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How do students of Religious Education in Centre A in Karachi, respond to collaborative methods of learning?

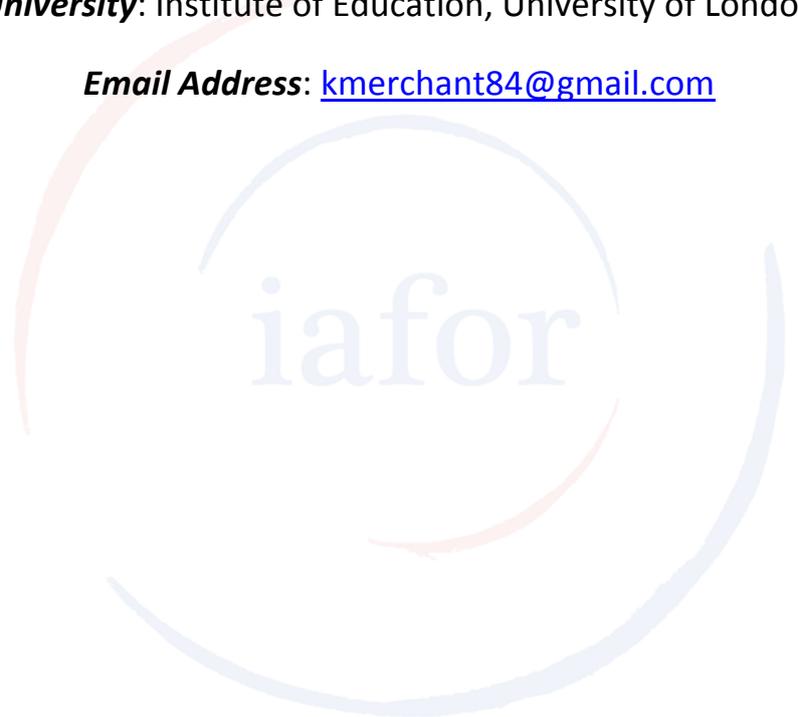
Topic Area of the Submission: Other Areas of Education (Active Learning)

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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, sans-serif font. The text is enclosed within a circular graphic composed of two overlapping, semi-transparent arcs: a light blue arc on the left and a light red arc on the right, which together form a partial circle around the text.

INTRODUCTION

***Title:* How do students of RE in Centre A in Karachi, respond to collaborative methods of learning?**

***Author:* Karima Merchant**

Background:

Students in secular schools and Religious Education Centre (REC) in Pakistan are exposed to the reception model of teaching where the teacher is widely seen as a repository of knowledge and the students as passive listeners. The introduction of collaborative learning methods in REC and its impact on student learning challenges this approach to education as students are now also involved in working together in achieving the objectives of the lesson.

I have been exposed to the traditional teacher-centred approach, as both a student and a teacher in Pakistan. However, my exposure as a student and also as a teacher in the UK has led me to realize the importance of using collaboration as an effective method of learning. I have learnt that cooperative and collaborative learning methods are encouraged and used in classrooms with the objective of changing students from passive recipients of information to active learners working together. By means of using specific collaborative learning approaches mentioned later in the paper, I believe students will be encouraged to take responsibility of their own learning - thus to a great extent, shifting the onus from the teacher to the student.

Purpose and Aims:

Collaborative methods of learning, such as Debate, Role play and Think-Pair-Share, worked well during my Religious Education (RE) practicum in UK. The main purpose of conducting this research was two-fold. Firstly, I wanted to experiment with these methods in Pakistani context with the aim of viewing student's responses and any skills that were to develop from this type of learning. Secondly, the aim was to acquaint the students to a student-centred approach to learning that would enable them to meet the demands of the new secondary curriculum. The students are, therefore, expected to:

- Work collaboratively
- Read, analyse, synthesise and critique information
- Discuss and debate issues in pairs/groups

Thus, collaborative learning will perhaps encourage the students to express their ideas and views without the fear of censure and may also enable them to acquire skills and help them realise the value of working with others, sharing their knowledge and discussing issues constructively in order to achieve a common goal.

Context of Research:

This empirical research study took place in an affluent area of Karachi, Pakistan at one of the REC, henceforth known as Centre A. The class taught was Grade 8 and was spread across six sessions. On an average, fifteen students attended these sessions. The class duration varied between 75 to 90 minutes.

Hypothesis:

The hypothesis of my research is that students of Grade 8 in Centre A respond positively to collaborative methods of learning as it allows them to gain a greater understanding of content knowledge and enables them to learn social skills by interacting with one another.



LITERATURE REVIEW

Co-operative learning and collaborative learning have often been used interchangeably by many but according to some there are a few differences. According to Simons et al. (2000), collaborative learning is considered to be a knowledge construction process where interaction and negotiations occur with the teacher, other students and the teaching materials. The main aim is to work towards a shared meaning as a result of the negotiation process. Therefore knowledge is considered to be relative to the community. However, Watkins et al. (2007) argues that the essence of the term `collaboration` is to labour together. It is vital that all participants in the pair or group share information and work together towards achieving the common goal. Thus, the success of one learner helps the other students to be successful. In other words by communicating effectively, providing mutual help and building trust, collaborative learning enables the students to work on joint goals (Gipps, 1995). Co-operative learning, on the other hand is considered to be the most structured approach that is “imposed by the teacher and is designed to achieve a specific goal or end product” (ibid). In Pakistan educational setting, both in secular and faith based education contexts, the teacher is considered to be the source of knowledge in the classroom. Students always look up to the teacher for the correct answer as she/he is taken to be the single authority in class. Contrary to this idea, Lee and Smagorinsky (2000) hypothesize that knowledge is not simply passed down from the teacher to the student. Rather, meaning is constructed through joint activity, interaction and collaboration between the students and the teacher. The students therefore learn when they are involved in this process of constructing knowledge. Nolan and Francis (1992, p47) affirm that “all learning, except for simple rote memorization, requires the learner to actively construct meaning”. In view of this theory, Vygotsky (cited in Gilles and Ashman, 2003, p73) proposed that learning occurs through talk when “individuals interact with others who have different backgrounds, knowledge and experience”. They get a chance to explore and expand their ideas, modify them and eventually make it their own (Sharan & Sharan, 1992). Thus, one of the aspects of collaborative learning is working together in pairs or groups – a strategy that will be used in this research to emphasize the positive interdependence between students.

According to Rudduck (1991), students prefer tasks where they are engaged, both by the content and the approach, which gives them a clear specification of the task, relatively more autonomy and challenges them to think. Grouping serves as one of the ways where students come together, pool in their ideas, discuss and dialogue with one another and above all achieve their group objective. Nonetheless, it is essential to bear in mind that cooperative or collaborative learning is not merely group work. Johnson, Johnson and Smith (1991) have identified essential elements that depict cooperative learning. These include positive interdependence, face-to-face interaction, individual accountability, social skills and group processing.

Dialogue plays a vital role in group work. Anderson (1999, p65) is of the opinion that dialogue is a “dynamic generative kind of conversation in which there is room for all voices”.

To support this point of view, Carnell and Lodge (2002, p15) posit that when people dialogue they are “engaged in conversations in a spontaneous way, building on the ideas of one another. This is often expressed as excitement, physical proximity, raised energy levels and sudden movements”.

Diverse research has been conducted in the past to prove the advantages of working collaboratively in order to achieve a shared goal. In addition to providing encouragement to the students to share their experiences and learn from their peers, Deutsch (1949 cited in Gilles and Ashman 2003, p4) concluded that if “individuals are working co-operatively together to attain a group goal they will perceive themselves to be more psychologically interdependent than individuals who are in a competitive social situation”. However, the teacher needs to ensure, where possible, that every member is given an opportunity to contribute their ideas or else single or few members of the group will end up dominating as Gokhale (1995, p3) states “group-decision making can be easily dominated by the loudest voice or by the student who talks the longest”. Thus, the teacher plays an important role by acting as a facilitator rather than an instructor to ensure that the voice of every group member is heard. In addition, Silberman (1996, p99) highlights the benefits of collaborative learning by suggesting that “peer support and diversity of viewpoints, knowledge, and skill help make collaborative learning a valuable part of the classroom learning climate” and also explicitly states that collaborative learning is not always effective. Moreover, it may result in unequal participation, poor communication, and confusion. Therefore, this aspect was particularly taken into consideration during my research to ensure, as far as possible that each child gets an equal opportunity to pool in his/her ideas during a range of group activities and discussions. Also, it must be noted that just because students are sitting in a group does not necessarily mean that they are collaborating and communicating freely. Sharan and Sharan (1992, p21) rightly states that “being in a group is not new to children, studying in a group may be new for them”. Therefore, interaction among students should be made gradually as it is with time and practise that the students begin working together. In addition, it is essential for learning to be made explicit in the groups that the children are working in. Carnell and Lodge (2002, p29) states that “...activity alone is not sufficient in making learning effective...the stages in the learning cycle...need to be part of an effective learning experience”. This way the students will be in a better position to identify what it is that they are learning and then apply the understandings gained from their learning to inform future action (ibid).

At this stage, for the purpose of the work in progress, I will be using the terms ‘cooperation’ and ‘collaboration’ interchangeably as many researchers have done so in the educational literature.

METHODOLOGY AND METHODS

Methodology:

The approach that I used for this study was action research where “theories are not validated independently and then applied to practise...they are validated through practice” (Elliott, 1991, p69). Choosing this methodology allowed me, as a teacher researcher, to gain a better understating of on my teaching that would serve as a basis of action for improvement.

Moreover, a narrative style, allowed me to reflect on the research process and its findings (Herr & Anderson, 2005). In other words, action research served as a tool for my professional self-development, where the findings from my teaching are likely to change and improve my practice (Hargreaves, 1996).

This was a small-scale research that was conducted over six sessions. The pedagogy adopted was mostly a student-centred approach to teaching. However, due to the limited timeframe and the existence of numerous collaborative learning techniques, this paper will focus on three learning techniques that were used. These include:

- 1. Debate:** Silberman (1996, p84) states “a debate can be a valuable method for promoting thinking and reflection, especially if students are expected to take a position that may be contrary to their own”. I therefore wanted to experiment with this technique and view how students, who are used to teacher-centred approach, can adapt to this learning approach.
- 2. Role Play:** This is one of the enactment strategies used that gave students “new entry points into text, and yes, many of them are active, requiring students to move physically...” (Wilhelm 2002, p9). Students were required to work together in order to express their opinions by listening and creating meaning together. Additionally, various theorists have stated that it is important to attend to how the students learn and what they enjoy, as learning is said to be most powerful when the students are having fun (Bloom, 1985; Vygotsky, 1978).
- 3. Think – Pair - Share:** This strategy was used in order to experiment with how students work in pairs as opposed to groups. According to Lyman and McTighe (1988), this technique helps students find clarifications and think about what happened. In addition, it benefits students by “giving them a time to process the teaching, make brain connections ... and verbalize their learning with another person” (Belvel, 2010, p137). Moreover, students begin to view each other as sources of learning rather than considering the teacher as a sole source of knowledge.

Data Collection Methods:

During this research, qualitative data was collected. Miles (1979 cited in Robson 2002, p455) describes qualitative data as an “attractive nuisance” where narratives, accounts and other collection of words prove to be ‘rich’, ‘full’ and ‘real’. Furthermore, Wilkinson (2000, p79) posits that qualitative data “enables the voices of those being researched to be heard”. Hence, student responses were carefully noted and observed by using the following research instruments for collecting qualitative data:

- **Student Journal/Diary:** This was the primary source for collecting data. Since this was perhaps the first time the students would be reflecting about their learning and writing journals, they were provided with some helpful guiding questions. For instance, what did they learn in class? How did learning take place (process)? How did they like the class? Was it different from how they were taught before? As Hinds (2000, p52) states “explicit instructions [must be provided] in order to ensure the diary is completed in a manner fitting the aims of the research”. Students were therefore debriefed about how to write reflections. Furthermore, in order to review the experiences of collaborative learning in the classroom, students were provided with some prompts (mentioned below) which were either written in their dairies or were incorporated in informal conversations during and outside class.
 - Our group work is best when...
 - It helps us to collaborate when...
 - What were the best bits for learning?
 - Did everyone get an equal chance to talk?
 - How did you handle disagreements? (Watkins et al., 2007, p98)

The main advantage of this method was that it provided feedback from student’s perspective. However, on certain occasions some students found it difficult to record their thoughts and feelings and thus required my assistance.

Bias is another problem with journal writing. Students may have recorded events in a way that was beneficial for them especially if they believed that some action will be taken as a result of the contents (Walliman, 2005). Hence, in the first class, I clarified the purpose of writing journals and ensured that confidentiality of the students will be maintained. Nevertheless, as this was the first time the students were writing reflections, they were initially struggling with expressing their point of view. In light of this, Hopkins (2002) points out that the students may find it difficult to start on their own if journal writing is not an established practice in school. However, by the third class the students became familiar in journal writing and this continued to improve.

Additionally, certain secondary methods were used to collect data for the purpose of data triangulation. Denscombe (2007, p134) defines triangulation as a “practice of viewing things from more than one perspective”. Furthermore, he states that “triangulation cannot prove that the researcher has ‘got it right’” rather it should be used for “‘providing more support’, ‘increasing confidence’ and ‘reducing the possibility of error’” (ibid, p138). In other words, triangulation helps to counter the threats to validity (Robson, 2002). The secondary methods used include:

- **Teacher’s Field Notes and Reflections:** During and after class discussions and group activities, field notes or “impressionistic jottings”, as Hopkins (2002, p103) refers to it, were taken where possible. However, as a teacher-researcher, at times I would find it quite challenging to take notes whilst maintaining my role as a teacher. Even then I used any chance I got to scribble notes and write reminders to ensure the event wasn’t forgotten. Consequently, I relied on brief, intense periods of note taking. Hopkins (2002, p103) states “keeping field notes is a way of reporting observations, reflections and reactions ...” Furthermore, I set aside a time after class to reflect on the field notes which enabled me to relate incidents and explore some of the emerging trends (Hubbard and Power, 2003).
- **Student Work:** Students created posters to demonstrate their understanding of the subject matter which was either in the form of bullet points or drawings. In most cases, after every poster or drawing made by the group, the members made group presentation in order to explain their work to the class.

Ethical Considerations:

Ethical considerations are critical when “researching private lives and placing accounts in the public arena” (Mauthner et al., 2002, p1). Accordingly, every effort was made to obtain permission from students and their parents/ guardians, maintain confidentiality and protect identities by using pseudo names (Denscombe, 2007). Participation in this research was voluntary.



FINDINGS AND ANALYSIS

This chapter focuses on the following collaborative learning techniques; Debate, Role Play and Think-Pair-Share where random selection, and self-selection served as the two basic methods of assigning students into groups. The section below presents a brief description of the task, followed by the teacher's and students' perspectives emerging from student journals, teachers' field notes, reflections and students' work.

1. Debate conducted on 18th May, 2010

Description of Task:

The class was divided into three equal groups namely 'Humans', 'Animals' and 'Jinns'. All groups formed had a mix of boys and girls. The debate conducted was on an Islamic fable called *Ikwan –al- Safa* (Brethren of Purity) where the 'Humans' and the 'Animals' argued over who was superior. Each group brainstormed their ideas and then presented their case. The 'Jinns' were assigned the task of being the judges. They acted as a neutral group where their role was to define a criterion, carefully observe the case between the 'Humans' and the 'Animals' and finally pass a judgement.

Teachers' Perspectives based on Field Notes and Reflections:-

The first group called 'Humans' had four members. Whilst the students brainstormed, Student A titled their presentation as **“Humans and Animals were created equal BUT...”** [Group work – 'Humans', 18/05/10]. Amongst the list of reasons they came up with, Student B mentioned

“humans are on the top of every food chain” [Field notes; Group work – 'Humans', 18/05/10].

His friend added

“Humans are Ashraf –ul- Makhlukat – Allah's greatest creation indicating that they are in fact superior” [Group work - 'Humans', 18/05/10]

Student D expressed her idea by stating

“humans have evolved much much faster” [Group work - 'Humans', 18/05/10]

Whilst facilitating the group, I observed that Student D rarely participated in the discussion and when she was asked to elaborate her point, she remained quiet. Her behaviour prompted me to gradually engage her in the discussion by asking her simple questions like what is your opinion about this point? What do you think about this matter? and so on. Despite my effort, I noted her hesitance in engaging in the group discussion. I noted this incident in my mind and

decided to discuss it with her. At the end of the class she explained that she was not very comfortable in talking as she had recently moved from a village to this town and was therefore shy to talk in class [field notes, 18/05/10]. This incident also highlighted that students from a different background may behave differently to changing methods of teaching as Gillies (2003, p70) posits “students are resistant to student-centred approaches to learning because of its novelty...”

A similar situation occurred within the `Animals` group with Student X who had recently moved from a village. Although he understood what his friends were discussing in English, as was evident from his body language (nodding) and his written notes, it seemed that he found it difficult to articulate his ideas in English. Student Y, who was previously paired up with him, was aware of this hesitation and asked him to express his ideas in Urdu in order to make him feel more comfortable. He did so and she translated it in English. Thus, collaboration seemed to take place where the students exchanged ideas, discussed viewpoints and helped each other to achieve the group goal.

In the third group, there were an equal number of boys and girls. However, two students, a boy and a girl who belonged to the same secular school, seemed to be taking over. They were confident individuals who were fully engaged in the activity. Nevertheless, during parts of the group discussion, I felt that the rest of the members did not get an equal opportunity to contribute much and perhaps felt less valued. In fact at one point, as soon as the group saw me walk towards them, they handed the marker to another student and told him

“take this paper and marker...just write anything....write whatever comes to your mind”
[field notes, 18/05/10].

That was an interesting comment and made me think of the potential disadvantage of having students work in a group where there is a risk of making a group-decision that can be easily dominated by the loudest voice. Perhaps it would have been a good idea to implement collaborative learning by organizing the groups in a less random manner in order to give the students time and space to get comfortable working with one another. Furthermore, it made me think about my role as a teacher-researcher. Was I more focused on data collection? Did I ensure in any way that all my students knew how to collaborate within groups? This made me think that the students perhaps did not have the skills that were required for collaborative work.

The debate was a very interesting one where each group presented their case to the third group i.e. `Jinns`. The students began to weigh one argument against another. Hence, they not only delved deeper in the matter but also became more analytical and critical.

Pupil Perspectives based on Student Journal:

The students seemed to enjoy this activity as was evident from their written comments. It also improved their understanding of the subject matter as stated:

“I think I learnt a lot through debate and discussion...how to co-operate with my fellow group members, how to express myself in words and present...everyone has different point of views...I learnt how to think in different ways” [Student E journal, 18/05/10]

“...I learnt how to function as part of a group... to see things from the point of view of others and not just pass judgement based on my opinion only” [Student C journal, 18/05/10]

“...there was a lot of discussion...It was very knowledgeable and interesting to work together” [Student B journal, 18/05/10]

The comments suggest that the debate allowed them to have a greater and in-depth understanding of the topic. Some of the students voiced that they had read and studied this topic previously in the primary level, but had not understood it as clearly as they did now i.e. after having engaged in a debate on the topic [field notes, 18/05/10]. Notably, the debate enabled them to synthesize as well as internalise information by arguing and justifying their ideas to the other group. For instance, Student G pointed out:

“As a jinn...I perhaps learnt the most because I got the opportunity to look at the topic from both perspectives... I learnt through carefully observing the groups, techniques of presenting and noting important points such as putting forward examples, and group confidence and co-operation...” [Student G journal, 18/05/10]

Upon viewing various student journals, I was surprised to come across this particular comment where the student not only demonstrated an understanding of the benefit of being a judge during a debate, but also demonstrated an in- depth and critical understating of the topic. Additionally, upon further investigation from her previous teacher at REC, I learnt that she came from one of the private schools of Karachi where much emphasis is laid on project work, presentation, student’s interaction with members of the class. Consequently, she was familiar with the idea of working in groups and hence was able to contribute as well as benefit from this activity.

In addition, after much discussion and talk among themselves, the `Jinns` created a criterion that served as a tool to judge the other groups work. Engagement in this process and the manner in which they analyzed and assessed both the groups suggests that not only did this seem to have stimulated their thinking process but also seemed to have enhanced their critical thinking and problem solving skills.

Analysis:-

This was the first time I had done group work in my class. I therefore decided to experiment with the method of grouping first by random selection of students where the risk, that the students who select their own groups will either socialize too much or that some student will be excluded, can be avoided (Davis, 2009). All three groups had a mix of boys and girls but the dynamics in each group differed. Findings suggest that collaboration was taking place in all the groups.



2. Role Play conducted on 22nd May 2010

Description of task:

The students were given the opportunity to form their own groups. They divided themselves into three groups respectively. Group A comprised of boys, Group B comprised of girls and Group C had boys and girls. Each group had to read, identify the themes in the story and present it to the class in the form of a role play.

Teachers' Perspective based on Field Notes and Reflections:

During their group activity, I observed that the working relationship amongst the students and their comfort level in discussing and exchanging ideas had improved as compared to the previous class where groups were formed based on random selection. By allowing students to choose their own groups, the members worked more cohesively. My observation [22/05/10] was validated by the comments written by the students in their journals:

“We formed groups with our choice. This was because we could be comfortable working and acting” [Student H journal, 22/05/10]

“I formed my group because they were my friends and I enjoy working with them. This is because we know each other and we work well” [Student B journal, 22/05/10]

Hence, in this particular activity, the students showed preference in working with their friends. However, what was evident in these friendship groups was that it resulted in two distinct gender groups. Davis (2009, p195) postulates “When students self-select groups, they tend to do so based on affinities: friends, teammates... gender and so on. That can mean that some students who don't fit into one of the major groups in a course can find it hard to become a member of the group”

Group C was the only group that had a mix of boys and girls. What resulted in an `all boys` or an `all girls` group? Were they all not friends with each other? Did they belong to different secular schools? These were some of the questions that forced me to think about how to evaluate group strategies.

In terms of group work, I observed that Group A worked well as they were constantly engaged in talking to each other. They brainstormed and discussed on the topic together where each member actively participated. Nonetheless, during the discussion and planning

stage, Student C had reservation about his friends' idea. His comment was discussed and when all the members agreed to it amendments were made in the dialogues of the play in order to address his concern. Carnell and Lodge (2002, p35-36) support this idea by stating "where learners are involved in deciding the task, allowed to work in groups of their own choosing... there is an observable increase in motivation, co-operation and focus". Admittedly, Group A showed distinct signs of motivation and excitement.

The second group, comprising of girls only, worked differently than the previous group. They belonged to different secular schools but were good friends. Although all the students were engaged in the process of reading the story given to them and talking about it, Student Z, seemed to be proactive throughout the discussion. She had a strong personality and was quite confident. I observed that she took the initiative of creating a story line but rather than asking every group member to pool in their ideas, she instructed them and assigned them roles for the final presentation [field notes, 22/05/10]. Hence, because of her controlling nature, the rest of the group members did not get a chance to contribute. This made me realize that group management is an essential component of collaborative activity. Balance of power seemed to be a big problem where not all the group members were given an equal voice. Consequently, this could also be one of reasons why their final group presentation lacked cohesiveness. The story was perhaps very clear in the girls' mind but was not made that explicit for the other group members. After the group presentation, I could see that some of the students were baffled and hence had puzzled expressions on their faces, as per one of the student comments:

"I am confused – what are they trying to show in their role play?" [field notes, 22/05/10].

At this point I recognized my limitation as a teacher facilitating three groups simultaneously in a classroom. I realized that I should have given them explicit instructions about how to create a role play to ensure that all students were on the same wave length as some were doing a role play for the first time and therefore were not too sure of what was expected out of them. Furthermore, because of the confusion created, I ended up telling the students what the story was about. Retrospectively, by not giving the students the opportunity to explore this activity and make meaning out of it by themselves, my role as a teacher shifted from a facilitator to presenter of information which opposes the notion of student-centeredness. Consequently, I was falling back on the teacher-centred approach.

The third group was a mixed gender group. Due to limited time available, the group had divided the task; girls took responsibility of creating the story and the boys decided to create props required for the play. However, in both cases, they facilitated each other by contributing their ideas. They skilfully made full use of limited resources available and came up with creative ideas to construct props. Although this group divided the task among them and worked independently, they were still interdependent on each other as they needed to come together as a group in order to present their role play to the class. In other words positive interdependence existed where efforts of each group member was required to achieve the group goal.

Pupil Perspectives based on Student Journal:

My findings indicate that the role play served as an interesting and fun activity for the students as was reflected in their journals. In terms of learning, the enactments demonstrated that the students learnt a lot, both in terms of content as well as in terms of skills. They even presented in front of the class that consequently enhanced their self confidence as Student B stated:

“the role play was useful as it was easy to get the point through and show our talent”
[Student B journal, 22/05/10]

Moreover, it gave the shy students encouragement and a chance to participate as all well. The students wrote:

“the role play was the best part of today’s class as we all had fun in creating a play...”
[Student J journal, 22/05/10]

At another occasion Student H said

“the role play was very interesting and informative. It explained us ways to present the stories through words and action” [Student H journal, 22/05/10]

Enacting stories helped the students to better understand the moral of the stories as they were actively involved in the process of creating, internalizing and presenting it. This is evident from their comments:

“it was a kind of entertainment for us and it really helped us to understand each story and it’s moral” [Student L journal, 22/05/10]

“I enjoyed working in my group because everyone had great ideas which greatly contributed to the success of our role-play” [Student A journal, 22/05/10]

This comment, in particular, emphasised on positive interdependence and individual accountability of the students - two basic elements of a cooperative learning group.

Analysis:

During this activity, students self-selected groups mostly based on friendship that also resulted in two distinct gender groups. Overall, I observed that the students were very much engaged in this process of creating a role play. In most cases, not only did it require them to take ownership of their work but also enabled them to learn some social skills by working together as a group. It gave them the space and the opportunity to create something new without any interference from the teacher.

Also, in order to achieve the group purpose the students were seen as highly dependent on each other. By talking, discussing and synthesizing information, they were constructing knowledge together. The enactment enabled them to negotiate and reflect on the meaning of the text. Moreover, it gave every student a chance to actively participate and hence build confidence. Although their written comments were very positive, my observations and reflections proved that difficulties can also arise in this kind of a hands-on activity. I noticed that students did not demonstrate a strong command on the subject matter. In other words, the moral of the story (in the case of Group B) was not well understood or clearly expressed to the rest of the class. Perhaps, this was because of a lack of understanding of the task. Simply asking students to discuss a topic is not very productive. This made me realise that the role of a teacher goes beyond simply observing the students sharing their ideas with each other. The teacher must intervene to guide students for effective co-construction of critical knowledge.

Stepping back and reflecting on the group formation, I realized that group composition could play a vital role in the success of a group. Perhaps, it may not always be a good idea to have friendship groups as Dean (2000, p94) postulates that “friendship groups are not always the most successful groups and do not give children the opportunity to work with a variety of different people”. Moreover, these friendship groups also led to two distinct gender groups. Galton and Patrick (1990, p82) found that “single sex pairs and groups tended to do little less than mixed pairs and groups...” Thus for my next class, I kept this in mind and grouped students by random selection.

3. Think-Pair Share conducted on 31st May 2010

Description of Task:-

The students were divided into pairs where each student was paired with the person sitting next to him/her. This form of random assignment promotes the idea that everyone is expected to work with everyone else at some point in time. The majority of students were not at all happy to be grouped in such a way as they were not paired with their friends. Moreover, it seemed like they also got uncomfortable when they ended up being paired with the opposite gender.

Teachers' Perspective based on Field Notes and Reflections:

From my observation and field notes taken on that day (31/05/10), I felt that the think-pair-share did not work very well. Most of the students did not seem to be happy with their pairs perhaps, because they were not paired with someone of their choice as one of the students explicitly stated:

“...I didn't like working with my partner as we were not good friends” [Student M journal, 31/05/10]

Why do students prefer working with their friends? This statement served as a critical incident which made me think right away that what is it about the classroom ethos that prevents the students to work with each other and how can I, as a reflective practitioner, create a surrounding that fosters a comfortable environment that helps students to get to know and interact with one another.

Mixed gender grouping could also be one of the reasons that did not allow the pairs to be comfortable with each other and hence caused hesitation in discussing ideas openly. The students belong to a cultural context where they do not always feel comfortable in interacting and working with people of the opposite gender. As evidence, Student Y noted:

“I didn't enjoy working with my partner” [field notes, Student Y Journal, 31/05/10]

I was walking around in class observing students' journal writing process, I noticed this comment and inquired about it:

Teacher: Why didn't you enjoy working with your partner?

Student Y: I just didn't...

Teacher: Okay! Who would you prefer to work with then?

Student Y: Student S, Student T and Student V [field notes, 31/05/10]

The fact that she took names of three girls – Student S and Student T who were her friends from school and Student V, whom, I recall, had previously worked with her in a group activity, compelled me to investigate whether she preferred working with people she knew or she was comfortable working with people from the same gender. Inquiring about her background, I found that she belonged to an all girls school. Based on this information, it is safe to conclude that Student Y was uncomfortable in mix gender group work. This shows that gender plays a vital role in pairing students in class.

Pupil Perspectives based on Student Journal:

Contrary to my perspective that this activity did not work very well, students' reflective journals showed that most of the students enjoyed pair work. For example, Student N concluded:

"...pair work was fun as we got to discuss and share our ideas which made it easier for us as well as helped me to learn about the perspective of the other person" [Student N journal, 31/05/10]

Additionally, another student mentioned:

"My pair work was quite interesting as I was paired with a friend of mine. We worked well together and came up with good ideas" [Student G journal, 31/05/10]

Nevertheless, the written comments of a handful of students indicated that they did not seem to benefit much from the activity as they were not able to collaborate with their partners very well.

The pattern that emerged from their responses from the student journal revealed that students who were paired with their friends – mostly of the same gender, enjoyed the activity and benefitted from working with their partner but those who were not paired with their friends, were not very motivated to work. Student Q expressed his opinion:

“Working in pairs was (very boring) that was mainly because it wasted time and I was put into a pair with my brother...” [Student Q journal, 31/05/10]

Another strong comment came from one of the boys who was not very comfortable in working in pairs with his partner. Although she had made a few attempts to share and discuss her ideas with him, he was very hesitant to respond to her. After class, when I verbally got feedback from the students, he vocalized that he would have preferred working in a group rather than in a pair, as there are more members to generate and share ideas with.

Analysis:

Students were paired by random selection with the person sitting next to them. In this way the students were provided with the opportunity to “discover what anyone and everyone in their class can contribute to their learning” as every student is a valuable member of the class (Sharan & Sharan, 1992, p44). From the findings, there seemed to be mixed responses to pair work. It can be inferred that while some students enjoyed and benefitted from pair work, others found it ineffective due to incompatible working partners. For some, working with the opposite gender made them uncomfortable whilst for others not working with their friends was challenging as forming a working relationship takes time and practice. As a reflective practitioner and an action researcher, I contemplated student comments in-depth and realized that pairing students is a complicated process that takes place over time and requires meticulous structuring. Hence, for my future classes, this was something to bear in mind.

Overall Analysis

In order to continuously gauge my students' learning during the course of my research, I examined illustrations and drawings made by the students during different sessions. By analysing both the process of collaboration - through self reflection and students' journal - and their product in the form of student work, it seemed that student learning took place in terms on acquisition of subject matter and development of skills. Furthermore, towards the end of the research, all the students were asked to write down what they had learnt from collaborative methods of learning. In addition to verbal comments observed in class and written comments stated in their journals, the students made posters to express their views and opinions about these classes, some of which are captured in photographs taken that day. These photographs helped to triangulate the research by providing evidence of student perceptions in addition to teacher's field notes and student journals. According to Hopkins (2002, p115-116), "photographs...are useful ways or recording critical incidents in the classrooms or of illustrating particular teaching episodes". Thus, photographs provide some physical evidence of actual classroom activity.

The overall student comments suggest that, by working in groups the students had the opportunity to dialogue, discuss and share their ideas together; student learning took place both in terms of content knowledge and acquisition of skills. Non-verbal communication, such as the students' laughing and using humour, suggests that they enjoyed these classes. Moreover, by actively exchanging ideas and discussing various points of view within small groups, students showed glimpses of interest and engagement with their learning. Similarly, having a Debate and using Think-Pair-Share as a learning technique, allowed them to interact and negotiate with each other in order to achieve the desired group goal. They became willing to accept a range of perspectives and learnt to appreciate everyone's ideas. In addition, by presenting in front of the class on various occasions, all the students – especially the shy and reserved students – gained confidence. Their increased level of participation and engagement in activities demonstrated this change.

Thus, overall, collaborative methods gave students the opportunity to engage with their learning. Since the students were mostly taught by a student-centred approach for perhaps the first time in this grade at the REC, they not only had fun learning but were also seen as taking responsibility of their own learning by constructing knowledge that was evident from their group work and presentation given at the end of their respective activities. Through collaborative interaction, students became active participants in their learning.

DISCUSSION AND CONCLUSION

The main purpose of this research study was to find out, how students respond to collaborative methods of learning in an RE class. However, given the limited time frame to conduct this study, this small scale action research focused on specific learning techniques used in three classes that included Debate, Role Play and Think-Pair-Share. Shifting from a teacher-centred approach of learning that mostly dominates in Pakistan's education system, to a student centred approach, the aim and purpose of this research was to investigate and examine how students respond to learning in this manner.

Looking back at the review of literature and reflecting on my own teaching and learning, I believe that students acquired content knowledge as well as developed skills when they constructed knowledge together, as is evident from the findings section. The idea of collaboration stems from the notion of social constructivism where the underpinning assumption is that knowledge is constructed socially by communities of individuals (MacGregor, 1992). Group work, role play and think-pair-share for example, are considered to be some of the powerful teaching strategies where students are given the opportunity to represent information in a manner that they find 'personally meaningful' (Carnell & Lodge, 2002; Cooper & McIntyre, 1996). Additionally, research states that students gain knowledge and retain more information when they work collaboratively as Udavri-Solner and Kluth (2008, p20) posit "...students learn and retain more when they have agency in the process and have opportunities to speak, listen, share, interact, reflect and move".

Learning from this process of researching with RE students was illuminating for me as it enabled me to gain a better and deeper understanding of two important aspects of student-centred learning; student talk in construction of knowledge and my role of a teacher as a facilitator.

Student Talk:

This research has led me to realize the importance and value of student talk in how students interact and create knowledge together. Golub (1988, p12) points out that "collaborative learning has its main feature a structure that allows for student talk: students are supposed to talk with each other.... and it is in this talking that much of the learning occurs". In all the activities conducted during this research, the students were engaged in the process of talking, discussing and analysing ideas. According to Sharan and Sharan (1992, p23) "children's talk makes a significant contribution to learning. Talk is also a way by which students explore their ideas, clarify to themselves and to one another, expand and modify them and finally make them their own". Additionally, Vygotsky (1978, cited in Watkins et.al. 2007, p89) postulates "it is that new knowledge and ideas develop in a context of dialogue, and they appear first 'out there' in the extra-mental plane". By creating an environment where the

students were provided with an opportunity to discuss, describe, argue and explain, the students took responsibility of their own learning and developed confidence as was evident from their work. There was minimal teacher talk and the students were free to express their opinion and ideas in any form (writing, drawing, presenting, etc.). In view of this, Wells (1987 cited in Dunne and Bennett 1990, p8) claims "...learning through talk... children are active constructors of their own knowledge".

Teacher as a facilitator:

Teachers play a critical role in implementing a collaborative learning pedagogy in the classroom where the aim is to promote interactions among the students and engage them in the learning process (Gillies, 2007). Whilst implementing a student-centred approach to learning, I recognized that my role as a teacher had changed. In contrast to the traditional method of teaching where the teacher serves as the instructor, in a student-centred approach, the teacher's role was that of a facilitator. Rather than looking up to me for the correct answer, the students were involved in the process of dialoguing and discussing with their peers in order to reach a solution. In other words, there was a shift of power from the 'expert teacher' to the 'student learner' where the knowledge was constructed by the students rather than instructed by the teacher (Rogers, 1983). My role was therefore viewed as a facilitator rather than a tutor where I monitored and regulated interaction within the groups as opposed to telling them what to do. By promoting student-to-student interaction and allowing them to exchange ideas with each other, the research findings demonstrated that students were actively engaged in the process of creating knowledge. However, it did lead to some problems. For example, the role play did not work well with all the groups. Furthermore, gender seemed to be a problem when pairing students during the think-pair-share activity. Nonetheless, having informal conversations with them on various occasions made the students feel comfortable and encouraged them to freely share their opinions with me. At this point, it is essential to remind the reader that my role was not only restricted to being a teacher in the class; rather I performed the dual role of being a teacher and an action researcher. Serving in this capacity posed many limitations and challenges for me.

Firstly, I found it challenging to step out of the centre and engage the students in group work. Since this was the first time I was using these teaching methods in an RE class in Pakistan, engaging students in group activities was challenging. Furthermore, as a teacher-researcher it became complicated for me to simultaneously monitor as well as facilitate students in the class, as collaboration was something that was new for the students too.

Secondly, the teaching time available for every class served as a limitation. Using collaborating learning techniques in class requires time. Striking a balance between content and pedagogy created tension between the process of student learning and the syllabus that had to be covered. Also, due to limited time available, I, as a teacher-researcher did not get a chance to evaluate contributions made by every student in group work.

Lastly, I believe that group work is not an easy option for the teacher or for the students. In undertaking group work, it was challenging for me to form groups in a manner where all students have equal opportunity to participate and feel included. Guiding and designing group work takes time and comes with practice. Every collaborative activity works differently with a diverse mix of students as the way any activity unfolds is quite unpredictable, both for the teacher and the students. Thus, using collaborative activities in class could be rewarding but, like any other teaching strategy, it has its challenges. Smith and MacGregor conclude (1992, p29):

“Ultimately, collaborative classrooms stimulate both students and teachers. In the most authentic of ways, collaborative learning process models what it means to question, learn and understand in concert with others. Learning collaboratively demands responsibility, persistence and sensitivity but the result can be a community of learners in which everyone is welcome to join, participate and grow”

In conclusion, this research provided me the opportunity to explore some of the collaborative learning techniques in my class. My primary aim was to experiment with different methods of collaborative learning. From the results and analysis I found debate, role play and pair work to be beneficial in most cases. The hypothesis focussed on student responses, content and social skills to the experimental collaborative methods. Responses to these were greatly positive as evident from the comments in the student journals. However this method of data collection also has its limitations. There is a possibility that the students may be a victim of the ‘Hawthorne Effect’ where efficiency and performance can change solely because the students are being observed (Brussee, 2004).

Other challenges included lack of participation, dominating roles, lack of understanding of the task at hand and mixed gender issues arising in group settings. In this setting, the data appeared to support the hypothesis. However, further research is needed in order to draw conclusions of collaborative learning methods in an RE class in Karachi, Pakistan. This could include looking further into the variable factors of this research such as data collection methods, different age groups and different sample sizes.

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**A Survey of the Effects of National University Entrance
Examination on the Aims of Secondary Education in Iran**

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Abstract

The secondary education is the evolution and transition phase from: childhood to youth and adolescence; dependence to independence; general education to higher education; school to work and family to social life. So, different aims and potentials such as employability, further education, livability, and management ability are considered. The University entrance exam named "Conquer" is the only passing way for further education in Iran. The question is to what extent Conquer has influenced secondary education by focusing on higher education. The aim is to deeply understand the effects of Conquer on the objectives of curriculum in secondary education. The social statistics and samples were selected from people associated with "Conquer" directly or indirectly such as students, teachers, university students and educational experts in Tehran Province. Data was collected through questionnaire. 629 questionnaires were collected from the randomly selected sample. The result showed that The "Conquer" is the most important interest for parents, students, teachers and school managers in secondary education. This attention causes ignorance to the other aims such as employability, livability and management ability. In fact, the aim of entering university and achieving further education strongly influences the other goals. Therefore, students who cannot pass the "Conquer" have no other life skills and feel a sense of failure. The suggestions are: first, all the aims of secondary education should be addressed. Second, all abilities required for achieving the aims should be considered as university entrance criteria.

Key Words: Secondary Education, Aim, Curriculum, Entrance Examination, Conquer, Further Education, University

Introduction

The secondary education especially in senior section (ages 15-18) is a very important course due to its role in shaping the characteristics of young people in this age. Students step into adolescence from youth and experience maturity. His/her interest to independency and self decision making appears and they desire to be autonomous and self follower. In fact, the secondary course is accompanied with the age of evolution in human life in which huge changes happen in youth characteristics from socially and individually aspects. (Mosapour, 2003). Graduates of this course face three main individual and social fields including preparing for independent life, preparing for work as well as for further and higher education. As Jean-Louis Sarbib, the Senior Vice President of the World Bank's Human Development Network says:

"Secondary education is the highway between primary schooling, tertiary education, and the labor market. Its ability to connect the different destinations and to take young people where they want to go in life is crucial" (<http://www.worldbank.org>, 2005).

Consequently, there are different capabilities for secondary education as its specific goals. Collin Ball defined four capabilities for secondary education including academic, employability, life skills, and wisdom capability (Mosapour,

2003). It means that firstly, according to the rapidly changing world especially in technology and knowledge, it is necessary to prepare youth for continuing education and enable them to adapt themselves with the changes. Secondly, secondary education should have the capability of preparing students for work and employment, because of society needs to skilled workforce and the final destination of all students is work and employment. Thus, transition from school to work becomes a very important aspect of secondary education curriculum in development countries (Finch & Crunkilton, 1998). Thirdly, complexity of social life and citizenship in the 21st century, make necessary for youth to learn life skills. Finally, students should be able to apply their skills and knowledge in planning for life becoming strong and patient in facing difficulties and solving their problems wisely. Therefore, the secondary education should have the wisdom capability.

As a result, it is necessary for secondary education to provide these capabilities for students as its aims. Here, there is a questions that why the secondary education of Iran cannot provide these capabilities for students? Which factors cause failure and prevents achieving the aims of the curriculum? In this paper we attempt to answer these questions through investigating the influence of national entrance examination on the aims of secondary education.

Statement of the problem

For more than forty years the national entrance examination (named Conquer) is the only university acceptance criteria for secondary graduates in Iran. As mentioned before, the aim of secondary education is not only to prepare students for higher education. Learning life skills, employability, transition to work, strengthening thinking and innovation, identification of aptitude and developing it with respect to social needs, are the other main aims of this course. But, it seems that Conquer makes achieving secondary education aims difficult. The high demand for university education in Iran have caused preparation for university entrance to become the main and only goal of secondary education.

Consequently, it seems that the interest of students and their parents to win in the big contest of Conquer as well as the process, method and content of this examination causes the high school and pre-university centers converting from the main aims of secondary education, to concentrating only on preparing students for Conquer. In this regard, the best high schools are considered the ones that enable more students to pass Conquer and enter university. On the other hand, the official curriculum of secondary education especially the teaching- learning methods has been shaped by concentrating on this aim, as well as preventing achievement of the other aims. So, the main problem of this research is the method of Conquer as the only entrance pathway for entering university. In other words, this research is seeking to investigate the effect of Conquer on the curriculum of secondary education. By using the results of this research, this paper will examine the negative effects of Conquer on the aims of secondary education along with the review of the transition process between secondary education and higher education.

The aims and questions of the research

The main aim of the research is: identifying the effects of Conquer on the secondary education curriculum. The main question of the research according to the aim is: what are the effects of Conquer on the secondary education curriculum?

The aim and questions of the paper:

According to the main aim and question of the research based on curriculum, this paper focuses on the aims of secondary education as an element of curriculum. Therefore, the main aim and question of this paper are:

Aim: Identifying the effects of the Conquer on special aims of secondary education.

Question: What are the effects of conducting Conquer on the aims of secondary education?

Research method

This is an applied research with respect to the goal, and a post-facto of descriptive research considering the collection of data. Questionnaire was selected as a tool for gathering data from the relevant sources. Exploring the attitudes of relevant people to high schools, universities and curriculum developers in a real life environment was necessary. So, students of pre-university centers, high school teachers, school managers, curriculum developers, educational experts and university students of the first year in the province of Tehran, formed the statistics population of the research. Eight educational areas were selected randomly as the sample, from 20 educational areas of the Tehran Province. According to the Neaman method, the sample for pre-university school students was equal to 405 persons shown in Table1, below.

Table1: Sample of pre university school students

Discipline	area gender	1	6	7	8	9	11	12	19	Total students
Math-Physics	F	18	18	7	14	10	10	10	5	92
	M	18	27	7	16	7	12	11	5	103
experimental sciences	F	15	13	6	13	9	5	9	5	75
	M	5	5	5	5	5	5	5	5	40
Human sciences	F	8	5	5	8	8	5	8	8	55
	M	5	5	5	5	5	5	5	5	40
Total		69	73	35	61	44	42	48	33	405

The other selected samples have been shown in Table 2 as follows:

Table2: The other population sample

No.	Samples	Population
1	First year university students	100
2	high school teachers in 8 areas	40
3	Pre university school students	40
4	Educational experts at province level	10
5	Educational experts at national level	20
	Total sample population	210

Totally, the population of samples was 615 persons in different groups. Questionnaires were delivered and collected face to face. More questionnaires were delivered in order to collect appropriate number after deleting those of non responded or not validated. Therefore, totally, 629 questionnaires were properly collected which are shown in Table 3.

Table3: collected questionnaires from respondents

Percent	Total Freq.	Respondents			No.
		%	Freq.	Discipline	
59.1	372	48.9	182	Math-physic	Students 1
		24.5	91	Experimental sciences	
		22.8	85	Human sciences	
		3.8	14	No respond	
7	44	School managers			2
9.7	61	School teachers			3
16.4	103	First year university students			4
7.8	49	Educational experts			5
100	629	Total			

The formation of secondary education and its aims in Iran

Secondary education in Iran began to form since 1911 when the Constitution Act of education was approved. Determination of the aims of education was one of the main concerns since the formation of secondary education (Safi, 1994, Goya, 1999). In initiative formation of secondary schools, there were discussions that the social needs should be considered as one of the main aims in secondary curriculum. In addition, developing the different aptitude of students as well as preparing them for further education were considered as one of the main aims of secondary education (Goya, 1999). Goya (1999) investigated the different secondary education planning since the institution of Daralfonoon and concluded that:

“Although there were no approved aims, at the initial implementation of secondary education, in fact, two aims were followed in action: a) preparing students for employment in the administrative system of Bureaucracy at intermediate level, b) preparing students for further education in college and university in order to provide specialists at high level”. Goya (1999, p 70)

Therefore, secondary education was expanded and graduates were increased which resulted in the unemployment of graduates because of full employment capacity of bureaucracy system and limited capacity of universities for acceptance of students. Although, secondary education should pay attention to all three aims of preparing students for entering society, responding to labor market needs and further education, but the last aim influenced the two others because of some social, cultural and economic reasons. In fact, most schools have attempted to prepare students just for entering university as the only aim. This, provided a failing sense in response to social and labor market needs for secondary curriculum developers. This failing sense has pushed the educators several times towards reforming the secondary education system focusing on achieving the two other aims, but after a short time, the aim of entering university influenced the other aims again and they were ignored which resulted in failing of the reform. Comparison between the reform of the education system in two decades, 1972 and 1988, shows that there are similar reasons for changing. Ministry of higher education in a report to fifth conference of evaluation of educational revolution in 1972 emphasizes that:

"Most part of secondary education has formed in a way which can be supposed that there is no aim except sending students to university. For the future, the only way is to change the educational system in a way that at the end of the secondary education, a significant part of graduates could enter the labor market with regard to their skills and abilities" (Goya, 1999 p 73).

After nearly two decades and in spite of huge events happening in Iran such as the Islamic revolution and change in the political regime which provided huge alterations, the same reasons for reforming the education system still remain. It is interesting that the council of fundamental change of educational system in analyzing the problems of education system in Iran reported that:

"The main aim of secondary education even in vocational education is going to university. The disciplines of experimental sciences, mathematics, culture and literature, and economy have no aim except university. Even in applied disciplines which aim to prepare students for work, due to the fact that the society has no appropriate value for work, students have no interest to choose these disciplines and think of going to university" (Overview of education system in R.I of Iran, 1988 p 25).

As it is shown, the two reports are very similar and both emphasize that the aim of going to university influences the secondary education in spite of the decision of the policy makers and educators on meeting the needs of labor market and preparing students, who cannot get accepted into universities, for workplace. This is a cycle that repeated after every reform in the education system. Although the recent reformed system established a new educational applied path named Kar-Danesh (work-knowledge) in 1993, which emphasized on workplace needs and preparation of students for work after graduation, the social force obliged the policy makers to open the system for more and more students entering university and established new universities and increased the capacity of accepting students. Now again, it seems the same reason for reforming secondary education exists.

Therefore, again and again, the aim of educating in further education influenced the other main aims of secondary education and secondary education failed in achieving the aims of providing students for life and for workforce which are very important for students and society as means of having a good life. So, here raises a question that why does this phenomena happen and what is the main factor of creating this problem. This paper attempts to answer this question based on the result of the research we have done. It is necessary to talk about the background of the issue before presenting the results of the research.

Background

Conquer or national entrance examination of university has a long background in Iran. The first Conquer was held in 1938 when the number of applicants for entering universities became more than the seats available, in some courses such as medical, law and engineering (Kardan, 1972). From then, the entrance examination of university named Conquer was held every year and found a high position in secondary and higher education as criteria for accepting high school graduates in universities. The method of conducting Conquer has been changed many times since its establishment.

The first country wide examination was conducted in summer 1969. Due to increasing pupils finishing high school and eager to continue further education, the number of participants

increased by three times which provided some problems. The trend of taking part in Conquer dramatically increased during the next two decades up to 10 times more than in 1970.

During the three decades after Islamic revolution of Iran, the number of participants of Conquer dramatically increased during 1982-2002. However, the number of entrants decreased during the 2000s because of decreasing population rate which in turn decreased the student population. (table 4) . Although the participant declined, the capacity of universities and higher education institutes increased, as well as the demand of students (especially girls) and their parents for entering university also increased dramatically. In the last Conquer held in summer 2011, the rate of female participation was 66 percent in comparison with 34 percent for male.

Table 4: the trend of growing rate of entrants of Conquer during three decades

Year school in the beginning of decade	The number of entrants	The growth rate based on last decade	The average of annual rate
1981	124387	0.0	0.0
1991	912251	633.4	63.3
2001	1458000	59.8	6.0
2011	1132877	-22.3	-2.2

Every year, during the time Conquer is held, most newspapers, magazines and general media discuss about this event, but searching the literature in the scientific databases shows very few researches about the influence of Conquer on the aims of secondary education. In a seminar held in Isfahan in 2002, some papers were presented in terms of methods and problems of university entrance examinations. These papers mostly pointed out the negative influence of Conquer on secondary education. Goya and Zanganeh (1992) in their discussion indicated some disadvantages of Conquer. They warned about the crisis effects of Conquer on society and declared the problems and suggested a model for improving the national university entrance examination. Jafarpour (2002) analyzed the English language examination in Conquer with regards to aims and questions. He found many problems in this examination and concluded that it assessed only students' memory. He suggested some solutions for improving the Assessment Organization. Another research (Telgini et al, 2002) surveyed the attitudes of pre-university students towards Conquer and concluded that importance of learning is decreasing gradually. Students mostly interested to study only for passing the Conquer and acceptance in a university. Consequently, education and teaching-learning method in classroom is obliged to follow the Conquer requirements. In the forth seminar of mathematics in Iran, Kazemi (2000) as a mathematics teacher discussed that the effect of Conquer on the attitudes of teachers and students caused weakness of mathematics learning in the last year of secondary education and resulted in converting student from the school lessons and books and decreased the interest of students to mathematics. Another research was conducted as a dissertation in York University in England by an Iranian student (Pakatchi, 2003) about the effect of Conquer on the teaching – learning process in biology lesson in secondary education of Iran. The result was that teachers and students focused on doing multi choice testing for Conquer which converted education from its main aims. These findings show that to succeed in Conquer is a significant concern for teachers and parents as a main criteria for successful education as well means of evaluating successful teachers and schools.

In addition, Conquer provided some psychological effect on students and their family. Yarmohammadian et al (2005) investigated the effect of Conquer on the psychological and personality situation of young people who could enter and not enter university and their parents. They showed that there is a significant difference between the two groups from the

aspects of positive and negative emotion as well as psychological stress. This result has been confirmed by another research (Motamedishalamzari, 2006) which investigated the effect of Conquer on general health, self-esteem and sign of mental disorders in young people who could not enter university and compared it with students who got accepted at university as well as students not yet participated in Conquer. The result indicated that the general health of students who failed to enter university is significantly lower than two other groups. Sobhani and Shahidi (2007) reviewed the papers issued in media and made an effort to recognize the negative effect of Conquer on secondary education. They concluded that Conquer is a social problem which is a threat to innovation and mental health of young people and attracted concerns and attention of policy and decision makers towards researching on this important issue.

The review of the background shows that in spite of the long history of Conquer in Iran, few researches have been conducted in this issue. Most studies and discussions carried out are based on the view of experts and personal experiences and less on broad research. However, these views indicate the general attitudes towards Conquer as a social and educational problem which has affected the secondary education aims and diverted them from the real pathway and affected deep and practical learning.

Results

As mentioned before, this paper aims to indicate the effects of Conquer on the aims of secondary education. Therefore the key question is: what negative effects has Conquer had on the secondary education aims. In response to this question, first, we discussed in literature about the aims and role of secondary education in which four potentials of employability, ability of further study, livability, and management ability as the main aims of secondary education are considered. In fact, these potentials are the sources of determining aims for secondary education. Therefore, for answering the research questions, second, we summarized the aims of secondary education of Iran confirmed legally by the supreme council of education in four items as below:

1. strengthen the spirit of truth, study, research, thinking, criticism and innovations in students
2. deep recognition of the aptitudes and interest of students in order to grow and orient them to their aptitudes considering the country and local needs
3. indicating the worth of work to secondary students and preparing them for employment
4. providing the background of needed training and educating for continuing study in higher education

These aims show that secondary education is expected to manage its educational activities focusing on four subjects. First, increasing the ability of thinking, second, recognizing the aptitudes and interest of students, third, preparing student for work and fourth, preparing students for continuing their study for higher education.

To understand the extent to which these aims are affected by Conquer in the real environment of high schools in Iran, A questionnaire with 35 questions based on research questions were provided and delivered to the respondents from the social population of research which was described before in the research method. Totally, 629 questionnaires were completed which is shown in table 3 (p 6).

The effects of Conquer on the Aim 1

In response to the first question about assessing the effect of Conquer on the first aim, five (1-5) items were provided in the questionnaire which asked respondents to choose one of the answers according to Likert method in 6 range of agreement from 0 to 5. The data collected from the respondents about the effects of Conquer on the first aim has been shown in Table 5 which indicates the extent of respondents' agreement with the relevant items. Analysis of the data in Table 5 shows that the first aim was not achieved by high school activities from the point of view of most students, teachers and educators. In other words, providing opportunities for strengthening students in terms of spirit of truth, study, critical thinking and innovation has failed and actually has converted to the aim of preparing students for succeeding in Conquer. So, 50.2 percent of respondents strongly believed that Conquer is the main obstacle for achieving the first aim, while 7.5 percent strongly disagreed with this notion.

Table 5 : The attitudes of respondents to the effect of Conquer on the aim 1

The effect of Conquer on aim 1														
Very high 5		High up 4		some 3		Low 2		Very low 1		No 0		No answer		Number of Items
Freque ncy	per cent	fre quency	per cent	fre quency	per cent	fre quency	per cent	fre quency	Per cent	fre quency	per cent	fre quency	Per cent	
245	39	168	26.7	157	25	20	3.2	22	3.5	12	1.9	5	0.8	1
198	31.5	166	26.4	134	21.3	68	10.8	33	5.2	25	4	5	0.8	2
48	7.6	60	9.5	103	16.4	89	14.1	153	24.3	149	23.7	27	4.3	3
153	24.3	159	25.3	176	28	62	9.9	53	8.4	22	3.5	6	0.6	4
190	30.2	192	30.5	115	18.3	38	6	48	7.6	29	4.6	17	2.7	5
26.5		23.7		21.8		8.8		9.8		7.5		1.8		Mean percent

The effects of Conquer on the Aim 2

In response to the second question on assessing the effect of Conquer on the second aim, seven items (6-12) were provided in the questionnaire which has been shown in table 6. These items focused on assessing the key conceptions of the aim 2 as "to recognize deeply the aptitudes and interest of students in order to grow and orient them to their aptitudes considering the country and local needs."

Analysis of the data in Table 6 shows that 61.1 percent of respondents believed that the second aim was not achieved because of the influence of Conquer, while, 12 percent declared that Conquer has no effect on achieving the second aim. In other words, most respondents believed that there are no opportunities for students to access their teachers to consult for choosing their field of study. So, it can be concluded that Conquer is the main obstacle for achieving the second aim from the point of view of most respondents.

Table 6: The attitudes of respondents to the effect of Conquer on the aim 2

The effect of Conquer on aim 2							
Very high 5	High up 4	some 3	Low 2	Very low 1	No 0	No answer	Number of Items

Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
133	21.1	115	18.3	164	26.1	76	12.1	72	11.4	53	16	16	3.5	6	
174	27.7	165	26.2	129	20.5	66	10.5	50	7.9	40	6.4	5	0.8	7	
168	26.7	144	22.9	136	21.6	73	11.6	51	8.1	48	7.6	9	1.4	8	
109	17.3	113	18	147	23.4	113	18.1	69	11	71	11.3	6	1	9	
61	9.7	100	15.9	154	24.5	99	15.7	118	18.8	80	12.7	17	2.7	10	
178	28.3	172	27.3	126	20	63	10	38	6	32	5.1	20	3.2	11	
45	7.2	64	10.2	94	14.9	94	14.9	155	24.6	155	24.6	22	3.5	12	
19.7		19.8		21.6		13.3		12.5		12		2.3		Mean	

The effects of Conquer on the Aim 3

In response to the third question about assessing the effect of Conquer on the third aim, eleven items (13-23) were provided in the questionnaire which has been shown in table 7. These items focused on assessing the key concepts of the third aim as “indicating the worth of work to secondary students and preparing them for employment”.

The analysis of the data in table 7 indicates that 66.7percent of respondents believed that the third aim of secondary education cannot be achieved because of the limitations provided by Conquer, while 8.9 percent believed that aim 3 is not affected by Conquer. In detail, 60.7 percent strongly and totally 79.4 percent, believed that the stress of Conquer pressing students, their parents and school faculty, leads to ignorance of the third aim and there are no opportunities for students to get familiar with the value of work and getting prepared for work after graduation. So, it can be concluded that the pressure of Conquer causes the failure to achieve the aim of employability after secondary education.

Table 7: The attitudes of respondents to the effect of Conquer on the aim 3

The effect of Conquer on aim 3														
Very high 5		High up 4		some 3		Low 2		Very low 1		No 0		No answer		Number of Items
frequency	percentage	frequency	percentage	frequency	percentage	frequency	percentage	frequency	percentage	frequency	percentage	frequency	percentage	
207	32.9	170	27	127	20.2	55	8.7	36	5.7	23	3.7	11	1.7	13
164	26.1	171	27.2	136	21.6	68	10.8	52	8.3	18	2.9	20	3.2	14
138	21.9	145	23.1	163	25.9	75	11.9	50	7.9	35	5.6	24	3.7	15
66	10.5	78	12.5	71	11.4	69	11	150	24.1	166	26.7	22	3.5	16
260	41.3	159	25.3	101	16.1	48	7.6	24	3.8	19	3	18	2.9	17
172	27.3	174	27.7	146	23.2	54	8.6	33	5.2	22	3.5	28	3.5	18
211	33.5	176	28	108	17.2	46	7.3	43	6.8	17	2.7	28	4.5	19
64	10.2	80	12.7	96	15.3	83	13.2	143	22.7	125	19.9	38	6	20
220	35	178	28.3	113	18	46	3.7	23	3.7	23	3.7	26	4.1	21
218	34.7	199	31.6	110	17.5	37	5.9	26	4.1	22	3.5	17	2.7	22
39	6.2	48	7.6	110	17.5	103	16.4	151	24	145	23.1	33	5.2	23
25.4		22.8		18.5		9.6		10.6		8.9		3.7		Mean percent

The effects of Conquer on the Aim 4

In response to the fourth question about assessing the effect of Conquer on the fourth aim, twelve items (24-35) were provided in the questionnaire which has been shown in table 8.

These items focused on assessing the key concepts of aim 4 under the importance of higher education, encouragement of student by their parents and school managers, providing extra space for Conquer preparation, allocation of special time for preparing student for attending in Conquer.

The analysis of data in table 8 shows that 64.9 of respondents believed that most teachers and high school principals mention the importance of Conquer and studying in university as a main way for progress in life. The data collected from items 25, 26 and 27 shows that 68.6 percent believe that parents and school principal always encourage students to allocate most of their time for preparing themselves for Conquer and to get acceptance from a university. Also, 59.3 percent declare that a part of students' time in classrooms is spent for exercising tests and the skills of passing Conquer. So, students spend most of their time to prepare for passing Conquer successfully and registering in a university. In this case, it can be concluded that Conquer influences positively and helps the achievement of the forth aim as ability of further study.

Table 8: The attitudes of respondents to the effect of Conquer on the aim 4

The effect of Conquer on aim 4															Number of Items
Very high 5		High up 4		some 3		Low 2		Very low 1		No 0		No answer			
frequency	percent	frequency	percent	frequency	percent	frequency	percent	frequency	Percent	frequency	percent	frequency	Percent		
231	36.7	183	29.1	109	17.3	25	4	30	4.8	38	6	13	2.1	24	
38	60.9	165	26.2	47	5.7	17	2.7	3	0.5	5	0.8	9	1.4	25	
195	31	154	24.5	153	24.3	50	7.9	23	3.7	36	5.7	18	2.9	26	
217	34.5	181	28.8	130	20.7	33	5.2	30	4.8	19	3	19	3	27	
112	17.8	128	20.3	144	22.9	63	10	82	13	83	13.2	17	2.7	28	
73	11.6	78	12.8	167	26.6	90	14.3	96	15.3	81	12.9	35	5.6	29	
58	9.2	87	13.8	129	20.5	66	10.5	104	16.5	160	25.4	25	4	30	
115	18.3	88	14	109	17.3	77	12.2	68	10.8	128	20.3	44	7	31	
88	14	119	18.9	182	28.9	76	12.1	70	11.1	66	10.5	28	4.5	32	
84	13.4	133	21.1	196	31.2	74	11.8	64	10.2	50	7.9	28	4.5	33	
203	32.3	120	19.1	121	19.2	52	8.3	48	7.6	64	10.2	21	3.3	34	
32	5.1	58	9.2	140	22.3	88	14	125	19.9	157	25	29	4.6	35	
23.7		19.8		21.4		9.4		9.9		11.7		3.8		Mean percent	

Discussion

As mentioned in the background, secondary education as a bridge between general education and workplace, life and university and also the pathway from childhood to youth and from the sense of dependency to independency has an important role. This importance has increased the expectations of the society and students. Therefore, secondary education should nourish different capabilities in high school graduates to be able to enter the society and social life. These capabilities include work, politics, life and marriage, science and its applications, innovation and creativity, art, planning and etc. For this reason, secondary education should follow multi dimension aims and nurture all individual and social aspects of graduates on the pathway of maturity they can fulfill their social and individual needs.

In analyzing the effects of Conquer on the first aim, we found out that the pressure of Conquer on schools, parents and pupils prevents the growth of deep thinking in pupils. According to this

we can assume that one reason of weak capabilities and low interest of students in research in universities and low rate of reading among people of the society is due to not achieving this aim. So, the university acceptance policy should be revised in a way that to help and support secondary education to achieve this first aim and students would have the moral of research, thinking and contemplation and relevant research capabilities.

In interpreting the second findings of the research regarding the effect of Conquer on the second aim, we have to say that secondary education is the transmission phase of childhood to youth. According to the Piaget's theory of cognitive development, pupils in this period are in the stage of formal operations and are capable of hypothetical and deductive reasoning of thinking (Boddington, 2009). In this stage the sense of responsibility and independence in their personal and social life appears and they look to find their aptitudes and talents and show them to others. In this period, it is the school's responsibility to find the pupils aptitudes and gradually enter them into the domains of life in a way that through the opportunities provided, they can freely think about themselves, their life and take responsibility of their actions (Mosapour, 2003). Therefore, schools and parents should provide such opportunities for pupils. But as this research shows, the serious attention of schools and parents on passing Conquer and entering into university and wide-spread advertisements to participate in Conquer private classes and methods of succeeding, prevent students to pay attention to themselves and their social and individual needs. Here, we can say that negligence of this aim results in youth not getting prepared to enter life and inability to solve problems. It also initiates many problems like addiction to drugs, unwillingness to marriage and to hold responsibility, increase of divorce and other abnormalities in the society.

The effect of Conquer on 3rd aim and negligence of the aim to prepare youth for work in secondary education is one of the main reasons of unemployment among youth. Because when teenagers do not get familiar with different jobs and workplaces and have no skills for finding jobs, they would have no enthusiasm for working as a value. In this case unemployment will developed among young people. In other words, the student who cannot be accepted by a university and remain behind in this level, have lost the opportunities of getting skills for job in one hand and on the other employers need skilled workers but cannot employ them because of low productivity of high school graduates. In this case, the cost of production increases and producers cannot compete in the local and global market which results in many problems for economical development. Therefore, failure of the 3rd aim of secondary education prevents the economic development.

Although Conquer causes the failure of the first to third aim of secondary education, it forces to succeed the fourth aim as making a big competition for continuing education in a high level.

Conclusion

Consequently, the results of this research show that pressure of high demand for entering universities on the aims of secondary education really convert the main different aims of secondary education to only one aim of continuing education without considering deep learning and good understanding. Actually, compatibility of secondary education for multi dimensions training of students was ignored and attention was paid only to memorizing knowledge without considering their implications. This approach firstly attenuates innovation, critical thinking and deep learning in students and ignores the needs of society and students and secondly, cannot provide opportunities for most students to choose their interest subjects and disciplines. So, after entering university, students loose their enthusiasm for studying. The pressure of Conquer not only converts the aim of secondary education but makes many problems in different sociological, economical and psychological aspects which cannot be

compensated easily. Therefore, it is necessary to change the policy of universities in Iran to help and support secondary education in achieving all aims.

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Title of the Paper:

The Effect of Using Task-Based Activities on Speaking Proficiency of EFL Learners

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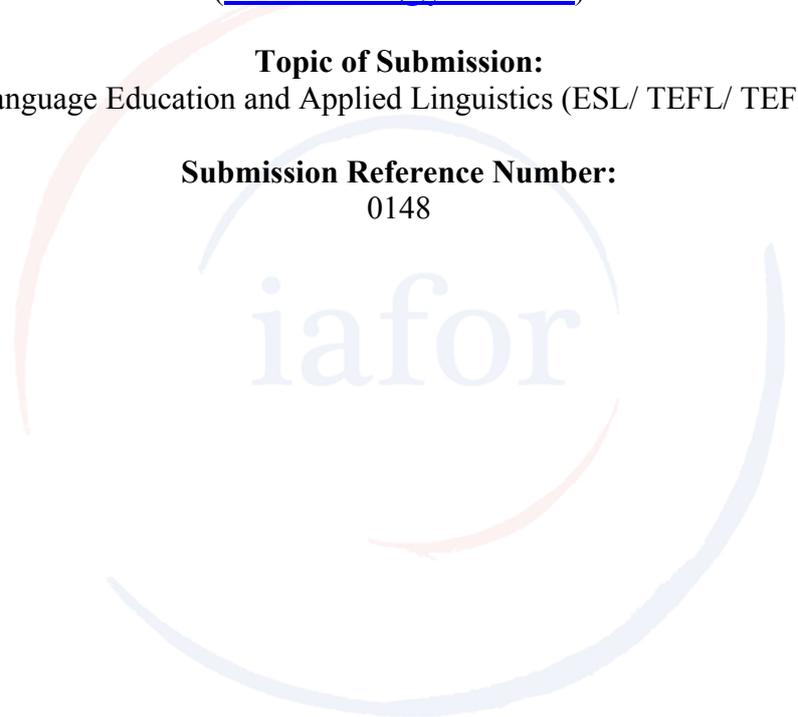
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The logo for the International Association for Applied Linguistics (iafor) is centered on the page. It features the word "iafor" in a light blue, lowercase, sans-serif font. The text is enclosed within a circular graphic composed of two overlapping, curved lines: a light blue outer arc and a light red inner arc, creating a partial ring effect around the text.

The Effect of Using Task-Based Activities on Speaking Proficiency of EFL Learners

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Abstract

For the past twenty years, Task-Based Language Teaching (TBLT) has attracted the attention of L2 researchers, curriculum developers, teacher trainers and language teachers. Tasks make our learners more autonomous and creative; in addition, they can fill the gaps we have in our course books and establish ties among different parts of the unit. The present research is an attempt to provide new evidence for the efficacy of task-based techniques to speaking proficiency development of EFL learners. The primary focus of the study is to investigate the effects of task-based techniques on speaking proficiency development. In the second place, it tried to scrutinize the effect of gender on speaking proficiency development under task-based principles of language teaching. Accordingly, sixty male and female Iranian EFL participants from intermediate level were selected and assigned into two groups (experimental and control) on the basis of their performance on the interviews as pre-test. In continuation, each category was divided into two groups of males and females. At the end of the experimental period, the subjects in the two groups were interviewed as the post-test. A set of independent sample t-tests were conducted. It was found that the students of the experimental group, who experienced task-based principles of teaching speaking, performed remarkably better than those of the control group on the final speaking post-test. It was also concluded that gender was not a determining factor in speaking development under task-based approach.

Key Words: Task-based, Speaking, EFL, Proficiency

Introduction

A glance through the past century or so of language teaching gives us an interesting picture of how varied the interpretations have been of the best way to teach a foreign language. As schools of thought have come and gone, so have language teaching methods waxed and waned in popularity. Teaching methods are the application of theoretical findings and positions. They may be thought of, as Brown (1991) termed, “theories in practice”. It is no surprise that in a field as young and dynamic as second language teaching there have been a variety of such applications, some in total philosophical opposition to others.

Moreover, few would question the need to make language classrooms a place where genuine and meaningful communication takes place and not simply one where students “practice” language for its own sake. This emphasis on making meaning the priority in syllabus design and methodology underlies many aspects of contemporary approaches to language teaching, e.g., CLT, Task-based language teaching, and Content-based instruction.

SLA research suggests overwhelmingly that language learning is a developmental process, which cannot be consciously controlled or predicted by teachers or learners. It seems that language learning – in the sense of acquiring the ability to use the language spontaneously – is powerfully driven by natural processes. But it also seems that these processes can be sharpened and rendered more efficient by an appropriate focus on form. Task-based learning

(TBL) represents an attempt to harness natural processes and to provide language focus activities based on consciousness-raising which support these processes (Willis, 1996).

A task is an activity which learners carry out using their available language resources and which might lead to a real outcome. Examples of tasks are playing a game, solving a problem, or sharing and comparing experiences. In carrying out tasks, learners are said to take part in such processes as negotiation of meaning, paraphrase, and experimentation, which are thought to lead to successful language development (Richards and Renandya, 2002).

Task-based language teaching is an approach seeking to provide learners with a natural context for language use. As learners work to complete a task, they have abundant opportunity to interact. Such interaction is thought to facilitate language acquisition as learners have to work to understand each other and to express their own meaning (Larsen-Freeman 2000).

TBLT makes students feel as if they are not in the atmosphere of the classroom, and instead puts them in different situations that require communicative use of the language. Tasks are used with the objective of creating contexts that promote the communicative use of different L2 skills and components simultaneously.

TBLT, however, is not only concerned with communication; it also pays attention to the formal aspects of language. Tasks are normally designed in such a way that they draw learners' attention to specific grammatical or lexical features that are needed for the successful completion of the task. The philosophy behind this orientation is simple: learners learn better if they notice aspects of the language that they need to learn; without noticing, there will be no linguistic development in learners' proficiency since mere exposure to L2 does not lead to improvement.

Statement of the Problem

Often, when faced with various problems, language teachers are in search of finding something that could create a difference in their classroom. The problems are generally caused by students' lack of motivation to the lesson. Increasing learners' motivation and performance has always been the primary concern of language teachers. A new approach, TBL, is applied to a traditional classroom situation with the aim of finding solutions to certain problems such as poor learner motivation. Implementing a TBL approach in EFL classes creates variety for the students. Moreover, it enhances their learning, since TBL tasks encourage student involvement and lead to significant improvements regarding their language performance; and the students can find enough opportunities to express themselves in the target language.

Speaking is so much a part of daily life that people tend to take it for granted. However, learning speaking whether as a first or second language, involves developing a subtle and detailed knowledge about why, how and when to communicate and to produce complex skills for managing interaction, such as asking a question or taking a turn. One of the most important aspects of everyday talk is that it always takes place in cultural and social contexts. People speak in order to carry out various social tasks and, although they may not always be consciously aware of doing so, they attune language and the meanings they wish to exchange to their specific purposes for speaking within the context. Clearly, if learners are to develop

the competence they need to use a foreign language easily and effectively in situations they encounter outside the classroom, they need to experience how language is used as a tool for communication inside the class. "Task" serves as the most obvious means for urbanizing teaching along these lines.

Significance of the Study

This study is an attempt to investigate the effect of using task-based activities on speaking ability. In particular, its purpose is to find better and easier ways for teaching and learning speaking in foreign language and to make the students motivated and interested in language classrooms. Speaking can undoubtedly be labeled as the most applicable skill in a foreign language environment. Task-based teaching, a rather new trend, has proved to be effective in many contexts. It is a very good idea to put to the test its efficiency in the context of the institutes. It is a widely accepted assumption that speaking is the most emphasized skill in the institutes and even universities. So, it is believed that utilizing task-based activities will firstly motivate the students (because of their flexibility) and also will enable them to communicate easily and deeply or have negotiation of meaning through some simultaneous listening, speaking, and writing activities. Moreover, students will be interested in learning and it causes them to be successful language users.

Research Questions and Hypotheses

According to Ellis (2004) task-based research has been primarily concerned with production tasks, especially speaking tasks. Tasks can involve any of the four language skills. Researchers have been interested in two main questions regarding productive tasks: (1) 'What effect do the properties of the task have on learners' speaking?', and (2) 'What effect do the properties of the task have on L₂ acquisition?' Underlying these two questions are the research questions that follow:

1. Does using task-based activities have any effect on speaking ability of Iranian EFL language learners?
2. Does using task-based activities have different effect in increasing males' and females' speaking ability?

With regard to the research questions, the following null hypotheses can be formulated:

1. The use of task-based activities does not have any significant effect on learners' speaking ability.
2. The use of task-based activities does not make significant difference in speaking ability of males and females.

Methodology

Subjects

The researchers selected 87 students of both genders out of 200 intermediate level students in Iran-Zamin co-educational English institute through simple random sampling. Intermediate language learners had experienced at least 2 years of English learning and had passed the first three books of Interchange series (Intro, 1, 2 volumes). At the very first session of the term, a speaking examination, as the pre-test, was conducted on some oral tasks similar to those which were practiced during the term. The students were marked by two raters according to a

chart proposed in “Testing Language Skills” by Farhady, Birjandi, and Jafarpour (1994) which considers structure, vocabulary, fluency and comprehension for evaluation of speaking (see appendix). Based on their scores, the students were categorized into two homogeneous groups of 30, as the control and experimental groups of the study. Secondly, each category was sub-divided into two groups of males and females. There were 17 females and 13 males in the experimental group and 16 males and 14 females in the control group.

Instruments

The subjects in both experimental and control groups were interviewed and answered 20 questions scored by two raters according to what they had studied in their text books as a pre-test. The students in the control group studied the interchange book; while the students in the experimental group practiced different task types. As expressed previously, *Authentic tasks* (sometimes also called real life tasks) such as booking a room in a hotel or doing grocery shopping were fulfilled throughout the term in order to improve the speaking proficiency of the experimental group students. *Jigsaw tasks* which are very similar to two-way tasks, (such as doing a puzzle or filling out an application form), and *open tasks* (such as proposing some solutions for the improvement of the educational system or deciding on solutions for some family problems), were some examples of the tasks which students practiced during the term.

Appropriate information-gap tasks (jigsaw), opinion-gap tasks (convergent and divergent tasks), and reasoning-gap tasks were practiced by the students in the classroom during the course of the study. In this way, male and female English learners of the experimental group experienced a set of productive tasks in which, language is not regarded as an object of study or manipulation but as a means of communication. In contrast, students of the control group mostly experienced memorization, repetition of conversations and blank-filling exercises of the interchange course book. At the end of the course, the students in both control and experimental groups took a post-test and answered 10 questions. They were asked and scored by two raters.

Procedure

As expressed before, 87 students of both genders out of 200 intermediate level students were chosen by the researchers through simple random sampling. At the very first session of the term, a speaking examination, was conducted on some oral tasks similar to those which were practiced during the term, as the pre-test. The students were marked by two raters. Based on their scores, the students were randomly categorized into two homogeneous groups of 30, as the control and experimental groups of the study. Secondly, each category was sub-divided into two groups of males and females. The students in the control group studied interchange book. The students in the experimental group practiced different task types during the twelve sessions of 90 minutes.

At the end of the course, the students in both control and experimental groups took a post-test and answered 10 questions. They were asked and scored by two raters.

Data Analysis

A group of 87 students took part in the pre-test. Based on the mean score of 14.59 and the standard deviation of 3.38 (Table 1), 60 subjects were selected and randomly assigned into two homogeneous groups of control and experimental to participate in the main study.

Table 1: Descriptive Statistics Preliminary Study

	N	Mean	Std. Deviation	Mean - SD	Mean + SD
PRE-TEST	87	14.5920	3.38733	11.21	17.97

Pre-test

An independent t-test is run to compare the mean scores of the experimental and control groups on the pre-test of speaking.

The t-observed value is .198 (Table 2). This amount of t-value is lower than the critical value of 2 at 58 degrees of freedom.

Table 2: Pre-test of Speaking by Groups

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.027	.869	.198	58	.844	.15000	.75833	1.36797	1.66797
Equal variances not assumed			.198	57.95	.844	.15000	.75833	1.36799	1.66799

Based on these results it can be concluded that there is not any significant difference between the mean scores of the experimental and control groups on the pre-test of speaking. That is to say the two groups were homogenous in terms of their speaking ability before the administration of task-based activities to the experimental group.

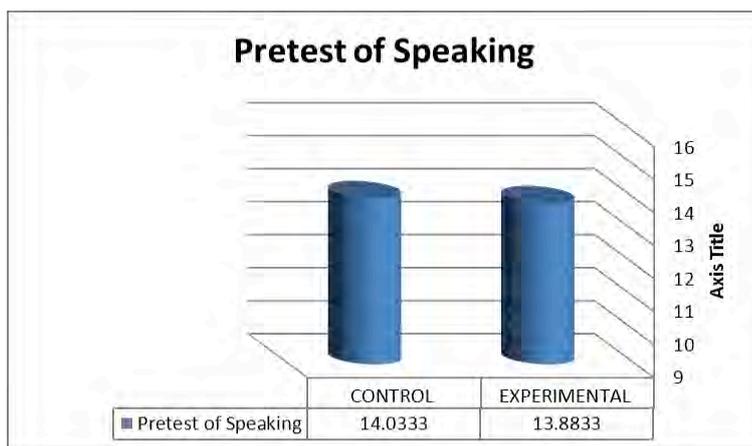
Table 3 displays the mean scores for the experimental and control groups on the pre-test of speaking. The mean scores for the experimental and control are 13.88 and 14.03 respectively.

Table 3: Pretest of Speaking by Groups

EXPLICIT VS IMPLICIT VOCABULARY TEACHING	N	Mean	Std. Deviation	Std. Error Mean
EXPERIMENTAL	30	13.8833	2.97601	.54334
CONTROL	30	14.0333	2.89748	.52901

Graph 1 displays the mean scores of the two groups on the pre-test of speaking.

Graph 1: Pre-test of Speaking by Groups



The experimental and control groups enjoy homogenous variances on the pre-test of speaking. As displayed in Table 2, the probability associated with the Levene's F of .027 is .86. Since the probability is much higher than the significance level of .05, it can be concluded that the experimental and control groups enjoy homogenous variances. That is why the second row of Table 2; "Equal variances assumed" is reported.

1: Does using task-based activities have any effect on speaking ability of Iranian EFL language learners?

Post-test

An independent t-test is run to compare the mean scores of the experimental and control groups on the post-test of speaking to probe whether administration of task-based activities has any significant effect on the experimental groups' speaking ability.

The t-observed value is 5.14 (Table 4). This amount of t-value is higher than the critical value of 2 at 58 degrees of freedom.

Table 4: Post-test of Speaking by Groups

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	5.389	.024	5.142	58	.000	3.30000	.64175	2.01540	4.58460
Equal variances not assumed			5.142	50.38	.000	3.30000	.64175	2.01126	4.58874

Based on these results it can be concluded that there is a significant difference between the mean scores of the experimental and control groups on the post-test of speaking. Thus the null-hypothesis as using task-based activities does not have any effect on speaking ability of Iranian EFL language learners is rejected.

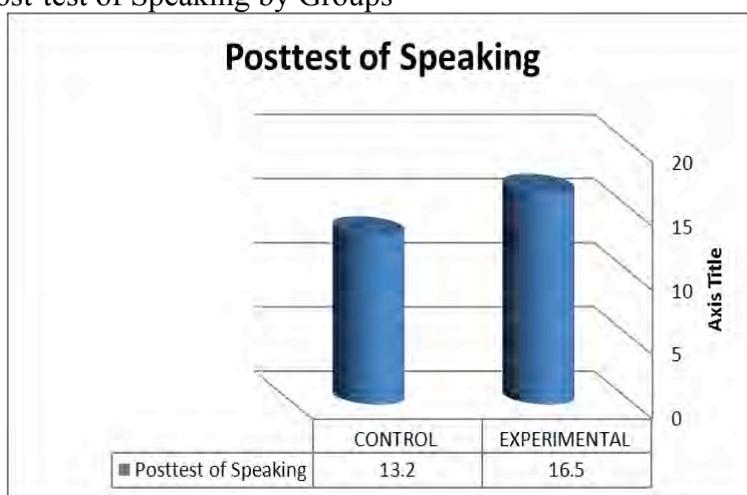
Table 5 displays the mean scores for the experimental and control groups on the post-test of speaking. The mean scores for the experimental and control are 16.50 and 13.20 respectively. The experimental group outperformed the control group on the post-test of speaking.

Table 5: Posttest of Speaking by Groups

EXPLICIT VS IMPLICIT VOCABULARY TEACHING	N	Mean	Std. Deviation	Std. Error Mean
EXPERIMENTAL	30	16.5000	1.94316	.35477
CONTROL	30	13.2000	2.92905	.53477

Graph 2 displays the mean scores of the two groups on the post-test of speaking.

Graph 2: Post-test of Speaking by Groups



The experimental and control groups do not enjoy homogenous variances on the post-test of speaking. As displayed in Table 4, the probability associated with the Levene's F of 5.38 is .024. Since the probability is much lower than the significance level of .05, it can be concluded that the experimental and control groups do not enjoy homogenous variances. That is why the first row of Table 4; "Equal variances not assumed" is reported.

2: Does using task-based activities have differential effect in increasing males and females' speaking ability?

An independent t-test is run to compare the mean scores of the male and female groups on the post-test of speaking of experimental group to probe whether administration of task-based activities differs across two genders.

The t-observed value is 1.24 (Table 6). This amount of t-value is lower than the critical value of 2.04 at 28 degrees of freedom.

Table 6: Post-test of Speaking by Gender

	Levene's Test for Equality of Variances		t-test for Equality of Means					
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference

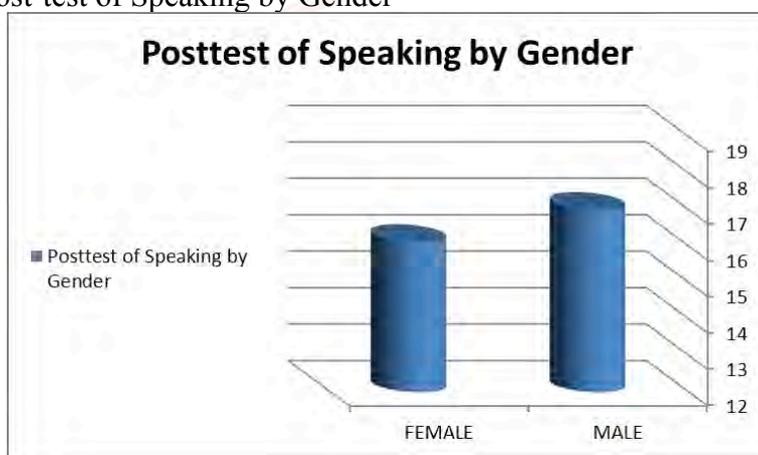
								Lower	Upper
Equal variances assumed	.524	.475	1.244	28	.224	.88235	.70927	-.57052	2.33522
Equal variances not assumed			1.252	26.59	.221	.88235	.70449	-.56418	2.32889

Based on these results it can be concluded that there is not any significant difference between the mean scores of the male and female groups on the post-test of speaking. Thus the null-hypothesis as using task-based activities does not have different effect in increasing males' and females' speaking ability is supported.

Table 7 displays the mean scores for the male and female groups on the post-test of speaking. The mean scores for the male and female are 17 and 16.11 respectively.

Graph 3 displays the mean scores of the two groups on the post-test of speaking.

Graph 3: Post-test of Speaking by Gender



The male and female groups enjoy homogenous variances on the post-test of speaking. As displayed in Table 6, the probability associated with the Levene's F of .52 is .47. Since the probability is much higher than the significance level of .05, it can be concluded that the male and female groups enjoy homogenous variances. That is why the first row of Table 6; "Equal variances assumed" is reported.

Inter-Rater Reliability Pre-test

The inter-rater reliability for the two raters who rated the students on the pre-test of speaking is .92 (P = .000 < .05).

Table 8: Inter-Rater Reliability Pre-test

		PRER2
PRER1	Pearson Correlation	.923**
	Sig. (2-tailed)	.000
	N	87
**. Correlation is significant at the 0.01 level (2-tailed).		

Inter-Rater Reliability Post-test

The inter-rater reliability for the two raters who rated the students on the post-test of speaking is .88 ($P = .000 < .05$).

Table 9: Inter-Rater Reliability Post-test

		PRER2
PRER1	Pearson Correlation	.889**
	Sig. (2-tailed)	.000
	N	60
**. Correlation is significant at the 0.01 level (2-tailed).		

Discussion

To summarize the major findings of this study in terms of research hypotheses set at the outset, the null-hypothesis predicting no greater speaking proficiency skill through using task-based activities for the experimental group than for the control group was rejected in this study. This can be due to the different task-based activities that were used during the treatment period. Therefore, the effects of using task-based activities on speaking proficiency skill were confirmed in this study. Additionally, the experimental group indicated more ability in speaking. It was predicted that using task-based activities leads to more fluent and accurate speaking. In fact, the results revealed that the systematic variation between groups' performance on post-test was due to the manipulation of experimental treatment. Accordingly, it can be speculated that using task-based activities affected the speaking ability of the experimental group.

Besides, the results obtained in this study are compatible with the Interaction Hypothesis (Pica 1994). From the IH viewpoint, negotiation facilitates comprehension. Pica (1994) proposes that opportunities to negotiate meaning assist language learners in three principal ways. First, as Long (1989) and others have claimed, they help learners to obtain comprehensible input. Second, Pica suggests that negotiation provides learners with feedback on their own use of the L2. When more competent interlocutors respond to less competent speakers, they frequently attempt to reformulate what they think they meant in ways that provide very specific feedback on a problem item. Finally, Pica (ibid) argues that negotiation prompts learners to adjust, manipulate, and modify their own output. In this respect, exchanges where the more competent speaker requests clarification of the less competent speaker seem to work best. Learners are pushed into producing output that is more comprehensible and therefore more target-like.

Finally, the findings demonstrated that the subjects took advantage of the task-based activities and showed a meaningful difference due to the treatment effect. In other words, it posited that the more opportunities for negotiation there are, the more likely acquisition is to happen.

Conclusion

Better performance of the students of the experimental group which was determined by the mean-comparison with those of the control group, was somehow anticipated by the researchers observing the strongly motivated learners of the experimental group who also

showed a higher degree of openness to experience during the course of the study than the students of the control group. Experimental students showed a higher inclination to negotiate meaning or to establish a sound communication with the aim of innovative expressions and gestures compared to students of the control group who preferred to use memorized bits of language or formulaic expressions. One of the most salient privileges of task-based approach seems to be that language development of students of the experimental group is socially driven which corresponds to Vygotskian accounts of language learning.

Moreover, gender, is one of the most influential variables in nearly all of social phenomena. Language as a basic social phenomenon is not an exception. Under many language teaching and learning approaches, the superiority of females has been delineated. Most of neurolinguistic experimentations relate this female superiority in second or foreign language learning to the more engaging left hemisphere which is believed to have the responsibility of language development (Long and Crooks, 1992). Considering the critical role of experience, task-based approach exploits the right hemisphere in addition to the left, dissimilar to most classical approaches used for second or foreign language development. To the researchers' best knowledge, this fact can correspond to different cognitive and psycholinguistic differences between two groups of students.

To recapitulate, task-based techniques which are socially and humanistically driven seemed to be quite influential on the development of speaking proficiency, while gender seemed to have an insignificant effect on speaking ability development under task-based approach.

Implications

Based on the statistical results of the study, these implications are noticing:

Theoretical Implications

- Experimental students showed a higher inclination to negotiate meaning or to establish a sound communication with the aim of innovative expressions and gestures compared to students of the control group who preferred to use memorized bits of language or formulaic expressions.
- Considering the critical role of experience, task-based approach exploits the left hemisphere in addition to the right, dissimilar to most classical approaches used for second or foreign language development. Task-based techniques of language development which were socially and humanistically driven seemed to be quite influential on the development of speaking proficiency.

Pedagogical Implications

This study has also implications for language teaching and syllabus designers. From a practical point of view, a fuller appreciation of the central process of task-based speaking has important implications for foreign language teaching. On the basis of findings, it is suggested that some time must be devoted in speaking classes to use different types of task-based activities. In fact, enough opportunity should be given to the speakers to follow the pre-task, task cycle, and language focus stages of task-based approach in the classroom.

Similarly, certain kinds of task-based activities may be helpful to students in order to make them motivated and interested enough to facilitate negotiation and increase the level of their general language proficiency, as some researches have pointed out (e.g., Pica, 1994). Hopefully, this study may draw the material designers' attention to include special task-based activities sections in speaking materials. By providing more opportunity for doing different kinds of task-based activities in the books, there may be more acceleration in the process of speaking and also in motivating students to be involved in the interactions to be more fluent and accurate speakers.

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Appendix

The chart proposed in "testing language skills" by Farhady, Birjandi, and Jafarpour for evaluation of speaking:

Scale	Point	Behavioral Statement
Accent	6	Phonemically acceptable pronunciation throughout
	5	Few phonemic errors but never hindering comprehension
	4	Occasional phonemic errors necessitate attentive listening.
	3	Frequent phonemic errors require frequent demands for repetition.
	2	Constant phonemic errors make comprehension very hard.
	1	Severe errors make understanding virtually impossible.
Structure	6	Almost no error
	5	Few insignificant errors only
	4	Occasional petty errors but no problem with understanding
	3	Frequent errors occasionally interfere with meaning.

	2	Constant errors interfere with understanding.
	1	Severe errors make understanding virtually impossible.
Vocabulary	6	Appropriate and extensive use of words in any domain
	5	Appropriate use of adequate vocabulary to discuss general topics and special interests
	4	Occasional use of inappropriate words which not, however, affect the message
	3	Frequent use of inappropriate words distort the message
	2	Constant use of wrong words, limited vocabulary
	1	Inadequate basic vocabulary
Fluency	6	Fluent and effortless speech like a native speaker
	5	Natural and continuous speech with pauses at unnatural points
	4	Fluent speech with occasional problems
	3	Frequent problems hinder fluency and demand greater effort
	2	Slow speech, hesitant, and sometimes silent
	1	Virtually unable to make connected sentences
Comprehension	6	Comprehends everything
	5	Comprehends everything except for very colloquial or rapid speech or low-frequency items
	4	Comprehends nearly everything but needs occasional rephrasing
	3	Comprehends slower-than-normal speech
	2	Comprehends only slow and simple speech
	1	Comprehends very little of even simple and slow speech

RE-VISIONING THE TEACHING OF BUSINESS ENGLISH BASED ON THE EVOLVING MBA CORE CURRICULUM

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Introduction

What does the student of English need to know in order to communicate effectively in the highly competitive environment of the global marketplace? We now live in an era when the global economy is undergoing profound transformations due to a collapse in credit markets--- with new government regulations, new sources of capital and labor, new customer bases, and new sources of financing. Though it is no doubt true that the current global economic crisis was to some degree caused by people with MBA's, (Reeves & Knell 2009, p.11) this in no way undermines the contention here that the MBA conceptual map and attendant language is a necessary condition for navigating through the ever-shifting landscape of the global economic environment. Despite certain limitations, the MBA core curriculum continues to be the touchstone for business education, since it specifically focuses on providing the essential skills and knowledge necessary for executives to compete in an increasingly complex and ever-changing global market place. Within the field of TESOL (Teaching English to Speakers of Other Languages), there is a growing emphasis on such area as English for Academic Purposes (EAP), English for Special Purposes (ESP), and Content Based Teaching (Dudley-Evans 1998, p.3). The theoretical and empirical work being done in these fields dovetails nicely with the contention being put forth here- that the MBA curriculum is a useful and effective model or paradigm for designing a Business English corpus. This proposal falls within the field of Content Based Teaching, and is supported by the set of theories and teaching methodologies advocated within this field. It is also supported by the second language acquisition theory of Stephen Krashen known as the Natural Approach. The basic assumption here is quite simple (though the theories are complex)- that

communicative competence is best achieved by prioritizing content, making it interesting and above all relevant (Krashen 1983, p.130). Put another way, curriculum design should start with identifying the essential business concepts needed to operate in the global marketplace. Then, later, language targets can be adjusted according to level; however, meaning is always prioritized over form (Gulbahar 2004, p.163).

Critique of Current Materials for the Teaching of Business English

What sort of course materials are currently available for teaching Business English? Are any of them deeply rooted in business culture? Further, does the linguistic content articulate nicely with the conceptual world that students will have to face when they work in various markets and industries? Surprisingly, most of the textbooks from major publishers fail to meet the standard being set here- to develop those language skills which are necessary to effectively communicate in today's globalized marketplace.

A general survey of the major textbooks in Business English will reveal that when business topics are introduced, they are usually done so in a piecemeal fashion. For example, in one Business English textbook by a major (to be unnamed) publisher, there is a case study about a Norwegian company and its financial strategy, which is then followed by an exercise asking the student to imagine what they would do if they were stuck on a desert island.

There is no apparent connection between these exercises, at least not from a business standpoint. In another textbook, there is a chapter on the stock market, which is mostly a jumble of disconnected readings and exercises, all of which deal in some way or other with finance, but which lack any sort of conceptual coherence—at least not from an MBA point of view. Rather than being an isolated incident, this is fairly typical- the lack of coherence in terms of business concepts.

1. With one or two rare exceptions, Business English textbooks lessons are generally organized around teaching language structures; there seems to be no clear organization around business concepts. Such concepts or categories often seem to be thrown in almost as an afterthought, as a kind of window dressing so as to be able to call itself Business English. In other words, content seems to be secondary to form.

2. A typical business English textbook will have units focused on such skills as, “answering the telephone,” “greetings,” “negotiations,” “making small talk,” “handling a customer complaint,” yet any of these language functions could easily be taught in a general English course and need not be part of a serious course in Business English.

3. There are a number of textbooks which present actual business case studies, however it is often unclear just what the cases are meant to illustrate, or if it is clear, what they are illustrating seems unconnected with any larger conceptual framework. It appears that these case studies are presented as a way to practice some particular language targets, rather than aimed at understanding business concepts. Of course, for many mainstream ESL/EFL teachers, this is fully justified, however the whole point of CBI and the Natural Approach is, as stated earlier, based on an entirely different assumption- that by prioritizing interesting and relevant concepts/content first, language structures are thereby internalized at a deeper level, so that the student will be able use them flexibly and appropriately. (Dueñas, 2004, p.74)

4. Another disturbing pattern which emerges is that there seems to be a marketing strategy in Business English textbook publishing that, “more is better.” English textbooks of all sorts (not just Business English texts) tend to try to pack as many words onto a page as possible- more for your money, seems to be the advertising strategy. The print is often very small font, making it difficult to read, especially for Asian learners who can’t read English script as well as Europeans. (Williams 2010, p. 8) Students from non-Western backgrounds will find such text style dense and overwhelming. Furthermore, outside the EU, much of the British business terminology and style used in these books will seem a bit alien.

The current course material available suggests that current textbook writers are stuck in a didactic mode which is weighted more in favor of the learning of a formal set menu of language structures rather than a natural immersion in the real communicative contexts of business English. The sad result of the overly linguistic approach to course design is that all the juice or dynamism of the business world is lost. There are, to be fair, clear language targets, and from an applied linguistic point of view, the textbooks are indeed well-organized and coherent. However, as argued here throughout, having clear language targets is neither the necessary nor sufficient condition for developing communicative competence in Business English. Designing textbooks with clear business targets is more congruent with Content Based Instruction; having a clear conceptual focus will help the student learn both language and conceptual structures simultaneously and on a deeper level. The research strongly suggests that teaching concepts along with language will make the language learning experience more unified, natural, accessible, coherent, realistic, interesting and relevant. (Luka 2011, p.2)

The Essential Method

The essential method used in MBA program around the world is the case study method. (Navarro

2005, pp.11-15) This should also naturally form the essential method for teaching Business English- real cases which illustrate particular business problems and concepts which are essential for operating in the global marketplace. Case studies of businesses and entrepreneurs make concrete theoretical knowledge, and indeed, much of the theories used in business management come out of real world experiences—real cases of business dealing with and adapting to changing market conditions. (Silbiger 1999, p.13)

In the case study approach, used at many prominent MBA programs, the various tactical and strategic topics are studied by presenting students with an actual business case – a real problem faced by a business in the past. For example, in a marketing class, students may be given a scenario in which Coca-Cola needs to determine whether to enter the market with a new software drink. In a finance class, students may be given a case on how a bank might re-structure its balance sheet. Questions are presented at the end of the case, and student is chosen at random to “open” the case by speaking for some time, summarizing the key points and answering the questions. Debate ensues for the rest of the class, with provocative questions posed by the format. (HBS 2011)

Theoretical Justification

Using the case study method to teach Business English is congruent with theories and methods in TESOL, specifically Content Based Instruction. This is not the place to present empirical support for CBI theories; this has been done extensively elsewhere. (Hsu 2008) This paper doesn't seek to enter any of the various debates in the field of language education, but does assume from the start that content based teaching is effective because of it is holistic, i.e., based on a whole brain approach to language learning.

Orienting the Business English instruction around the MBA curriculum, would naturally involve a whole set of cognitive functions which the mere study of grammar structures or linguistic expressions would not. This hypothesis is supported by empirical research in the area of Stephen Krashen's Natural Approach, which argues that by prioritizing meaning- making the corpus conceptually meaningful (and interesting), a greater range of cognitive functions is utilized, thus facilitating deeper language acquisition. (Krashen 1983, p.134)

Within the field CBT research, the seminal work of Mohan can be characterized as a more “whole brain” method and therefore an effective approach for achieving language fluency. (Dueñas 2004) His “knowledge framework” shows how a content based approach actualizes a wide range of essential cognitive functions. (Tang 2004, p.101) According to Mohan (1986), learning activities can be divided into six major types of knowledge structure: classification, description, principles, sequence, evaluation, and choice. A case study approach to the teaching of Business English will

necessarily involve all these thinking skills. Some examples of how this might work are given below:

Classification: identifying what kind of market is suitable for a certain product

Description: describing the nature of a competitor firm

Principles: establishing what type of risk portfolio would be suitable for investing in the Euro Zone.

Sequence: the cost cutting advantages of a certain supply-chain system

Evaluation: judging the effectiveness of certain supply-chain management strategies

Again, it is not the primary aim of this paper to provide empirical evidence for second language acquisitions theories which would support and MBA approach; rather the value and validity of such theories is assumed from the start. Consequently, the rest of this paper will be devoted to identifying some of the key conceptual areas which come from the MBA core curriculum and are therefore deemed to be essential for an effective course in Business English.

The M.B.A. Core Curriculum

In an MBA program students learn how to produce, distribute, market and sell products and services, how to count revenues, costs, and profits. The following outline summary describes the basic curriculum; though different names may be used in different business schools, most courses include the following the following basic subjects:

Finance

Marketing

Operations and Supply-Chain Management

Accounting

Information Technology

Organizational Behavior and Leadership (including Entrepreneurship)

Human Resource Management

Business and Government

International Business

Within these overarching areas, there are many other sub-areas and, in the modern global MBA curriculum some new areas and somewhat exotic courses such as culture studies or “Corporate Diplomacy in a Global Context.”¹ Most subjects fall under the rubric of “strategy” or “functional” topics. (Navarro 2005, pp.6-9) This is not a hard and fast categorization, and of course

¹ See Oxford’s Saïd Business School curriculum for the Oxford Diploma in Global Business.

there are subjects which don't fall neatly into one or the other. Nevertheless, below is a brief description of the MBA core curriculum from the point of view of strategic and functional subject areas.

I. Strategy

Market entry

A key decision facing corporations is whether to enter a given market. Barriers to entry must be considered in this area of study; simply put, barriers to entry refers to how easy/hard is it to enter a new market.

Once this analysis is completed, or revised, the corporate strategist tries to analyze how to gain a competitive advantage; how to achieve superior market performance. Among other techniques, this can be done via pricing/cost control (Wal-Mart), distribution (Starbucks), marketing (Geico, Nike, Gatorade); product quality (Toyota); or innovation (Apple, Merck). Some of these topics are explored in detail, below.

Market Exit

When a company feels it can no longer effectively compete in a market, it can choose to exit this market. For example, IBM no longer manufactures PC's, having sold this business to Lenovo in China when they realized they could no longer be profitable in this market.

Mergers, Acquisitions and Diversification

Mergers and acquisitions (M&A) is a strategy to enter new markets quickly. If the barriers to entry are high but the company wants to enter a market, it can buy a company already doing business in that market. Funding is generated by buying a company that has strong cash flow, meaning it generates positive, reliable profits to help pay off the acquisition price.

Corporate finance

Investment of capital enables a firm to generate positive cash flows by investing new products, plants, marketing campaigns, and information technology, thereby adding value to the company.

One of the key questions asked by executives doing corporate investment is whether the investment of capital in the present will yield returns in the future given the uncertainties in the markets. Mathematical models are used to project turn on investment, adjusted for the various

forms of risk. The goal here is to create shareholder value in publically held companies. For private companies, the goal is return on investment for the individuals or institutions which supplied the funding.

Long Term Capital Budgeting

In the process of long-term budgeting, executives must take into account the general macroeconomic conditions in order to create a balanced financial portfolio (discussed below); this includes constitute *systematic risk* which affect all corporate economics equally – such as oil prices, tax changes, or wage inflation. It also includes unsystematic risk—e.g. sudden surprises which impact companies differently. Both types of risk are difficult to calculate.

Balancing your financial portfolio

Students are taught that portfolio mix will depends on the level of *risk aversion* and an understanding of the risk-reward relationship. Generally, the greater the risk, the greater the potential rewards.

Capital Financing/ Capital Structure

Capital financing focuses on the question of the ratio of debt to equity financing (equity is *typically* cash and assets that can be quickly converted to cash such as stock, and hard assets such as plants, and stocks). The Chief Financial Officer (CFO) advises the corporate leadership on how to pay for new capital investment projects (like a new plant). The calculation presents the impact on debt to equity ratios, and this decision may change in the capital structure for the company.

Short-Term Cash Flow Management

Specifically this is concerned with the following issues:

- how much raw material and other inventory should be kept on hand
- how much cash should be kept on hand to pay the bills
- how much credit should be extended to customers
- how and at what speed should cash be collected

Corporate Governance and Organizational Design

MBA programs teach corporate governance – how decisions are made. In general, at the executive levels there is a Board of Directors, run by a Chairman, with a Chief Executive Officer (CEO) reporting to the Board. A president, who has operating responsibilities, reports to the CEO and has a staff composed of functional executives: VP of Finance, VP of Sales, Chief Operating Officer, VP Human Resources, and so on. In publically traded companies, the Board is

accountable to the stockholders, and when large investors such as rich individuals or institutions such as pension funds are dissatisfied with Boards, they can put pressure to have the Boards replaced or re-structured.

Management Analysis

All M.B.A. programs have courses which cover at least three basic techniques related to management analysis – mathematical techniques which help formulate strategy. These three are listed below:

1. Statistical analysis [regression analysis]
2. Decision and risk analysis [decision trees]
3. Simulation [modeling]

II. Functional Topics

Strategy is an ever-evolving set of activities in any corporation, as every market is changing (albeit at different paces) and strategies must evolve. Yet even as strategies evolve, business execution is the primary set of tactical activities of a business – the implementation of strategies. (Navarro p.20)

Accounting

In contrast to corporate finance, where large issues of debt and equity finance are considered, accounting involves the day to day management of cash, payroll, benefits, management, vendor payments, internal and regulatory reporting, and short-term funds management.

Operations Management and Production

Every business has an operating model and MBA programs have numerous courses on how to produce and deliver a product or service. McDonalds is often used as an example of service standardization and efficiency, in which every step in the food preparation process is studied to minimize movement, maximize employee productivity, and standardized across all outlets. FedEx often is used as an example of operations management, with the coordination of goods on a 24 hour basis from pick-up points, through trucks, to airplanes, and then back to trucks and final delivery points.

Marketing

Marketing promotion also attempts to create the perception of customer value. The outcome of good promotion is sometimes referred to as *brand equity*- “Coca-Cola is one of the most famous. L.L. Bean, and Coach Apparel are other examples.

Another topic taught within marketing classes is pricing. This area is basically microeconomics for business managers. Its methods help gain a better understanding of how prices are set in markets, and how to price your own products.

Marketing also involves targeting and market segmentation:

1. Identifying target markets: to whom do I sell?
2. Identifying products for that market: which products do I sell to which customers? (Lutz 2005, 86)

Information technology

There are virtually no companies that do not rely on Information Technology (IT) for running their business. There is customer-facing IT (automatic teller machines, web pages, airline ticketing kiosks), and back office IT (payroll systems, supply chain management systems, robotic manufacturing equipment). MBA programs teach how to evaluate emerging IT, and manage existing IT.

Organizational/Leadership

The human management aspects of business operations are taught in every MBA program. The world of business is often, mistakenly characterized by specialization “in core functional areas such as finance, marketing, and operations management.” (McShane 2005: 227), This is unfortunate because many of the most successful businesses owe their success to leadership and excellent organizational systems. The emphasis on communication as a leadership tool can not be overstated. Good leaders communicate through various channels, and stay on message consistently to their staffs and their customers. Business schools around the world are recognizing the importance of leadership, and emphasizing this qualitative area of study more and more in their curriculums.

Human resource management

Human resource management tends to focus on tactics such as payroll administration, benefits management, on-boarding (bringing on new staff), training, and coaching.

Business and government

Businesses have to interact with government on multiple levels, and MBA programs address these.

There are regulations to be followed, tax policies to follow, and proper techniques for influencing policy (lobbying). Further, governments offer tax incentives for certain activities, such as crop-growing and oil-exploration, and these must be understood.

International business

Almost any company of scale operates globally, and MBA programs teach how to do so, covering areas such as currency management strategies; respect for cultural differences; seeking low-cost countries for various aspects of the total operating model (i.e. call centers and IT work in India; assembly in China; raw materials sourcing from South America).

The Evolving MBA Curriculum

It is important to note that the modern MBA curriculum is undergoing an evolutionary process, mainly because of the pressures and challenges of the challenges which business persons are facing in the modern global economy. There is a much greater emphasis on global concerns, not only in terms of business competitiveness, but a move away from a strictly narrow focus on immediate short-term profit maximization. (Gorman 2011, 389) It is becoming more holistic, i.e., it is much more comprehensive from a global point of view. This is a view which realizes that stakeholder profit is more fundamental than shareholder profit, and that such non-quantitative subjects such as “Global Leadership,” “Entrepreneurship,” or “Sustainable Development” are not less essential for producing capable business executives.² These curriculum changes could represent a major shift in the orientation of business schools, reflecting the tectonic shifts which are occurring in the global economy.

Conclusion

The paper critiques the current range of materials generally available for the teaching of Business English, and suggests using the MBA curriculum as a model and recommends the MBA case method as the prime approach of teaching Business English. Support for this approach comes from a number of theories such as in TESOL (Content-Based Instruction) and Second Language Acquisition Theory (Krashen’s Natural Approach). This paper has also tried to provide an outline of the essential features of the MBA curriculum which can be used as a guide for instructors engaged in Business English curriculum design. What this paper has not done, but will be necessary in future papers, is to specify some concrete classroom methods which can help better actualize the MBA concepts and case method in the EFL classroom. In the meantime, it is hoped that individual instructors will exercise their intuition, imagination and expertise to develop their

² For example at ALTIS, the Postgraduate School Business & Society of the Università Cattolica del Sacro Cuore of Milan

own methodologies which will be geared to 1) the language level of the learner, and 2) the specific business contexts in which they will need to operate.

Though the MBA curriculum is, to some degree, in a state of evolutionary flux (Holland 2009), nevertheless, there still remains, in all business schools, the traditional core curriculum which provides the foundational knowledge for operating in the domestic and global markets. Even hotshot entrepreneurs, though often not MBA trained, end up employing MBA trained specialists in finance, marketing, and operations in order to actualize their business visions. (*Entrepreneurship* 2009) The point of so-called English for Special Purposes (ESP), is to develop the requisite skills to operate in certain select areas. In the case of Business English, that area is the global marketplace. Even if it is the case that the student has no intention of becoming an entrepreneur or a business executive, they will nevertheless need a working knowledge of the language and concepts which form the basis for strategic business communication in the global economy.

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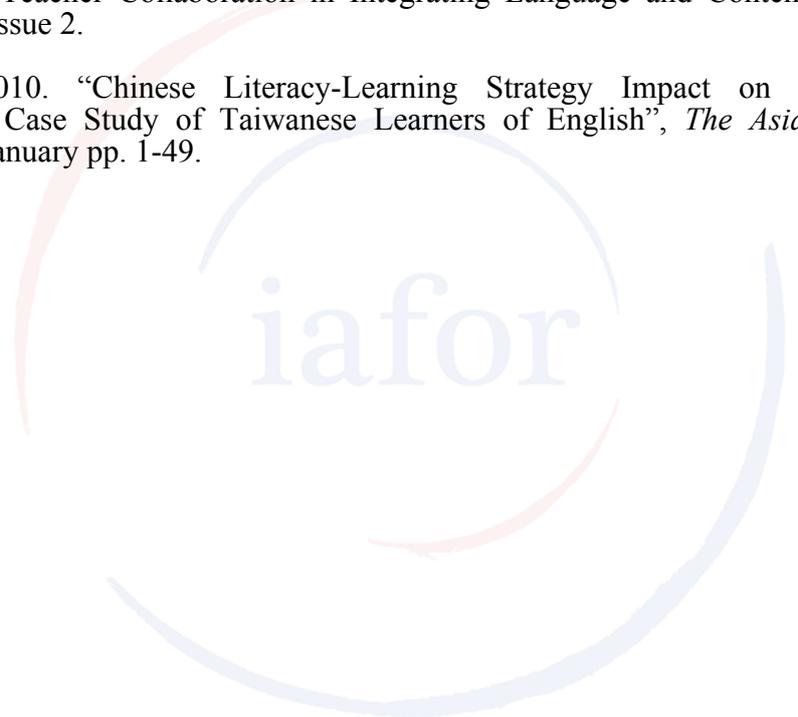
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The logo for the International Association for Business Education (iafor) is centered on the page. It features the lowercase letters "iafor" in a light blue, sans-serif font. The text is enclosed within a circular graphic composed of two overlapping, semi-transparent arcs: a light blue one in the foreground and a light red one behind it, creating a sense of depth and movement.

Young Learners' Interactive Behaviors in Jigsaw Reading

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Abstract

Reading proficiency is highly emphasized at all levels of language education because it is often the skill most frequently required by EFL learners. Communicative approaches to reading pedagogy encourage sharing of problems and ideas through peer interaction. However, it is often difficult for EFL learners to generate or to express their own ideas during group discussions. In fact many teachers avoid such activities, because their students seem reluctant to interact with their classmates. Cooperative learning attempts to address this problem by providing students with opportunities for active communication and positive interdependence in class. In a cooperative learning activity, students can work together to enhance their own and each other's learning. One popular kind of cooperative learning activity is jigsaw reading. This study aimed to investigate whether the employment of jigsaw reading could enhance learners' interactive behaviors. In addition, the effect of the use of jigsaw reading on learners' English reading achievement and attitudes toward learning English was also explored. In the study, twenty-five fifth graders in an elementary school participated in a 16-week jigsaw reading program. Seven instruments, including four electronic storybooks, an observation scale of interactive behaviors, pre/post reading achievement tests, and a questionnaire on cooperative learning were employed. It was found that the frequency of some types of interactive behaviors, including discussion, helping, and arguing, increased substantially during the implementation of program. The participants also improved their English reading achievement significantly and held positive attitudes toward cooperative learning. These findings are discussed, and some pedagogical implications offered.

Keywords: cooperative learning; jigsaw reading; English reading achievement; interactive behaviors; electronic storybooks

Introduction

Reading is highly emphasized in language learning since it is a major skill at all levels of language education. Students need a strong foundation in reading fluency and comprehension for academic tasks (Krueger and Ranalli 2003) so that they are able to expand their views as concepts through reading. That is because the information acquired through reading texts offers various life experiences to enrich their knowledge and solve their difficulties in life (Brooks and Warren 1979). However, one problem students encounter in comprehension is that they may spend too much time decoding words (Buzard, Jarosz, Lato, and Zimmermann 2001). They have to enhance their word recognition ability and reading comprehension ability in order to comprehend reading texts. Many students are classified as good readers because they understand the meaning of a new word by making sense of the word from the context and by making use of reading strategies and background knowledge (Watson 1982; Weaver 1994). In contrast, poor reading skills are often associated with academic failure (Ansary 1999). When students read printed books with only textual data, they are often not interested in reading (Chu 2004). The situation is similar for L1 Chinese reading in Taiwan. The International Association for the Evaluation of Educational Achievement (IEA) conducted the Progress in International Reading Literacy Study (PIRLS) in 2006. It was found that the reading ability of fourth graders in Taiwan ranked twenty-second from forty-six countries, and the rate of interest in reading extra books was only 24% (PIRLS 2006). It demonstrates Taiwanese students have problems with their reading. Students should improve their reading abilities to enhance their individual learning experience and knowledge.

On the other hand, with the integration of technology, many reading materials with more than just printed text are being used, including online e-books, electronic storybooks, and so on. Readers can access different reading materials any time, and electronic storybooks are increasingly being recommended for pedagogical purposes (Johnson 2001). In the traditional classroom, teachers use printed books to teach reading, and students cannot choose reading materials (Chen 1998). Students often cannot associate content with authentic objects from reading material. Based on Chen's (2003) study, students' comprehension of the texts of electronic storybooks was aided by animation. Therefore, electronic storybooks may extend students' individual reading capacity by providing non-textual data such as sound and animation to help them solve comprehension problems.

In addition, it is easy in Taiwan to see students sitting quietly, and lacking interaction with other students, so the learning atmosphere is individualistic and competitive (Cheng 2000; Liu 1997). Students usually obey the orders of the teacher in class. They receive the teacher's instructions and assigned seats and have little or

no opportunity for peer interaction during class (Chen 1998). In a teacher-directed learning environment, the teacher not only does most of the talking and arranges the class setting, but also dominates the learning process and reading materials. Many studies and educational reports indicate that teacher-directed learning tends to cause students to become overly passive, and indifferent to what is being taught (Adams and Hamm 1996; Liang 1996; Wei 1997). When poor readers are not given the opportunity to engage in interactive learning, their reading will not improve (Wei 1997).

Cooperative learning provides more opportunities for language development and integrating language with content from increased active communication and use of language for academic and social functions (Olsen and Kagan 1992). Cooperative learning emphasizes student-centred learning (Deen 1991; Gömleksiz and Onur 2005; McGuire 1992). Within a cooperative activity, students can work together to enhance their own and each other's learning. They provide their opinions to accomplish their common goal. Cooperative learning contains many methods, one of which is known as the jigsaw method. Jigsaw reading consists of several forms of grouping, including whole class, expert team, and original base group. In whole class, each student is assigned a section of text to read. After they complete their task in expert teams, each member from a different group shares their information to finish the entire text in the original base group. They have a task in each kind of grouping, and they are responsible for their material and for different parts of other members' material (Folye and Lyman 1989). This method not only makes use of reading but also provides a student-centered interactive learning environment. Therefore, to enhance students' reading achievement and interactive behaviors in Taiwan, it may be interesting to integrate cooperative learning, with jigsaw reading in English instruction.

The purpose of this study was to explore whether applying jigsaw reading could enhance learners' interactive behaviors. In addition, the effect of the use of jigsaw reading on learners' English reading achievement and attitudes toward learning English was also explored. This study aimed to find out answers to the following questions.

1. What kinds of interactive behaviors do students demonstrate when implementing jigsaw reading?
2. How effective is jigsaw reading in improving students' English reading achievement?
 - 2.1 How effective is jigsaw reading in improving students' word recognition ability
 - 2.2 How effective is jigsaw reading in improving students' reading comprehension ability?

3. What attitudes do students display toward cooperative learning and electronic storybooks?

Methodology

Participants

There were 25 participants involved in this study: fifteen male and ten female fifth graders in a suburban elementary school in Tainan. They had learned English for three years at school, beginning in the second grade. They have English classes twice per week, and each class lasts for forty minutes. In addition, these students do not attend cram schools after school to learn English – they only have English classes at school.

Instruments

Reading materials. The reading materials were comprised of four electronic storybooks. “The Biggest Jobs of All”, “Little Pea”, “Toilet Tales”, and “Round Is a Mooncake” were selected from the *TumbleBooks* website (http://www.tumblebooks.com.proxy.tnml.tn.edu.tw/library/asp/home_tumblebooks.asp).

Observation scale of interactive behaviors. The interactions were recorded by video recording and analyzed with a checklist every fifteen seconds. The checklist was comprised of a code of interactive behaviors designed to facilitate understanding of the students’ behaviors. In Hertz-Lazrowitz’s (1984) study, he clearly describes six behavior categories including noninteraction, interaction, on-task and off-task. In Chiu’s (2006) study, she further divided students’ interactive behaviors into behavior types and definitions. Therefore, based on Chiu’s study, a revised checklist of interactive behaviors was established to collect data in this study. Table 1 presents ten behavior types, definitions and behavior categories.

Table 1

Types of student-student interactive behaviors and definition

Behavior Types	Definition	Behavior Category
Discussing	A student discusses with members about leaning issue and holds a certain viewpoint.	Interactive on-task
Asking questions	A student asks questions related to learning.	Interactive on-task
Helping	A student provides a word meaning to his members.	Interactive on-task
Making agreement	A student agrees with their member’s	Interactive on-task

	answer.	
Arguing	A student disagrees with their member's answer.	Interactive on-task
Checking	A student confirms with their members that they understand the story text.	Interactive on-task
Not paying attention	A student does not participate in any learning activities for 15 seconds.	Noninteractive off-task
Disturbing	A student interrupts or disturbs members' learning.	Noninteractive off-task
Asking unrelated-questions	A student asks questions unrelated to learning.	Interactive off-task
Chatting	A student talks to members about non-related learning activity.	Interactive off-task

Word recognition test. A word recognition test was given to the participants in order to explore their word recognition level. Vocabulary items were selected from the 1200 English word list of the Ministry of Education on the Grade 1-9 Curriculum website (http://www.edu.tw/files/site_content/B0055/%ad%5e%bby970526%a9w%bdZ%a1%5d%b3%e6%a5U%a1%5e.pdf), and from the glossary of the students' English text book. Three experienced English experts revised and confirmed that these questions corresponded with the standard level of English competence for fifth graders.

Reading comprehension test. The purpose of the reading comprehension test was to examine students' reading comprehension level. The participants were required to read two stories and answer ten true or false questions within 15 minutes. The first story, "Birthday Story," was selected from *the mouse club* website (www.themouseclub.co.uk). The second story, "Trees," was chosen from *the Kiz club* website (www.kizclub.com/index.html). The two stories were selected based on the participants' current reading proficiency level and were verified as suitable by their English teachers.

Quizzes. Four quizzes were used to check students' word recognition and reading comprehension level after the participants finished the story text of each electronic storybook. These quizzes were remodeled from the *TumbleBooks* website (www.tumblebooks.com.proxy.tnml.tn.edu.tw).

A questionnaire on cooperative learning. The Questionnaire on Cooperative Learning (QCL) was intended to investigate the students' attitudes toward jigsaw reading in English learning. The questionnaire was revised from Lin (2008), Liu (2006), Huang (2007), and Huang (2006) respectively. There are twenty questions classified into four sections in the QCL: cooperative learning (items 1 to 6); expert

teams in jigsaw reading (items 7 to 10); original base groups in jigsaw reading (items 11 to 15); and the use of electronic storybooks in jigsaw reading (items 16 to 20) (see Appendix A). Three experts examined the questionnaire for its validity. All of these experts had taught English for many years and specialized in classroom management, educational psychology, and foreign language teaching respectively. After validity testing, the questionnaire was used in a pilot study to examine its reliability.

Interviews with the students. The interviewers encouraged the respondents to express their opinions and feelings in relation to this program. Twelve students participated in this interview: six males and six females. The interview questions involved two parts: questions about jigsaw reading and questions about electronic storybooks. Two experienced experts revised and confirmed the questions as being suitable for the participants (see Appendix B).

Data Collection and Data Analysis

The implementation of the experiment took 16 weeks, including pretests, the recording of students' interactive behaviors, quizzes, posttests, QCL, and interviews. A paired samples T-test was employed to test students' English reading achievement in order to explore whether there was a significant difference; the responses to the four quizzes, QCL, and interactive behaviors of students are reported with descriptive statistics.

Results and Discussion

What kinds of interactive behaviors do students demonstrate when implementing jigsaw reading?

The results, shown in Table 2, indicated that interactive on-task behaviors constituted over fifty percent of the interactive events observed. The categories of interactive off-task behaviors and non-interactive off-task behaviors, constituted around twenty percent of observed behaviors each. Figure 1 displays a line graph of the main categories.

Within the category of interactive on-task behaviors, the behavior of discussion always ranked first in the percentages of occurrences of interaction during each observation (31%; 41%; 45%; 36%). In the category of non-interactive off-task behaviors, the behavior of not paying attention ranked second, showing that students decreased their percentages of interaction in the course of the four exercises (21%; 12%; 15%; 14%). As for the category of interactive off-task behaviors, the behavior of chatting ranked third, showing that students increased their occurrences of this mode of interaction each time (19%; 22%; 17%; 31%). The descriptive statistics for the students' interactive behaviors are displayed in Table 3.

Table 2

Interactive behaviors by category

Category	Exercise 1	Exercise 2	Exercise 3	Exercise 4
IO	226 (56.4%)	243 (60.8%)	241 (60.3%)	203 (50.8%)
IF	87 (21.8%)	103 (25.7%)	96 (24.0%)	139 (34.7%)
NIF	87 (21.8%)	54 (13.5%)	63 (15.7%)	58 (14.5%)

Note. IO= interactive on-task; NIF= non-interactive off-task; IF= interactive off-task

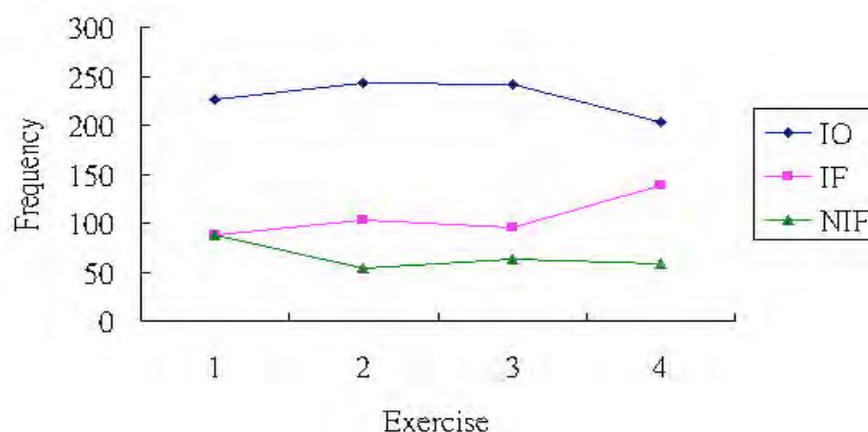


Figure 1 Changes in interactive behavior over the four exercises

Table 3

Descriptive statistics for all interactive behaviors

Behaviors	Exercise 1	Exercise 2	Exercise 3	Exercise 4
Discussing	122 (30.5%)	163 (40.8%)	178 (44.5%)	142 (35.5%)
Asking questions	72 (18.0%)	19 (4.8%)	35 (8.8%)	23 (5.8%)
Helping	15 (3.8%)	25 (6.3%)	17 (4.3%)	12 (3.0%)
Making agreement	10 (2.5%)	27 (6.8%)	2 (0.5%)	14 (3.5%)
Arguing	2 (0.5%)	5 (1.3%)	7 (1.8%)	8 (2.0%)
Checking	6 (1.5%)	4 (1.0%)	2 (0.5%)	4 (1.0%)
Not paying attention	83 (20.8%)	48 (12.0%)	61 (15.3%)	55 (13.8%)
Disturbing	4 (1.0%)	6 (1.5%)	2 (0.5%)	3 (0.8%)
Asking unrelated-questions	10 (2.5%)	16 (4.0%)	29 (7.3%)	15 (3.8%)
Chatting	76 (19.0%)	87 (21.8%)	67 (16.8%)	124 (31.0%)

In this study, the behavior of discussion in the category of interactive on-task behaviors was always the most frequent form of interaction, showing jigsaw reading can significantly influence the participants' interactive behaviors. In the cooperative

learning environment, students were capable of negotiating the answer with the text and expressing their own thoughts and ideas by mutual discussion. In the expert teams, interpersonal discussion helped students to grasp the textual meaning in order to accomplish their mission to become experts. They exchanged opinions, gave help, and taught their group members. Each student clearly understood their own responsibility because they needed to return to the original base groups to share the information. During the treatment, they were active in discussing the content. When encountering problems, they would ask questions or help their members understand the text. Also, they would express their own stances through agreement or disagreement. This was because students' interactive behaviors corresponded to the two fundamental elements in cooperative learning, interdependence and personal accountability, which helped students to comprehend the content and enhance interactive behaviors through discussion. In short, the jigsaw reading activity provided an interactive environment which made students focus on dealing with their task.

On the other hand, based on the statistics for the category of non-interactive off-task behaviors, the participants decreased their frequency of not paying attention over the course of the four exercises. It is likely that the students were not familiar with what they needed to do at the beginning of the jigsaw reading program, so they were less likely to concentrate on the task. After the implementation of two exercises, they were able to clearly understand what role they had to play and their personal accountability in the activity. In this treatment, they tended to discuss the question and provide help to understand the meaning of the text. When accomplishing the task, they would check the answers. They effectively concentrated on the task and decreased unrelated interactive behaviors by increasing interactive discussion.

As for the category of interactive off-task behaviors, the students spent much time in chatting during each observation, and the frequency of this behavior increased with each exercise. A possible explanation is that students discussed the content as well as checking the answers more effectively as they became more familiar with the implementation process of jigsaw reading. They may have spent less time in the on-task interactive behaviors with their group members during the discussion of the content. They tended to discuss their own questions, as their interactive behaviors increased with topics unrelated to the text. A similar finding was reported in Chiu's (2006) study, in which students were inclined to chat more when they had finished their mutual discussion. They spent more and more time revising their own writing and tended to be distracted from the cooperative learning. Students' mutual discussion stimulated them to consider the questions. Therefore, it may be a good idea for teachers to reduce discussion time to encourage students to focus on further investigation of the content. Students' interactive behaviors would become more and

more meaningful, and their reading would further improve.

How effective is jigsaw reading in improving students' English reading achievement? (word recognition tests, reading comprehension tests, and quizzes)

The data from the paired sample T-test, in Table 4, shows there were significant differences in the posttests of word recognition and reading comprehension respectively ($t = -4.21, p = .00$; $t = -3.12, p = .00$). All participants' scores in word recognition and reading comprehension increased significantly in the posttest ($M = 81.20, SD = 20.93$; $M = 68.00, SD = 12.91$). As for the four quizzes, Table 5 shows the descriptive statistics for the quizzes. In terms of overall reading achievement, all the results of the quizzes, as displayed in Table 6, showed the participants made progress during the treatment. Only the results of Quiz 2 and Quiz 3 did not demonstrate a significant difference ($t = 1.89, p = .07$). A possible explanation will be offered later.

Table 4

A paired samples T-test for the pre-test and post-test on reading achievement

	Pre-test (N=25)		Post-test (N=25)		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Word Recognition	63.20	27.91	81.20	20.93	-4.21	.00*
Reading Comprehension	54.80	18.06	68.00	12.91	-3.12	.00*
Total	59.00	18.64	74.60	14.98	-4.98	.00*

Note. * $p < .05$

Table 5

Descriptive statistics for the four quizzes

(N=25)	<i>Minimum</i>	<i>Maximum</i>	<i>M</i>	<i>SD</i>
Quiz 1	0	90	44.40	21.42
Quiz 2	40	100	77.60	15.62
Quiz 3	50	90	70.80	13.52
Quiz 4	60	100	85.20	12.29
Total	48	95	69.50	11.88

Table 6

Comparison of results in the four quizzes

(N=25)	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Quiz 1 & Quiz 2	33.20	20.36	-8.16	.00*
Quiz 1 & Quiz 3	26.40	18.90	-6.98	.00*
Quiz 1 & Quiz 4	40.80	21.20	-9.62	.00*
Quiz 2 & Quiz 3	6.80	17.96	1.89	.07

Quiz 2 & Quiz 4	7.60	14.80	-2.57	.02*
Quiz 3 & Quiz 4	14.40	11.21	-6.42	.00*

Note. * $p < .05$

The overall results in reading achievement showed that there was a significant improvement in the aspects of word recognition and reading comprehension after the application of jigsaw reading. It is likely that mutual discussion and the electronic storybooks enhanced students' reading achievement, and there are two possible explanations for this.

One possible explanation is that the participants' mutual discussion of the content of electronic storybook in cooperative learning helped them to understand the meaning of new words and content more clearly. Students engaged in jigsaw reading attempted to discuss the questions and offered answers to their group members in order to accomplish their task. In the expert teams, they tried to become expert in their own part as professionals, so they were responsible for sharing their knowledge with their group members. In the original base groups, they also had to bring their own part to connect each part to complete the story by discussion. The findings corresponded with those of Ceolho (1992), who found that jigsaw reading provided an excellent learning environment for students to produce purposeful talk in class. Students not only had to be accountable for their own task, but also needed to master the entire content. Therefore, the findings showed the participants in the jigsaw reading could improve their reading achievement more effectively through interpersonal discussion.

Another possible explanation for the findings is that the electronic storybooks served as a clue helping students to associate pictures with the meanings of new words and to comprehend the content more closely. The pictures in the electronic storybook attracted the participants' attention and presented the setting and characters, thus helping the students to comprehend the content. The sound and animation also helped them to guess and imagine the meanings of new words. Therefore, they could relate to the words and pictures through the functions of the electronic storybooks. This is consistent with the findings reported by Wei (1999) that jigsaw reading was significantly related to improvement in students' reading comprehension. Electronic storybooks provide sound and animation to support students' imagination. Students can read electronic storybooks by paying attention to both textual and non-textual data to improve their reading, so their reading achievement showed a significant improvement.

The four quizzes also provided evidence that jigsaw reading could bring about a significant improvement in the participants' reading achievement. A comparison of the results of Quiz 2 and Quiz 3 showed that although the students' average mean

score was higher than seventy, there was no significant difference in their results in these two quizzes. It is likely that the electronic storybook used in this treatment was a little difficult for students to comprehend, as it contained many unknown words and verb phrases such as right off, get off, and so on. This finding is similar to that of Kinniburgh and Shaw (2007), who reported that when students did not understand the meanings of words, they could not comprehend text quickly. In this case, students had difficulty understanding the verb phrases, for which the electronic storybook did not show any animation, so it was difficult for them to understand the meaning of the story.

What attitudes do students display toward cooperative learning and electronic storybooks?

The QCL and the interviews were used to analyze students' attitudes toward cooperative learning and electronic storybooks. The results showed that the participants had positive attitudes toward cooperative learning and electronic storybooks, and they agreed that jigsaw reading could significantly improve their English reading. The results of the QCL are summarized with descriptive statistics in Table 7.

Table 7

Summary of the four domains in QCL

Items	Domain	Response Frequency (%)				M	SD
		SA	A	D	SD		
1-6	(1) Cooperative Learning	45.3%	42.7%	11.3%	0.7%	3.32	0.54
7-10	(2) Expert teams in jigsaw reading	46 %	44%	9%	1%	3.35	0.54
11-15	(3) Original base groups in jigsaw reading	52.8%	40%	7.2%	0%	3.45	0.46
16-20	(4) Use of electronic storybook	55.2%	37.6%	6.4%	0%	3.27	0.54
Total	Overall	49.9%	41.1%	8.6%	0.4%	3.35	0.52

Note. SA= strongly agree; A= agree; D= disagree; SD= strongly disagree

The results of this study revealed that students had positive attitudes toward cooperative learning and electronic storybooks. The following discussion explores the reasons why the participants were able to change their attitudes in four domains.

With regard to cooperative learning, students thought jigsaw reading could enhance their overall reading ability, including the improvement of their reading achievement and the promotion of interaction with their group members. It is possible

that jigsaw reading provided a cooperative learning environment for interpersonal interaction and mutual discussion. Students became more active in sharing information, listening to each other and expressing their own opinions and thoughts. In the traditional classroom, there was little interaction when students engaged in the task with their classmates (Liang 1996). They received knowledge passively, and did not have many chances to exchange information and discuss the content with their classmates in class. However, once they had had the opportunity to share their own ideas and discuss the content of readings in the other English classroom, they felt excited about this jigsaw reading activity. They were more willing to use discussion to provide integrated information to construct the content. They became more and more active in expressing their own ideas, and interacted more with their group members. Students' interview responses confirmed the quantitative analysis, showing that they believed jigsaw reading could help their learning. The process of cooperative learning involved discussing the content, providing knowledge, asking questions, and sharing information with their group members in the groups. They had a positive attitude toward cooperative learning and interpersonal discussion.

With regard to the expert teams, most students in the expert teams believed that they could discuss the content and teach their group members actively when their group members did not know the answers. They clearly understood the reason why they needed to make an effort and work together because they had to become experts to teach their group members in the original base groups. They took responsibility for their own performance. The result was similar to that reported by Oxford (1990), in that students understood how to communicate with their group members from cooperative learning, which benefited themselves. The mutual discussion increased students' learning motivation and levels of interaction. They produced many more utterances when teaching their group members, which implied that they comprehended the content. They were professional enough to teach the content to their group members, so they had a positive attitude from the discussion and personal accountability in the expert teams.

In the original base groups, the participants thought everyone made efforts to complete the common task. They not only mastered their own part of the content but also understood the entire task. They formed close relationships with their group members through interdependent discussion. The performance of students in the original base groups corresponded with the findings of Yang and Chen's (2003) study, in that each student engaged in a task at the same time to achieve a common goal. Thus, they would provide detailed information and interact frequently with their group members. The common goal and discussion aroused students' learning motivation to accomplish the task. On the other hand, the students' interviews also

supported this analysis. They believed that their relationships and interactions with their group members improved. It is likely that they understood the information they shared and offered to their members, and that helped them to grasp the textual meaning and construct summaries of the entire content. They were capable of integrating information and comprehending the content by means of mutual discussion. In the original base groups, they had positive attitudes toward the common goal and the discussion.

As for electronic storybooks, the participants agreed that the electronic storybooks could facilitate their reading by improving their reading achievement and promoting positive attitudes toward learning. The students liked to read electronic storybooks because they provided cues to facilitate their comprehension of the content more clearly and quickly. Although they did not know the meaning of unknown words, they were able to look at the pictures and animations to imagine the roles and guess what they were doing to comprehend the content. Most studies have also proved that the sound, animation, words, and text of the electronic storybooks can assist students to understand the meaning of unknown words (Adam and Wild, 1997; Talley, Lancy, and Lee, 1997). The visual aids may influence students' reading, and the cues provided by the multiple-functions supported their comprehension of the content of the electronic storybooks. In addition, this was the first time students had read the material in these electronic storybooks, and they felt curious. They were motivated to read repeatedly and discuss the content with their group members in order to comprehend the content. Therefore, the electronic storybook served to enhance their learning motivation and improve their reading. They had positive attitudes toward the discussion of the content of the electronic storybooks and positive interaction with their group members.

Conclusion and Pedagogical Implications

This research project found that using jigsaw reading could change students' interactive behaviors with other group members during each observation. Also, it was found that jigsaw reading can effectively help in improving the students' English reading achievement and attitudes toward cooperative learning and electronic storybooks. Based on the results of this study, two pedagogical implications for English teachers and school administrators are offered.

First of all, since the employment of jigsaw reading was found significantly beneficial to students' reading, it is recommended that teachers implement the jigsaw reading process in their classes. By dividing students into heterogeneous groups, high achievers can give help to low achieving students who need assistance. They will increase their reading achievement and enhance personal accountability within the

groups. In addition, jigsaw reading provides a student-centered learning environment to make students accomplish a common goal. Students have positive attitudes toward cooperative learning and become more actively interactive by means of interdependent discussion. This will not only enhance students' learning motivation but also decrease their anxiety in class. Also, teachers can play the role of facilitator and observer when conducting the task.

On the other hand, the abundant online resource of electronic storybooks can be used to help students enhance their reading motivation and encourage them to form a habit of regular reading. The electronic storybook with animations, sound, and pictures of authentic life can help students comprehend the content. English teachers or school administrators can arrange a morning self-study time or a regular learning time for students to read electronic storybooks. They can also design a reading card with the encouragement of group rewards and individual rewards. When students finish reading a book, they can get a smile stamp. By doing so, students will be encouraged to cultivate a regular reading habit. Additionally, English teachers or school administrators can make good use of online learning resources such as TumbleBooks website and LittleKiss website. They can download a series of electronic storybooks and establish a mini library learning corner. Students can read the selected electronic storybooks they like. This is likely to be helpful in enhancing students' own independent learning and reading motivation.

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Appendix A

Questionnaire of Cooperative Learning

Dear students,

The purpose of this questionnaire is to investigate your attitudes toward the process of implementing jigsaw reading in English learning. There are no standard answers for right or wrong. Please read these questions and circle the number based on your experience and thoughts. The questionnaire is only for research purposes. Thank you for your assistance.

The Department of Applied English
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(Strongly Disagree=SD; Disagree=D; Agree=A; Strongly Agree=SA)

<u>Jigsaw Reading</u>	SD	D	A	SA
1. I like to participate in the activity of jigsaw reading.	1	2	3	4
2. I think the activity of jigsaw reading can improve my English learning.	1	2	3	4
3. I think the activity of jigsaw reading can promote friendship between my group members and I.	1	2	3	4
4. I like how each member has own opinions and thoughts in jigsaw reading.	1	2	3	4
5. I like to share my opinions and information with my group members.	1	2	3	4
6. I think the activity of jigsaw reading can help me learn much more things than individualistic learning.	1	2	3	4
<u>Expert Teams</u>				
7. I can share my answers with my group members in the expert teams.	1	2	3	4
8. I can ask other group members actively in the expert teams when I do not know the answers.	1	2	3	4
9. Each member in the expert teams can mutually share their own opinions.	1	2	3	4
10. The members in the expert teams can teach me actively when I do not know the answers.	1	2	3	4

Original Base Groups

- | | | | | |
|--|---|---|---|---|
| 11. I express the answers I know to my members in the original base groups. | 1 | 2 | 3 | 4 |
| 12. The members of original base groups can confirm whether their members understand the text or not. | 1 | 2 | 3 | 4 |
| 13. I discuss with my members in the original base groups before answering the teacher's questions. | 1 | 2 | 3 | 4 |
| 14. I feel teaching members can make me understand about learning the text in the original base groups. | 1 | 2 | 3 | 4 |
| 15. Both members of original base groups and I made efforts to complete the tasks based on electronic storybooks for the group grades. | 1 | 2 | 3 | 4 |

Electronic Storybooks

- | | | | | |
|---|---|---|---|---|
| 16. I feel that reading electronic storybooks is interesting. | 1 | 2 | 3 | 4 |
| 17. I can guess its content by looking the electronic storybook name. | 1 | 2 | 3 | 4 |
| 18. I can guess its text from the cover pictures of the electronic storybook. | 1 | 2 | 3 | 4 |
| 19. I can guess the meaning of unknown words in the text from the pictures in the electronic storybook. | 1 | 2 | 3 | 4 |
| 20. I feel that electronic storybooks are more attractive to me than general picture books. | 1 | 2 | 3 | 4 |

Appendix B

Interview Questions for Students about Jigsaw Reading

1. Do you think that the jigsaw reading activity was helpful for learning English?

Why or why not?
2. Did you like the jigsaw reading program? Why or why not?
3. How was your performance in the jigsaw reading activities? Was there any difference in your performance in the expert teams and the original base groups?
 - 3.1 Were you responsible for your task in the jigsaw reading activity?
 - 3.2 Did you share your opinions and answers with your group members in the expert teams?
 - 3.3 Do you think that sharing information can help you understand the text of electronic storybooks? Can it improve your relationship and interaction with your classmates in class?
4. Do you like to read electronic storybooks? Why or why not?
 - 4.1 Can the functions of the electronic storybooks help you more easily understand the content?

**Evaluation of teaching performance of English courses by
applying data envelopment analysis and two-phase segmentation**

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Manuscript

Evaluation of teaching performance of English courses by applying data envelopment analysis and two-phase segmentation

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Abstract

Effective teaching performance is a crucial factor contributing to students' learning improvement. Students' ratings of teachers at the end of each semester can indirectly provide valuable information about teachers' performance. This paper selects classes of freshmen students taking a course of English in a university of Taiwan from the academic year 2004 to 2006 as the research object. We adopt the data envelopment analysis, a reliable and robust evaluation method, to identify the relative efficiencies of each class. The calculation is performed in two phases. In phase 1, all the classes are in the same pool. The results of numerical analysis in phase 1 are used to clarify whether the existing teaching methods can achieve the desired results and what are the improved methods. Based on the calculation of phase 1, we segment all the classes into 2 groups according to their contribution of output indicators in calculating efficiency values. The empirical results are expected to identify more objective classes and to reveal that the evaluated classes refer to different efficient classes in different phases and their ranking order changes accordingly. This method can help to provide some concrete and practical teaching strategies for the inefficient classes.

Key words: data envelopment analysis; English courses, teaching performance; segmentation.

1. Introduction

English remains an indispensable communication tool and a valuable skill for the English as second language learners who expect to enter the job market. In Asian non-Latin speaking countries such as Taiwan, Japan, China, and South Korea, students often struggle to have a good command of the English language in their professional life. Effective teaching performance is a crucial factor contributing to students' learning improvement. Students' ratings of teachers at the end of each semester can indirectly provide valuable information about teachers' performance. Key performance indicators (KPIs) are measures of accomplishment. Without the evaluation of performance based on key factors and indicators,

there will be no permanent change and improvement in the enhancement of the quality of educational institutions (Azma, 2010).

This paper randomly selects 25 classes (among around 250 classes) of freshmen students taking a course of English in a university of Taiwan of the academic year 2004 to 2006 as the research object. We adopt the data envelopment analysis (DEA), a reliable and robust evaluation method, to identify the relative efficiencies of each class. This study focuses on four indicators as an example: two inputs (the course is clearly explained and can easily be assimilated and good communication channels between the teacher and the students) and two outputs (students' satisfaction about their grades and students' learning performance). These four representative indicators were selected among a total of 10 and have passed the Pearson correlation coefficient test. The calculation is performed in two phases. In phase 1, all the classes are in the same pool. The results of numerical analysis in phase 1 are used to clarify whether the existing teaching methods can achieve the desired results and what are the improved methods. Based on the calculation of phase 1, we segment all the classes into 2 groups according to their contribution of output indicators in calculating efficiency values. The empirical results are expected to identify more objective classes and to reveal that the evaluated classes refer to different efficient classes in different phases and their ranking order changes accordingly.

The remainder of this paper is organized as follows: section 2 (literature review) presents some academic studies in relation with our research. Section 3 (methodology and selected evaluated indicators) introduces the DEA model, explains the method used, presents the data and the important indicators discussed in this paper. Section 4 (empirical results and suggestions) presents the obtained numerical results based on the empirical data which include the efficiency analysis and the segmentation analysis. Section 5 draws the conclusions, limitations and directions of future studies.

2. Literature review

According to Sanders & Horn (1998), students with comparable achievement levels in second grade had different outcomes in fifth grade because of a large number of variables such as socio-economic status, school, and class size. But the variable which had the greatest impact on student achievement was teacher quality. Because teacher performance is so essential to student accomplishment, many studies have tried to define key performance indicators (KPIs) in order to assess and to improve teacher performance. KPIs are tools used by individuals and organizations to track progress and success. Milken (2000) developed a teacher performance based accountability system in public schools in Arizona using indicators such as teacher skills, knowledge, and responsibilities, classroom-level student achievement gains, and school-wide achievement gains.

In 2002, the National Committee for the Evaluation of the University System (CNVSU)

organized in Italy an expert team to devise a teaching evaluation questionnaire, the Short Form Questionnaire (SFQ), to ensure homogenous evaluation in all Italian universities (Iezzi, 2005). The SFQ defined several indicators, such as the structure of the degree, the organization of the course, didactic activity and study, infrastructures, and interest and satisfaction.

Loveland and Loveland (2003) discussed a large number of suggestions for improving the ratings of 10 factors identified as significant such as (in order of priority) knowledge of the subject, communication skills/ability, enthusiasm for the subject, encouragement of student participation, rapport with students, fairness in grading, timeliness in providing feedback, organization of class, adequacy of text-book and other learning materials, and instructor's preparation for class.

Wolf et al. (2004) described the weaknesses (poor delivery of course contents, being disorganized, inaccessible, and displaying weak teaching skills) and the qualities (being a knowledgeable and strategic teacher, creating a positive learning environment, demonstrating professionalism, demonstrating positive personal traits, and displaying scholarly traits) in faculty teaching performance.

Johnes (2006) applied Data envelopment analysis (DEA) to measure the performance of Higher Education institutions (HEIs). This study uses an output-oriented approach and indicators such as score based on best 3 A levels or equivalent, gender, school, % of graduates who are female, % of graduates who did not attend an independent school, and pass/other. Johnes (2006) shows that measures of the efficiency of departments derived from individuals' efficiencies are much more highly correlated with department level efficiency scores.

Martin (2006) applied DEA methodology and selected indicators concerning both the teaching and the research activity of the departments of the University of Zaragoza (Spain) in order to assess their performance. The inputs selected were human resources, financial resources and material resources; the outputs were credits registered \times experimental coefficient, Ph.D. credits offered, Ph.D. completions, annual research incomes, and scientific production index.

McGowan & Graham (2009) highlighted four indicators contributing most to improved teaching: active/practical learning, teacher/student interactions, clear expectations/learning outcomes, and faculty preparation.

Wu and Li (2009) constructed a performance measure indicators system for higher education using four perspectives: financial, customer, internal process, and learning & growth. Zhou and Wang (2009) applied DEA to analyze the efficiency of 16 universities in China. Their performance indicators are teachers as labor power index, financial power, physical power, number of graduates, and scientific research.

Montoneri et al. (2011) applied DEA to assess the performance of English writing courses in a university of Taiwan and selected four indicators: preparation of teaching contents, teaching skills, fair grading, and students' learning performance. They showed that

the evaluated classes may refer to different facet reference sets according to their actual values located in lower or higher ranges. As a result, inefficient evaluated classes may compare themselves with efficient evaluated classes in their range and make improvement little by little.

Various studies have been conducted on the KPIs of evaluation, but there is little consensus concerning the choice of indicators to assess the performance of teachers and educational institutions. The main purpose of this research is not to decide which indicators are the most suitable, but to find the more important indicators and help to formulate improvement suggestions for educators.

3. Methodology and selected evaluated indicators

The efficiency assessment is often conducted by DEA which can measure the relative efficiency of educational institutions from commonly available performance indicators. This paper uses DEA to investigate the indicators contributing to teaching performance in a university of Taiwan. We use students' ratings of teachers (questionnaires filled at the end of each semester) about the course they follow.

3.1. Origins and application of DEA

The starting point of DEA is attributed to Farrell's seminal 1957 paper (Førsund and Sarafoglou, 2002). In his study, Farrell introduced his concept of efficiency measurement. This concept became more popular after Charnes, Cooper, and Rhodes (1978) developed Farrell's efficiency measurement concept. Their method, the so-called "Charnes-Cooper-Rhodes (CCR) model" or "CCR model" includes the function and concept of benchmarking and introduced the concept of multiple inputs and multiple outputs. The CCR (ratio) model is nowadays the most widely used DEA model. If the efficiency value of the CCR model equals 1, the evaluated unit is efficient (of optimal performance); if the efficiency value is less than 1, the evaluated unit needs some improvement (Lin et al., 2009; Lee, 2009).

DEA is a reliable and robust evaluation method which has notably been applied to assess the efficiency of educational institutions (Ahn et al., 1989; Johnes & Johnes, 1993; Ng & Li, 2000; Abbott and Doucouliagos, 2003; Johnes, 2006; García-Aracil and Palomares-Montero, 2008). It has also been applied more recently to assess the performance of various courses (Mathematics and Science in Ismail, 2009; English writing courses in Montoneri et al., 2011).

3.2. DEA model

This paper adopts the evaluating method—DEA to perform the efficiency evaluations of a course of English for freshmen from various departments. We investigate the relative efficiency of decision-making units (DMUs), that is, the evaluated classes. The DMUs'

relative efficiency values are calculated under an output oriented CCR model. According to Montoneri et al. (2011), minimizing input indicators in order to obtain an efficiency value equal to 1 can mislead educators. Therefore, the output oriented model is more suitable than an input oriented model, notably because it can emphasize on how much the insufficiency of the output performance is under the current input resources without additional input efforts.

3.3. Data selecting—input and output indicators

The data source

The study case is a private university established in 1956 in Taiwan. There are approximately 11,000 undergraduate students in the university. The data comes from the university's online student rating system, which provides student feedback to professors at the end of each semester. Students are required to fill out the questionnaires.

The characteristics of the research object are as follows:

1. Freshmen students in a university of Taiwan from the academic year 2004 to 2006.
2. The classes are randomly selected from around 250 classes among 21 departments. English majors from the Department of English Language, Literature and Linguistics are not included.
3. English is a required course for freshmen for all the departments of the studied university. All the classes follow a similar course to meet the homogeneity of the evaluated object.
4. The English course is a 2-credit course (2 hours/week). Each teacher can choose the text-book of his/her choice. Most of the teachers propose group discussions and role plays during the class.
5. A total of 25 classes taught by full-time and part-time teachers are selected as the decision making units (DMUs), that is, the evaluated units. They are named from D1 to D25.
6. Among the selected departments for this research: Department of Mass Communication, Department of Law, Department of Chinese Literature, Department of Social Work and Child Welfare, Department of Applied Chemistry, Department of International Business, Department of Accounting, Department of Tourism, Department of Computer Science and Information Engineering, and Department of Finance.

The characteristics of the data source are as follows:

1. The data are based on questionnaires (10 questions) filled out by the students at the end of each semester for each class. Each question is rated from 1 (very unsatisfied) to 5 (very satisfied) by the students.
2. This paper aims at providing a method to identify the indicators contributing to teaching performance; this method can be applicable to different kinds of data and various types of courses.

3. To ensure the reliability of the questionnaires, at least half of the class must answer seriously. If a student gives ratings too different from the rest of the class, he/she is excluded.
4. The average scores of each question undergo a correlation analysis to test the reliability of the ratings and to find representative indicators in this study.
5. The data concerning the selected indicators is fed in the software Frontier Analyst to calculate the performance values of each evaluated class.

After the rule of thumb, the number of evaluated units is suggested to be two times or even four times the number of indicators. Based on the questionnaires, four indicators are appropriate in the current research. The indicators selected for the evaluation model are abbreviated by I1, I2 and O1, O2 respectively and presented as follows:

Input indicators:

- I1. Course clearly explained and easily assimilated: it refers to the degree of teachers' professional knowledge for the preparation of the course.
- I2. Good communication channels between the teacher and the students: it indicates whether the teacher can actively answer students' queries and clear their doubts. It signifies whether teachers can adapt to students' learning habits and their learning channels. This indicator may increase students' learning interest and learning motivation.

Output indicators:

- O1. Students' satisfaction about their grades: students fill the questionnaire before the end of the semester; therefore this indicator should not represent students' immediate response to one particular grade, but a general appreciation of the fairness of grading during the whole semester.
- O2. Students' learning performance: it indicates students' self-recognition of learning performance after receiving a period of language training. This indicator relates teacher quality to student achievement.

3.4. Correlation analysis of input and output indicators

As mentioned in Lin et al. (2009), the Pearson correlation coefficient test is often used to verify whether the correlation is high among variables. A closer relation between two variables means that their correlation coefficient is higher, while less correlated variables have a lower correlation coefficient. Generally speaking, a Pearson correlation coefficient of 0.8 or above represents a very high correlation; a value of 0.6 to 0.8 represents a high correlation; a value of 0.2 to 0.4 represents a low correlation; the value inferior to 0.2 represents an

extremely low correlation or not correlated. The correlation coefficients among the four selected indicators listed in Table 1 below are all above 0.8 with a significant level of 1%. This shows a very high degree of correlation. The principle of isotonicity is satisfied.

Table 1. Pearson correlation coefficients between input and output indicators.

Outputs \ Inputs	I1	I2
	(Course clearly explained and easily assimilated)	(Good communication channels between teacher and students)
O1 (Students' satisfaction about their grades)	0.851*	0.928*
O2 (Students' learning performance)	0.925*	0.936*

Notes: 1. * denotes significant levels at 1%.

4. Empirical results and suggestions

The 25 DMUs' relative efficiency values are calculated under an output oriented CCR model of DEA and are conducted in two phases. In phase 1, all the 25 DMUs are in the same pool. The results of numerical analysis in phase 1 are used to clarify the relative efficiency of each DMU and the indicators' contribution in calculating efficiency value. In phase 2, the 25 DMUs are segmented according to their output indicators' contribution in calculating efficiency value acquired in phase 1. The purpose of this segmentation is to regroup DMUs of similar characteristics and to identify the more objective DMUs which are suitable for designing questionnaires concerning teaching performance evaluation. This study can provide suggestions to teachers about how to make a better use of limited teaching resources in order to increase their teaching efficiency in short term.

4.1. DMUs' efficiency analysis in phase 1

Table 2 lists some performance indicators of the DMUs which are ranked by descending order of "Efficiency value". The DMUs with an efficiency value equal to 1 are efficient can constitute "reference sets" which form efficiency frontier curves. If the efficiency value is less than 1, the evaluated unit is inefficient. The efficient DMUs are the referring standards for other inefficient DMUs. The efficiency value of each DMU is calculated by the distance of their locations to the efficiency frontier curves. The results show that the average efficiency of all the DMUs is 0.968; that of the inefficient ones is 0.962. The efficiencies of the DMUs D15, D20, D19 and D16 in phase 1 show the best performance with value of 1. That is, they are all on the efficiency frontier curves without the need of further improvement in the inputs and outputs. The inefficient DMUs can improve their efficiency by referring to the efficient DMUs of their reference set.

The input and output indicators' contribution in calculating DMUs' relative efficiency values gives information about their importance. As a result, the values listed in Table 2 allow us to identify which inputs and outputs have been used or not in determining efficiency. For example, the contributions of O1 (students' satisfaction about their grades) and O2 (students' learning performance) in calculating D15's relative efficiency values are 71.7% and 28.3%,

respectively; and the contribution values of I1 (course clearly explained and easily assimilated) and I2 (good communication channels between the teacher and the students) are 0% and 100%, respectively. This means that for D15, students' satisfaction about their grades is almost 3 times more important than students' learning performance in calculating its relative teaching efficiency, which is only influenced by the input indicator I2; that is, the good communication channels between the teacher and the students. The input and output indicators' average contributions for all the DMUs reveal that O2 and I2 are the major indicators in the efficiency evaluation of studied empirical example, with 61.3% and 80.9%, respectively. That is, generally speaking, the students' learning performance is the major output indicator and the good communication channels between the teacher and the students is the major input indicator.

Suggestions

In order to improve teaching performance, teachers of inefficient DMUs should emulate the efficient DMUs of their reference set and focus on enhancing the communication channels, adapt to students' learning habits and their learning channels, such as language learning websites, learning software, online courses, mobile phones, Twitter, Facebook, blogs, etc., in order to give them enough learning support during and outside the class. Consequently, students' learning motivation and performance will be increased accordingly.

Table 2 Relative performance indicators of DMUs in phase 1

DMU name	Efficiency value	Rank	Reference set	Contribution in calculating efficiency value (%)			
				O1	O2	I1	I2
D20	1.000	1	D20	26.1	73.9	0.0	100.0
D16	1.000	1	D16	95.7	4.3	81.6	18.4
D19	1.000	1	D19	74.5	25.5	0.0	100.0
D15	1.000	1	D15	71.7	28.3	0.0	100.0
D22	0.990	5	D20	0.0	100.0	0.0	100.0
D24	0.986	6	D15, D19	72.3	27.7	0.0	100.0
D13	0.985	7	D15, D20	0.0	100.0	12.5	87.5
D7	0.980	8	D15, D20	0.0	100.0	12.1	87.9
D17	0.978	9	D15, D19	72.3	27.7	0.0	100.0
D1	0.975	10	D15, D20	0.0	100.0	12.6	87.4
D25	0.969	11	D15, D19	72.7	27.3	0.0	100.0
D21	0.967	12	D15, D20	0.0	100.0	12.3	87.7
D10	0.963	13	D15, D20	26.4	73.6	0.0	100.0
D9	0.960	14	D20	0.0	100.0	0.0	100.0
D4	0.959	15	D15, D20	0.0	100.0	12.5	87.5
D14	0.959	16	D15, D20	0.0	100.0	12.2	87.8
D5	0.957	17	D15, D19	72.5	27.5	0.0	100.0
D3	0.957	18	D15, D20	0.0	100.0	12.4	87.6
D12	0.956	19	D15, D19	72.1	27.9	0.0	100.0
D2	0.956	20	D15, D20	0.0	100.0	12.3	87.7
D23	0.950	21	D15, D16, D19	96.0	4.0	82.5	17.5
D11	0.950	22	D15, D19	71.7	28.3	0.0	100.0
D18	0.947	23	D15, D20	0.0	100.0	12.6	87.4
D8	0.943	24	D15, D19	72.2	27.8	0.0	100.0
D6	0.920	25	D15, D19	71.9	28.1	0.0	100.0
Average of all the DMUs	0.968			38.7	61.3	11.0	89.0
Average of the inefficient DMUs	0.962			33.3	66.7	9.2	90.8

Note: O1 is “students’ satisfaction about their grades”; O2 is “students’ learning performance”; I1 is “course clearly explained and easily assimilated”; I2 is “good communication channels between the teacher and the students”.

4.2. DMUs’ efficiency analysis in phase 2 — Segmentation of DMUs by output indicators’ contribution

Based on the calculation of phase 1, we segment all the DMUs into 2 groups according to their output indicators’ contribution in calculating the relative efficiency. The DMUs with O1’s contribution superior to 50% are classified as the group O1 which contains 12 DMUs: D16, D19, D15, D24, D17, D25, D5, D12, D23, D11, D8 and D6. The DMUs with O2’s contribution superior to 50% are classified as the group O2 which contains 13 DMUs: D20, D7, D10, D13, D22, D1, D21, D14, D2, D4, D3, D9 and D18. For example, D16 belonging to group O1 has O1’s contribution (95.7%) superior to that of O2 (4.3%).

In phase 2, the calculation of each DMU’s relative efficiency is separately conducted in the two groups and the efficient frontier curves are reconstituted in the two different segmented groups. Table 3 includes each DMU’s relative efficiency, rank order and output indicators’ contribution in calculating relative efficiency in phase 1 and phase 2. The results reveal that:

1. One new efficient DMU appears in phase 2

The 3 efficient DMUs (D16, D19, and D15) in phase 1 are still efficient in phase 2; but one more DMU (D7) becomes efficient in phase 2 and is located in the segmented group O2. Because the segmentation according to output indicators' contribution makes the new reconstituted frontier curves in group O1 now closer to the O1 value and in group O2 now closer to the O2 value, this results in a new efficient DMU appearing in group O2 in phase 2.

The DMUs of group O1 are more influenced by O1 in phase 2 than in phase 1; the DMUs of group O2 are more influenced by O2 in phase 2 than in phase 1. This phenomenon can be proved by the slightly increase or by the same efficiency value in phase 2 than in phase 1.

2. Inefficient DMUs refer to different efficient DMUs in different phases

Because 3 of the 4 efficient DMUs in phase 1 now belong to group O1, one other efficient DMU belongs to group O2. This implies that after the segmentation, the efficient frontier curves are recalculated and the efficient DMUs can probably be changed; some of the inefficient DMUs in group O1 originally referring to the efficient DMUs which are now located in group O2 have to refer to different efficient DMUs, because they are in different pools. For example, the two inefficient DMUs of group O2, D1 and D21, originally referred to the efficient DMUs D15 and D20 in phase 1; because D15 is located in group O1 in phase 2, they refer to the efficient DMUs D20 and D7 instead.

3. Ranking order changes in different phases

In group O1, the 12 DMUs' ranking order in phase 1 is the same as that in phase 2; however, in group O2, the 13 DMUs' ranking order in phase 1 is different from that in phase 2. For example, D22, D1, D21, D4, and D9 have higher rank in phase 1 than in phase 2; and D7, D10, D14 and D2 have lower rank in phase 1 than in phase 2. Only 4 DMUs in group O2 keep the same ranking order as in phase 1. There is one new efficient DMU in group O2 because the new frontier curves are closer to O2 in phase 2. Group O2's efficiency values are equivalent or slightly higher in phase 2 than in phase 1.

4. More objective DMUs appear

In group O2, the major indicator of DMUs D7, D10, D4 and D18 changes from O2 to O1. It implies that these four DMUs are more influenced by the presence of other DMUs and are less objective concerning the result of teaching efficiency. As for the DMUs in group O1, their major indicator is still O1. Therefore, except D7, D10, D4 and D18, all the DMUs of group O1 and O2 are more suitable for designing questionnaires concerning teaching performance evaluation.

Table 3. DMUs' relative efficiency ranks and output indicators' contribution in two phases

Group O1							Group O2						
Unit name	Rank in phase		Relative efficiency in phase		Contribution of O1 in phase		Unit name	Rank in phase		Relative efficiency in phase		Contribution of O2 in phase	
	1*	2	1	2	1	2		1**	2	1	2	1	2
D16	1	1	1.000	1.000	95.7	100.0	D20	1	1	1.000	1.000	73.9	100
D19	1	1	1.000	1.000	74.5	100.0	D7	4	1	0.980	1.000	100.0	0
D15	1	1	1.000	1.000	71.7	71.7	D10	7	3	0.963	0.991	73.6	0
D24	4	4	0.986	0.986	72.3	72.3	D13	3	3	0.985	0.991	100.0	100
D17	5	5	0.978	0.978	72.3	72.3	D22	2	5	0.990	0.990	100.0	100
D25	6	6	0.969	0.969	72.7	72.7	D1	5	6	0.975	0.978	100.0	100
D5	7	7	0.957	0.958	72.5	72.5	D21	6	7	0.967	0.978	100.0	100
D12	8	8	0.956	0.956	72.1	72.1	D14	10	8	0.959	0.973	100.0	100
D23	9	9	0.950	0.950	96.0	96.0	D2	12	9	0.956	0.967	100.0	100
D11	10	10	0.950	0.950	71.7	71.7	D4	9	10	0.959	0.967	100.0	0
D8	11	11	0.943	0.943	72.2	72.2	D3	11	11	0.957	0.965	100.0	100
D6	12	12	0.920	0.921	71.9	71.9	D9	8	12	0.960	0.960	100.0	100
							D18	13	13	0.947	0.951	100.0	0

Note: *: Group O1's rank in phase 1 means that their new rank does not consider the presence of group O2's DMUs. **: Group O2's rank in phase 1 means that their new rank does not consider the presence of group O1's DMUs.

5. Conclusions and suggestions

This paper applies DEA to calculate the relative efficiency values of 25 evaluated classes under an output oriented CCR model. The calculations are conducted in two phases. In phase 1, all the 25 DMUs are in the same pool. The results are used to clarify the relative efficiency of each DMU and the indicators' contribution in calculating efficiency value. All the inefficient DMUs of group O1 (D24, D17, D25, D5, D12, D23, D11, D8 and D6) are suggested to concentrate teaching effort on indicator O1 (students' satisfaction about their grades) in order to increase their relative efficiency in short term. Teachers are suggested to announce grading criteria as clearly and early as possible in order to guide students and to answer their questions and doubts before the exams. After the exams, teachers should give a correction and advices to students. Students who have a bad grade sometimes give up and drop the class. Under these circumstances, communication channels between the teacher and the students should be fast and clear. Students need to feel that teachers care about them. In addition, teachers can offer them some help after the class or during the office hours. Students need to know why they failed, and more important, what they can do to improve their level. This will help enhance students' learning motivation and increase the value of O2 (students' learning performance) at the same time. All the inefficient DMUs of group O2 (D17, D25, D5, D12, D23, D11, D8 and D6) are suggested to concentrate teaching effort on indicator O2 in order to increase their relative efficiency in short term. Teachers can offer students help outside the class (teaching website, English corner, office hours).

In phase 2, the 25 DMUs are segmented according to their output indicators' contribution

in calculating efficiency value acquired in phase 1. The purpose of this segmentation is to regroup DMUs of similar characteristics and to identify the more objective DMUs which are suitable for designing questionnaires concerning teaching performance evaluation. The analysis of phase 2 shows that except D7, D10, D4 and D18, all other DMUs are more suitable for designing questionnaires. It means that on 25 DMUs, 21 can provide reliable information to educators and decision-makers. The results may of course vary according to the year, the subject matter, the departments and the classes selected.

This paper proposes a method to find out the more important evaluated indicators and help to formulate improvement suggestions for educators in Taiwan concerning English courses for freshmen. Our demonstration on how to screen primary indicators can be useful for further studies in other countries or fields. The results of this paper can serve as a model for decision-makers to design the educational policies satisfying the objectives of enhancing the competitiveness of educational institutions. The results of the study need to be interpreted in light of its limitations. DEA only gives efficiencies relative to the data considered. This paper offers suggestions to teachers on how to improve their teaching according to four selected indicators. Future studies could propose to analyze other indicators and conduct research on teachers' response to student ratings.

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Supporting Successful Academic and Social Transition of First Year Students into Higher Education: A Case Study of Entrepreneurship Students at RMIT University

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Topic of Submission: Student Learning, Learner Experiences and Learner Diversity

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Abstract

It is important that educators of first year students focus on learner-centred teaching skills and strategies that support them to develop a sense of ownership of their learning while building collegial networks early in their studies. The successful academic and social transition to higher education can be demonstrated by the ability of students to use higher cognitive level processes and to collaborate with their peers. This case study presents the particular challenges in supporting successful academic and social transitions for first year students mostly fresh from high school, in the context of an undergraduate programme in Entrepreneurship at RMIT University, Australia. The first year students in the Bachelor of Business Entrepreneurship Programme at RMIT require discipline specific foundational knowledge, skills and attributes which will be implemented progressively throughout the program and beyond. In achieving this, the role of the educator has ceased being the exclusive content expert, and transformed into the *learning facilitator* making the essential contributions to the students' learning process that encompasses learning through 'competition' and 'cooperation' amongst student groups (Boyer 1990; Weimer 2002). A three pronged strategy was adopted to devise creative learning experiences that would enhance the academic and social transition of the first year students. The paper presents important findings on how this 'distinctive' approach has enhanced student motivation and engagement.

Introduction

Over the past 20 years a dramatic shift has taken place in the way policy makers and students foresee higher education and the role of universities. Employment and skill development are seen as central to the role of universities (Hager and Holland, 2006). While there is no debate about this expectation, it is important to recognize that employability is not an outcome of one course. It is a result of the entire program experience where graduate employability is systematically developed from ground up through a well designed curriculum. This calls for educators of first year courses to adopt learner-centred teaching skills and strategies that support them to develop a sense of ownership of their learning while building collegial networks early in their studies (Yorke, 2000). A successful academic and social transition to

higher education can be demonstrated by students' ability to use higher level cognitive processes, and to collaborate with their peers.

The Context

Entrepreneurial Process is a foundation course and a pre-requisite to most other entrepreneurship specific courses in the Bachelor of Business Entrepreneurship (BBE) programme at RMIT University. Although this course is primarily offered to students in the BBE programme, it is also offered to those from diverse disciplines such as Engineering, Multimedia Design, Property Management, and Fashion Design. This diversity produces a cohort with significantly different skill, knowledge and interest levels with different expectations and learning styles.

This context presents challenges, particularly in supporting first year students. Feedback and discussion with the students presented three common concerns. *First*, the course (Entrepreneurial Process) attracts students from a wide variety of programs and this produced a cohort with significantly different skill, knowledge and interest levels. Therefore, teaching foundational theory to a variegated group of students was a particular challenge because of the differences in their expectations and learning styles. *Second*, this course sits in the Bachelor of Business Entrepreneurship programme as a first year first semester course, entrusted with the responsibility of ensuring successful academic and social transition of first year students mostly fresh from high school. They require discipline specific foundational knowledge, skills and attributes which will be implemented progressively throughout the program and beyond. The need to engage students in the learning process through problem-based and practical-based exercises was reflected in the discussion. *Third*, the need to develop a number of critical graduate attributes such as, research/analytical skills, report writing skills, presentation skills, team building skills and emotional intelligence also emerged as important concerns.

In response to the concerns, a variety of problem-based and practical-based exercises were adopted in the course to engage students in the learning process. The role of the teacher/educator ceased being the exclusive content expert, and transformed into the *learning facilitator* making the essential contributions to the students' learning process that encompasses learning through 'competition' and 'cooperation' amongst student groups. The teaching practices aimed to enable students to explore the content, relate it to their own experience, and challenge it regardless of their level of expertise, and hence derive their own meaning of the content.

Approaches Chosen for Course Delivery

The following two approaches were chosen to enhance the academic and social transition of the first year students into higher education:

- *Approaches to the support of learning and teaching that influence, motivate and inspire students to learn.*
- *Approaches to assessment, feedback and learning support that foster independent learning.*

A three pronged strategy was adopted to devise creative learning experiences for the students through course delivery:

- **Academic skills transition - adopting a research oriented and a constructivist approach**, engaging students in research projects to develop basic research skills and encouraging them to raise their own questions, generate their own hypotheses and derive their own conclusions.
- **Social skills transition - cultivating *self-directed and collaborative learning*** by designing tutorial activities that require students to work in groups (encompassing the diversity in the class in terms of nationality, gender, age and experience) on problem-based activities, relate it to their own experience and challenge it regardless of their level of expertise, and hence derive their own meaning of the content.
- **Developing *course content* and redesigning *assessments*** to enhance learning and successful academic transition to higher education through explicitly mapping assessments against learning outcomes.

The approaches that were developed are ‘distinctive’: they are not a ‘traditional approach’ to learning typically applied to foundational courses offered in the first year of higher education. Students' independent learning and critical thinking skills were developed through a sequence of tutorial activities for the whole semester, focusing on analysis of case studies and journal articles, and finally undertaking a research project in a peer supported environment, progressively building on the foundational concepts. Since Entrepreneurial Process is a foundational course for the BBE, and offered to large classes of mostly first year undergraduate students, group-based and research-oriented learning activities can be a powerful approach to enhance learning experience. There are a number of recent studies (Biggs, 2003; Barnett and Coate, 2005; Conrad, Johnson and Gupta 2007; Stefani 2009) that have discussed the value of using group-based and research-oriented learning activities to inspire students to learn and foster independent learning.

Instructional practices were adopted that integrate democratic and egalitarian views of education, opening possibilities of different kinds of learning, and in turn enhancing student motivation and engagement (Boyer 1990; Weimer 2002). Constructivism prescribes a whole new level of student involvement with content, where content becomes the means to knowledge, rather than the end. Less knowledgeable and experienced learners interact with content in less intellectually robust ways, but the goal is to involve transition students in the process of acquiring and retaining information. In this notion, educators should facilitate and inspire students to take responsibility for their own learning, becoming self-directed and lifelong learners throughout their professional and personal lives. Naturally, assessments play a dominant role in how students approach their learning. As argued by Biggs (1996): ‘What and how students learn depends to a major extent on how they think they will be assessed.’

In this foundation course on entrepreneurship, this process was applied as follows. In the first tutorial, students are presented with a case study on entrepreneurial attributes that would require them to draw on the foundational concepts of entrepreneurship and their own life experiences to analyse the questions without any indication or suggestion about what should be a correct answer. Students are asked to focus on every single detail of the facts presented in the case and to make inferences by drawing both from the foundational concepts they learnt in the lecture and their general understanding and experience of real life entrepreneurship, and to identify what could or could not be concluded from it. The exercise teaches them how to analyse a case study and draw conclusions and implications from it, and more importantly, how to think critically about what it does and does not answer. Through sponsorship from the publisher of the prescribed text for the course, a case study analysis competition is organized to be held in week 11 where students compete in groups to win ‘book vouchers’ as the prize

through providing best analytical responses to case study questions designed around the key contents of the course.

Students' critical thinking skills are further enhanced with group-based activities in a number of tutorials where students need to independently undertake secondary research on both local and international businesses of their choice to bring in their individual understanding of aspects of entrepreneurship, such as the sources and types of innovations, entrepreneurial marketing, dimensions of social entrepreneurship or even the value of preparing a business plan, and discuss and debate with team members. Even though they employ the analytical methods from our tutorial discussion, they must produce their own individual analysis and arguments with effective writing of no more than 500 words.

As their journey through the course continues, they learn the importance of undertaking literature review not just by merely accepting the authors' views, but by challenging the theoretical model, the methodology and the results directly, then critically thinking about how the findings are relevant to their focus of inquiry and where the gaps are. Thus, they learn to review literature pertinent to their research issues by formulating questions they expect the author to answer. A significant learning outcome for them is to learn how to approach a research paper by challenging the paper to prove its findings and interpretations rather than merely absorbing conclusions.

This activity is followed with a group-based research project that has a set of questions prepared in advance, in keeping with the intended learning outcome. One of the most frequently encountered challenges for the students at this stage is to identify relevant literature that would help them to build a theoretical framework around the research question posed in the study. This is often discussed at length in an attempt to help students see the logical links between the research question, the theoretical model, the hypothesis, the methods of data collection, the analysis and the conclusions. Students very often struggle to understand the limits that exist on what can and cannot be concluded from a single piece of empirical research. However, once they go through the phases of linking research question with the theoretical model and research design, they approach their analysis, conclusions and implications in a much more sophisticated and critical way. Furthermore, much emphasis is given in inspiring students to focus their thoughts, identifying the key elements, and structure their writing. It has been found that problem-based research activities leading to formal report writing and presentation are extremely effective in helping students clarify their thinking and improve communication skills. The research and report writing skills, presentation skills, team building skills and emotional intelligence developed by the students on completion of the course are progressively applied in the programme.

Student Evaluation of the Course

Students acknowledged that the use of learning strategies that involve both competition and cooperation, and the problem-based and research driven approach facilitate a self-directed and interactive way of learning, particularly to those outside of the programme. Students appreciated the interactive and group-based learning activities and associated presentations that replaced assessments that were largely based on broad essay topic when they reflected:

I loved the way we were encouraged and given the opportunity to explore case studies, make presentations, do research, interview entrepreneurs, write reports and display the newly acquired knowledge. It was a real pleasure doing this subject.

Finally, as indicated by the students, a memorable learning experience for them was the Case Study Competition, where student groups competed against each other to win a prize for their ability to answer questions relating to a case study and present their views to the class. The success of the approach adopted in the course can be attested through the following statements from students:

The learnings from this course are things I would use every day in working with teams, to give directions and ensure each sub-team is engaged to achieve results which lead to ultimate team success.

On the first day of the Entrepreneurial Process class I was sitting next to two people who have turned out to be great friends and people that have challenged me to become a better person.

Breadth of Impact in Enhancing Student Learning, Engagement and/or the Overall Student Experience

In all its courses, RMIT conducts a systematic survey – the Course Experience Survey, or CES – of student evaluations of learning and teaching. The key scale reported on is the Good Teaching Scale (GTS). Entrepreneurial Process – a foundational first year course, achieved significant improvements, as can be seen from the chart below. The GTS has increased from 24.5% in Semester 1, 2007 to 67.9% in Semester 1 2010.

The impact of the creative approach to teaching and learning can also be supported through an increase in student numbers from 143 in 2008 to 159 in 2010 as well as increased enrolments from other programmes such as Management, International Business, and Engineering. This is an indication of course popularity and the effectiveness of the curriculum and teaching strategies. In addition, Entrepreneurial Process has also been offered as a core course in the Bachelor of Design (Multimedia Systems) since 2008, and as part of the Entrepreneurship Specialist Stream in RMIT's Bachelor of Commerce, Vietnam, since 2009. Because of the important role the course plays in preparing the first year students to transition well into the programme, it has been integrated to RMIT's standardised architecture for the Bachelor of Business degree, and is expected to attract around 1000 students in onshore and offshore every year. Furthermore, the commitment of the course towards enhancing successful academic and social transition of first year students to higher education has established important foundational benchmarks for teaching entrepreneurship at RMIT, and the teaching strategies have been replicated and adapted by colleagues in the programme.

Concern for Equity and Diversity

The promotion of equity and diversity has been an integral part of the course delivery, which has been carefully implemented to cater to the needs of a diverse first year student cohort. Considerable attention has been paid in the course delivery to the diverse demands, rewards, concerns, responsibilities and expectations of students, including those that combine their study with employment responsibilities. As Entrepreneurial Process is also offered as electives to students with diverse programmes (e.g. Management, Engineering), and the course has had relatively large class sizes (around 150 students), involving students to work individually and in groups encouraged greater participation. A wide range of learning activities as discussed

earlier were developed to adapt to the changing demand. These included the problem-based exercises and presentations to encourage regular attendance and greater participation as well as a group research project to encourage possibility of increased social interactions and cultural exchanges between the teacher and students or among students. Weekly presentation at the tutorials was also introduced to improve the communication and presentation skills. To cater for the variety of needs of the first year students, instructions and marking criteria required for the completion of tutorial activities and other assessments were documented in a way to provide the students greater flexibility and opportunities to learn outside the normal teaching hours. It was important particularly for those students who couldn't attend a lecture for some inevitable reason (e.g. medical reason, work and family commitment) but still got the opportunity to learn. The success of the learner-centred approach applied in the course is demonstrated through the following statements from the first year students.

“Treats everyone fairly and is very helpful...”

“...is an excellent tutor who commits herself to all her students”.

“...Treats students as equals, which gives me the confidence to participate in class.....”

“The course is very relevant to what we experience in real life as entrepreneurs.....”

Conclusion

This case study has demonstrated how a focus on learner centred teaching practices in foundation courses can enhance student outcomes in terms of their successful academic and social transition into the higher education environment, and also contribute towards developing graduate attributes that can be implemented progressively throughout the program and beyond. It also highlights the importance of utilising the student feedback and the GTS scores as a mechanism through which the educator can scaffold future improvements to delivery, practices, assessment and content. The effectiveness of foundation courses can be measured by evidence of students developing their ability to be self-directed, utilise higher cognitive level processes and to collaborate with their peers. It is also important to recognize the relationships we as learning facilitators build with our students and a bond that we create together as a team in the higher learning space which can be taken much further into future.

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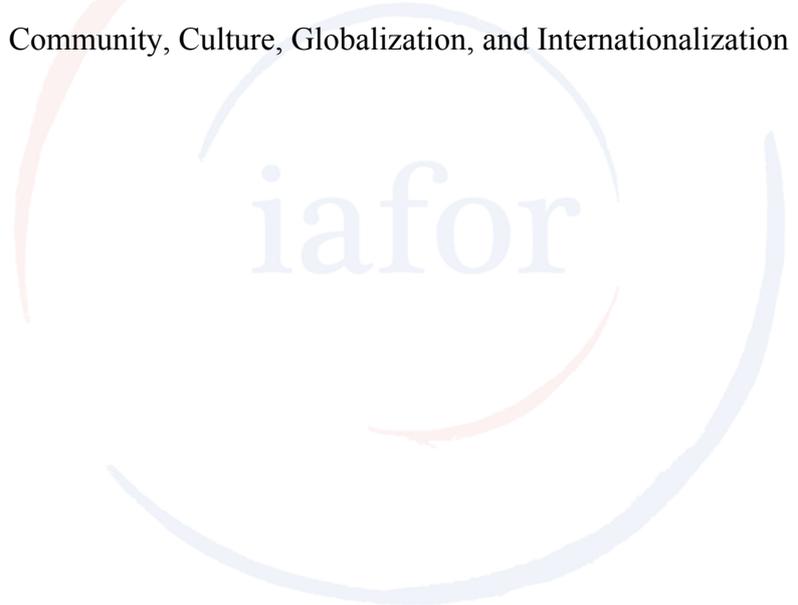
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Teaching American Studies in a Globalized World: Selected Problems

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Community, Culture, Globalization, and Internationalization

The logo for the International Association for Cultural and Interdisciplinary Research (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 circular graphic composed of two overlapping, semi-transparent arcs: a larger light blue arc and a smaller, slightly offset light red arc, creating a sense of motion or a stylized globe.

Teaching American Studies in a Globalized World: Selected Problems

Chester Proshan
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Despite my self-awareness and my strong belief in cultural relativism, there can be no doubt that, as professor of American Studies, I played for Japanese students and colleagues the role of missionary (cultural, not Christian), [and] scientist (bearing the critical techniques of Western scholarship)....

Robert Rosenstone, California Institute of Technology, (1988, p. 274)

I join many other Japanese scholars of American studies in feeling that the time has come for us to ask: “What meaning does American Studies have to us, Japanese, and what is the meaning of doing American studies in Japan?”

Hiroko Sato, Tokyo Women’s Christian University, President of the Japanese American Studies Association (1999, p. 16)

“Globalization” is strongly impacting higher education. Globalization is leading to increasing numbers of students studying at universities outside their homeland. In the United States, for example, in 1970, some 140,000 international students attended universities; in 1980, some 300,000; in 1990, 400,000; in 2000, 540,000; and in 2010, 720,000 (Institute of International Education, 2011). Globalization, or, more broadly, interest in life beyond one’s own country, is also leading to more university students studying, inside their homeland, the history and culture of other nations. As Tawfiq Yousef, a professor of American Studies in Jordan, recently wrote (2006, p. 151), American Studies instruction in the Middle East is “relatively new,” several programs having started in the 1990s or later.

Both in and outside the United States, the number of EFL university students studying American Studies is growing. This development has important implications for instructors in the field. If there is any truth to the idea that how we teach strongly depends on whom we teach, then professors of American Studies need to be alert to the

growing numbers of students who are studying American Studies who do not have English as their first language. Discussed below are three instructional concerns raised by this development in the field. The first concern focuses on EFL-based American Studies and learning goals. The second concern addresses EFL American Studies and the challenge of balancing “conventional” learning outcomes with the almost inevitable polemics that come with any public discussion and interpretation of the United States, especially the United States and international affairs in the modern world. The third concern treats EFL American Studies instruction and the problem of evaluating student performance.

In taking up these three matters, I will refer to some observations made in the recent literature on American Studies pedagogy. Mainly, however, I will speak from the point of view of my own experience as an instructor in the field. Most of my career teaching American Studies has been in Japan, where I have been a professor in the field at my university for more than twenty years. In Japan, I have taught American Studies to undergraduate and graduate students, Japanese and from other countries, especially students from elsewhere in East Asia, in particular, China, South Korea, and Taiwan.

EFL American Studies and Learning Goals

American Studies has been taught at universities in the United States for more than fifty years (Horwitz, 2011). Like any academic field, American Studies has evolved, topically, theoretically, and methodologically. In its early years, American Studies was strongly influenced by the field of literature and focused on the production of “high” culture by elite White Protestant men, the hegemonic group in the nation’s experience. Over time, American Studies has both deepened and widened its frame of interest. Contemporary investigation examines the cultural diversity in American experience, past and present. Difference among particularistic groups, for race, religion, and ethnicity, grounded in and influenced by the constructs of power and class, and shaped by the identity of gender, is explored within the context of the lives of ordinary individuals, not the “elevated” activities of a select few. Contemporary American Studies also seeks to understand the complex and vexed weave of American cultural experience, since and before the founding of the United States, in comparison with cultural experience in other lands, including countries other than the United States in the Americas. Comparative transnational inquiry is pursued.

No matter its shifts in inquiry, American Studies, as taught at universities in the United

States, is content-driven. The English language competence of students is assumed. Students who do not have English as their first language need to achieve an adequate level of competence in English before they are accepted for enrollment in degree-granting programs at universities in the United States. At U.S. universities, American Studies courses focus on American Studies. The instructional goal is grounded in content.

American Studies instruction in my situation, teaching EFL students in a country where English is not the first language, is presented with a very different landscape for pedagogical goals. At my university, and I think broadly at universities in Japan if not generally at universities in countries where English is not the native language, American Studies courses are open to students who have a range for English skills. American Studies instructors in my situation usually have students who are very mixed for English ability, especially English listening and speaking skills. Moreover, while some students are mainly drawn to a particular course because of content, other students are not in the course primarily to learn about the topic. Commonly, students take an EFL-based American Studies course as a way to improve their English. As Stacilee Ford and Clyde Haulman, professors of American Studies in Hong Kong, have written (1996, p. 51) about their students, "...improving English competency is often a motivating force for those students that do select American Studies." American Studies attracts as an English skills course as much, if not more than, as a content course. In a classroom where the instructor and students have different expectations about what learning should take place and, even more, the students have different abilities for language, what should the learning goals be?

At universities in the U.S., professors can teach American Studies anticipating that students will learn language through content. I have come to believe that for American Studies instructors in my situation the reverse is true: content is learned through language. For learning to take place in EFL-based American Studies, the inherent communicative gap between instructor and learner needs to be assigned instructional priority. In lecture as well as seminar, for students to be engaged and satisfied with instruction, they need to be able to generally understand, and be generally understood when they speak. Shaping instruction to meet these needs changes the contour of the American Studies classroom significantly. Time usually used in class for content needs to be given instead to language matters. On the one hand, formal academic English used in the secondary literature needs to be made accessible to EFL students in the English

they have been taught in school, contemporary general English. On the other hand, informal English used in original sources—idioms, slang, regional vocabulary—also needs to be made understandable to students through being presented in modern everyday English. As Gönül Pultar, a professor of American Studies in Turkey, has written (1999, p. 12) about the question of the kinds and levels of English vocabulary and instructional materials to be used in a course:

In Turkey, a non-Christian and in a way non-“Western” society, the problems related to American Studies....concern...exposing students to texts containing allusions they are unable to comprehend. To illustrate, in a country where ninety-nine percent of the population is Moslem,...not Christian, students are not at all familiar with the Bible....Clearly, such cultural barriers undermine the success of both instructor and student.

EFL American Studies: Politics versus Pedagogy

A political dynamic is inevitably present in teaching American Studies to people who are not Americans. Sometimes when I am teaching American Studies to non-American EFL students, I think about this constant political element by considering such questions as these: What is it like for a professor from Britain to teach British Studies at a university in Hong Kong, Egypt, “French” (Quebec) Canada, or any other non-English-language based “acquired” territory of the former British Empire? What is it like for a professor from Russia to teach Russian Studies in Hungary, Poland, Rumania, or any other country that was “absorbed” into the Soviet bloc in the Cold War? What is it like for a professor from Japan to teach Japan Studies in China, the Philippines, South Korea, or any other land in Asia that was under Japanese control during World War II or during the war and the preceding period?

Political realities—past or present—are part of teaching American Studies or any other area studies to students from other lands or cultures which were impacted—negatively or positively—by the nation or culture being studied. As Edward Ako, a professor of American Studies in Cameroon, has written (1992, p. 67) about the United States, American Studies, and Africa, “Given the size and importance of the United States in the world today, the study of that country shall continue to be part of the curriculum of many African universities.” American Studies instructors in my situation are, indeed, never free of this political element in their exchange with students. The United States, big and powerful, perhaps never seems as strikingly so until one lives outside its borders. Broadly, the history of power—diplomatic, military, economic, and cultural—between

the United States and other nations presents a framework, in the background or the foreground, for the study of any topic about the U.S. done in the EFL setting.

The application of this point to teaching American Studies in Japan or elsewhere in Asia is obvious but for that reason not less real or powerful. I may have in my class, for example, a student whose grandfather fought in World War II and was killed by American soldiers. In contrast, I may also have in my class a student whose family's economic prosperity in the post-World War II period in Japan, South Korea, or Taiwan is broadly connected with the economic development of the student's country in relation to access to the American market or the military "security umbrella" the U.S. provides in East Asia. Emotions can run high in the EFL American Studies classroom about the United States and its present and past "sins" and "achievements."

Some implications for these high emotions and American Studies instruction I have come to try to keep in mind are the following seven points:

1. Student passion is better than student passivity. The instructor's goal should be to move students from a demonized or romanticized understanding of the United States to a more reflective, informed understanding.
2. Instructors in my position should not disadvantage students in the heat of politicized discussion by making use of their greater command of the language of instruction. The instructor should avoid scoring "debating points" by using "academic" English words the students will not understand or such words in combination with complicated phrasing that throw up a verbal "screen" that hide the instructor's limited knowledge or poorly-informed opinions about the subject being discussed.
3. Instructors should allow time, in class or through homework, for students to formulate—in English or, at first, in their native language—thoughts they have about topics they feel deeply about.
4. Instructors need to state, repeatedly, that disagreeing with the professor is fine, not impolite or risky in terms of final grade.
5. Instructors need to stay alert to students seeing them as a "representative" American or an "ambassador" for the United States.
6. To minimize student misunderstanding in the classroom, instructors should visually reinforce whenever possible points they make orally in informal exchange as well as formal presentation.
7. From the standpoint of English language and American Studies content, instructors should remember that when teaching EFL students focusing on identifying the pertinent

questions as opposed to arriving at answers is often the more doable task.

EFL American Studies: Evaluating Student Performance

The tension between language and content learning goals in EFL American Studies instruction strongly affects the matter of student grades. As instruction is supposed to be giving course credits toward graduation for content, not language, grades need to reflect student performance in relation to American Studies, not English. Yet the two matters—English language and course content—cannot be separated in the evaluation process. Students demonstrate their learning of American Studies through English.

More particularly, demonstrated competence for the two factors—English and course content—is not necessarily in synch. For example, in a seminar there may be a student who understands assigned readings well but has weak speaking skills in English and self-conscious of the weak oral skills talks little in class. In the same seminar, another student may speak well in English and talks a lot in class but demonstrates comparatively limited understanding of the readings. As seminar “runs” on discussion, should the first student be penalized for not speaking, even though the reasons for not speaking are understandable and could be respected? Should the second student’s “oral contribution” in class override the student’s weaker grasp of knowledge? A second example: How much weight in course writing assignments should be given to “quality” of content and how much weight should be given to “quality” of expression? A “strong” paper for content can be “weak” for English writing. A “weak” paper for content can be “strong” for English writing.

The challenge, for determining grades, that arises through the language-content divide is constant. Each instructor will approach matters through a different calculus. No matter the “weighting” a professor employs, there is one concern that should not be easily minimized or dismissed: an EFL American Studies course can have both “present” and “future” impact on a student. A course grade “lowered” for weaker English language skills may reflect instructional performance and motivate the student to improve language skill. But the reverse outcome could also result. A student may “give up” in the effort to develop English language competence because of getting a bad grade in an EFL American Studies course. Strict but understandable grading can lead to unfortunate but unintended results.

Anne Boris, a professor of American Studies in Belarus, has written (1998, pp. 46-7) about “judging” student performance, the tension between English language and course

content, and how learning styles change by culture:

In Belarus, more than in the U.S., I have found it very difficult to get each new group of students to speak in class, or even to ask questions. Yet speaking in class is crucial to their ability to think critically and to organize and articulate their thoughts; and *those* [emphasis in the original] abilities, in turn, affect their later job potential....Their reluctance is not due to lack of intellectual curiosity; I have had some very bright students in Belarus, and some of them have come up after class to ask the questions they were too shy to ask during class. Nor is the students' reluctance to speak up in class only due to the obvious difficulty of speaking in a foreign language. Belarusian...colleagues who attempt to use active learning methods have told me that they too have difficulty in getting students to speak up in class. The students themselves have told me, when I urged them to ask questions in class, that "*this is not our custom* [emphasis in the original]."

Making clear course grading policy is in both the students' interests and the instructor's interest.

Gabriel Díaz Maggioli, a professor of American Studies in Uruguay, has written (1994, pp. 66-7), "As far as American Studies...is concerned the growth and spread of the English language has proved to be not only a multiplying factor, but also the natural means through which most foreign countries get to know about the American people, their values, and characteristics. Hence, neglecting a place to the teaching of English as a vehicle of the dissemination of culture can pose limitations on the researcher and learner alike." Indeed, teaching American Studies in a country where English is not the native language means teaching English and American Studies in combination. The two are inseparable. I would add that in teaching English together with American Studies the emphasis should not only be on the hardware of the language, vocabulary and grammar. The why as much as the how of modern English usage needs to be addressed.

The core cultural beliefs and values that frame and inform language use need to be treated. Why do native speakers of English use the language the way they do? Language is a social act as much as a communicative act. That, as Professor Boris says, "...speaking in class is crucial to [student]...ability to think critically and to organize and articulate their thoughts...." says as much about structure and power in society and

attitudes about the rights and responsibilities of the individual as it does about speaking conventions. Similarly, Professor Pultar's point about the Bible, language, and studying American civilization is well taken. More particularly, it has been mainly Protestant Christianity that has influenced ideas and communication styles in relation to the history of the United States. But the United States now is de-Protestantizing as the number of Catholic Hispanic immigrants and non-Christian Asian immigrants increases. What will happen to cultural beliefs and values and language practices in the United States in the future as the country de-Protestantizes?

I am lucky. My job is to teach about my country to those from other countries. Every class I teach I see as an opportunity for me to learn about the world. In trying to help students learn about the United States, I am at an advantage because of the language of instruction. My goal is to have students learn about the United States through learning English, or, another way at looking at the same point, my goal is to reduce language difference as an obstacle to learning about the U.S.

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Causal Factors Affecting the Academic Achievement of Bachelor Degree Students on the Arts Education Program at Loei Rajabhat University

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ABSTRACT

The purpose of this research is: 1) to study the relationship between the educational institution, student-related factors and the level of academic achievement of bachelor's degree students on the Arts Education Program at Loei Rajabhat University, 2) to determine those educational institution and student factors that affect the level of achievement, and 3) to formulate the best possible predictive equation to ascertain the student's level of achievement. The sample group used in the study included 180 bachelor's degree students studying on the Arts Education Program, with the tool used to collect the data being a questionnaire. Analysis of the collected data was carried out using a computer program in order to ascertain the Pearson Product Moment Correlation coefficient. Multiple regression analysis using the entry method was also conducted in order to determine the significant variables, which were then utilized in order to formulate a predictive equation using the stepwise method.

The findings can be summarized as follows:

1. The original, fundamental level of knowledge of the bachelor's degree students had a positive impact on their academic achievement, to a low level of statistical significance (0.05).
2. A particular set of predictors had a relationship with the level of achievement of the students. The overall multiple correlation coefficient found was 0.295 and the set of predictors able to describe the level of achievement were able to explain 8.70% of the variance. These predictors were also able to predict the overall level of achievement of the students to a statistical significance of 0.01 - where the original fundamental level of knowledge $\beta = 0.395$ (to a statistical significance of 0.05 when arranging the regression coefficients of the set of predictive factors in a standard score form), and in descending order the results were: 1) for the achievement motive, $\beta = 0.213$, and 2) for the environment at the university, $\beta = 0.183$.

According to the stepwise multiple regression analysis, the raw and standard stepwise prediction score equations could be formulated as follows:

$$\text{Raw Score Equation: } \hat{Y} = .764 + .329 (X_5) + .181 (X_9) + .179 (X_1)$$

$$\text{Standard Score Equation: } Z_Y = .395 (Z_{X_5}) + .213 (Z_{X_9}) + .183 (Z_{X_1})$$

Background

The Rajabhat University Act 2547 B.E. - Chapter 1: General Provisions, states that Rajabhat Universities are institutes of higher education aimed at promoting local development; to help reinforce national intelligence, revive the learning process, promote local wisdom, support endeavors that secure the sustainable prosperity of the people, take part in managing, maintaining and utilizing natural resources and the environment on a balanced and sustainable basis, and with the objectives of providing education, enhancing knowledge and professionalism, providing lessons, researching, providing academic services to society,

improving, transferring, and developing technology, maintaining the arts and culture, producing qualified teaching staff and enhancing the academic standing of teachers. Also, in order to attain the objectives prescribed in Section 8, the roles and responsibilities of Rajabhat Universities shall be established as follows: 1) To seek and attain technical excellence based on local, Thai and international wisdom, 2) To produce graduates with excellent levels of knowledge and a conscience; who have a consciousness of Thai nationality and culture, and love and have an attachment to their local area – to promote lifelong learning in the community in order to help local people keep up with innovations. The number and quality of graduates produced shall be in line with the National Graduate Generation Plan, 3) To reinforce knowledge, understanding and a consciousness of the values associated with being proud of the local and national culture, 4) To learn about and reinforce the strength of community leaders, religious leaders and local politicians with the aim being to create a democratic consciousness, conscience, ethical framework, and community and local development administrative mechanism with the capability of serving the common interest, 5) To reinforce the strength of the teaching profession; generate and develop teachers and educational personnel of the appropriate quality and standard for such an advanced profession, 6) To coordinate and cooperate with, plus assist universities, communities, local government and other organizations, both locally and internationally, for local development purposes, 7) To research and seek a direction for local, modern technological development - in harmony with the way of life and occupations of local people, plus promote the management, maintenance and utilization of natural resources and the environment on a balanced and sustainable basis, and 8) To study, research, promote and pursue royal projects when implementing the local development missions of the University (Government Gazette, 2547:3)

The Faculty of Education at Loei Rajabhat University offers an education degree program in the arts which can be divided into three key fields, these being: 1) Fine Arts, 2) Music, and 3) Classical Performance, the purpose being to improve teaching standards and produce graduates with excellent levels of knowledge and a conscience, who have a consciousness of Thai nationality and culture, and love and have an attachment to their local area, plus have the ability to carry out their profession whilst understanding the rapid social, educational and contextual changes taking place around them (full-time student instruction - Loei Rajabhat University. 2010:163). This is in line with The National Education Act, 2542 B.E. and amendments (2nd Edition, 2545 B.E.), Section 6: Objectives and Principles, which prescribes that the aim of education is the complete development of Thai people in all respects: physical and mental health, intellect, knowledge, morality, integrity and a desirable way of life, so as to be able to live happily with other people. This acts as an assurance of quality at the university level. According to an internal audit and assessment report for the academic year 2009, conducted on ten components and using 42 indicators, the average score achieved was 2.35, while the average score of the audit and assessment carried by the committee was 2.16. As can be seen, the average score for the audit and assessment carried by the Committee was lower than the internal audit and assessment, particularly for the second component (teaching). The 2.16 score shows that the curriculum management and development system/mechanism is at a lower level of performance than the criteria set by the Committee. The researcher was interested in the results, and thus focused on a study into those causal factors affecting the academic achievement of bachelor's degree students on the Arts Education Program at the Faculty of Education, Loei Rajabhat University, so as to use the research results in order to develop a high quality education management development and improvement process, so as to further the education profession.

Aims of the Research

1. To study the relationship between the educational institution, student factors and the academic achievement of bachelor's degree students on the Arts Education Program at Loei Rajabhat University
2. To determine those educational institution and student factors that affect the level of achievement
3. To formulate the best possible predictive equation to ascertain the level of achievement of the students

Research Benefits

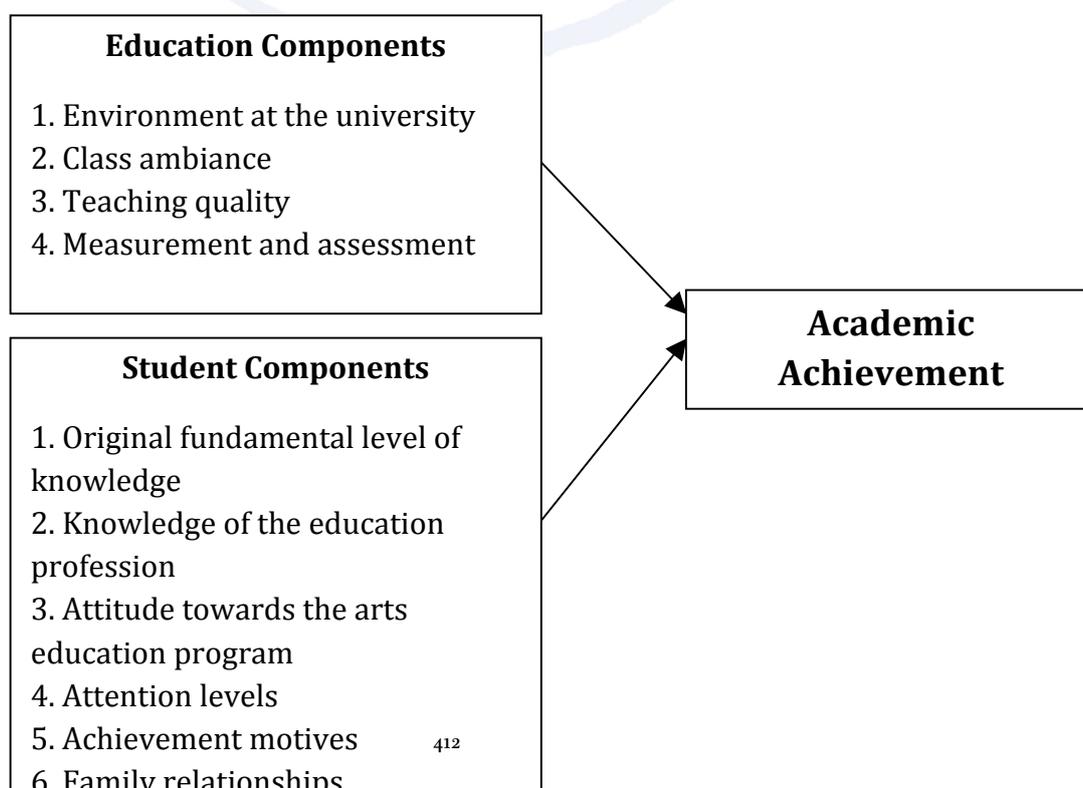
1. The research information and results will provide an understanding of those factors that affect the academic achievement of the bachelor's degree students on the Arts Education Program at the Faculty of Education, Loei Rajabhat University.
2. The research information and results will be used as a guideline for the development of an arts education program, so as to improve the academic performance of the students.

Scope of the Research

1. Scope of content
This research was conducted in order to study those factors affecting the academic performance of students on the Arts Education Program at the Faculty of Education, Loei Rajabhat University, by synthesizing the work of previous studies pertinent to academic achievement.
2. Study population and sample group
The sample group used in this research included 180 bachelor's degree students studying on the Arts Education Program at the Faculty of Education, Loei Rajabhat University during the 2010 academic year.

Research Concept

From a review of the relevant previous research, the conceptual framework of the research is as follows:



Analysis Results**Table 1:** The number and percentage of respondents

Personal Information	Number (student)	Percentage
1. Gender		
1.1 Male	77	42.78
1.2 Female	103	57.22
2. Academic Year		
2.1 First year	150	83.33
2.2 Second year	30	16.67
3. Parents' Economic Status (Earnings per Month)		
3.1 Less than 15,000 Baht	106	58.89
3.2 Between 15,000 and 30,000 Baht	58	32.22
3.3 30,001 and higher	16	8.89

From Table 1, it can be seen that the majority of respondents were female students (103) - accounting for 57.22% of the total. Out of the total, 150 students, or 83.33%, were in their first academic year and 106 students, or 58.89%, were from families with an average income of less than 15,000 Baht per month.

Relationship between the educational institution and the level of academic achievement of bachelor's degree students on the Arts Education Program at Loei Rajabhat University

Table 2: Relationship between the educational institution and the level of academic achievement of bachelor's degree students on the Arts Education Program at Loei Rajabhat University

Variables	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₃	Y
X ₁	1.00	.652*	.699*	.761*	-.539*	.220*	.459*	.403*	.428*	.413*	.637*	.061
X ₂		1.00	.650*	.700*	-.606*	.346*	.554*	.646*	.600*	.484*	.729*	-.108
X ₃			1.00	.831*	-.644*	.404*	.549*	.550*	.608*	.450*	.705*	-.042
X ₄				1.00	-.634*	.372*	.544*	.511*	.592*	.500*	.713*	-.076
X ₅					1.00	-.259*	-.563*	-.624*	-.614*	-.325*	-.628*	.166*
X ₆						1.00	.538*	.409*	.415*	.520*	.461*	.128
X ₇							1.00	.611*	.701*	.511*	.633*	-.053
X ₈								1.00	.768*	.470*	.650*	-.054

Variables	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₃	Y
X ₉									1.00	.499*	.682*	.049
X ₁₀										1.00	.578*	-.031
X ₁₃											1.00	-.034

*P < 0.05

As can be seen in Table 2, the basic level of knowledge (X₅) of the students showed a low-level positive relationship with academic achievement (r = .166) to a statistical significance of 0.05. However, the other factors show an insignificant relationship with academic achievement, to a statistical significance of 0.05.

Determination of the relationship among the predictive variables produced the following results:

Those factors showing a strong positive relationship to a statistical significance of 0.05 were the environment in the university (X₁) and measurement and assessment (X₄) (r = 0.761); level of attention (X₈) and the achievement motive (X₉) (r = 0.768); friendship (X₁₃) and class ambience (X₂) (r = 0.729); and friendship (X₁₃) and measurement and assessment (X₄) (r = 0.713).

For those factors showing a moderate positive relationship to a statistical significance of 0.05, all remaining predictive variables had a moderate mutual relationship, except for the original fundamental level of knowledge factor (X₅), which had a moderate negative relationship with the other variables, to a statistical significance of 0.05.

From the research results, a set of thirteen predictive variables were further analyzed in order to ascertain a predictor.

Those factors affecting the academic achievement of bachelor's degree students on the Arts Education Program at the Faculty of Education, Loei Rajabhat University

To analyze those causal factors affect the level of academic achievement of the students, and in order to ascertain the best possible predictor, the researcher employed multiple regression analysis using the predictive variable-dependent variable correlation selection technique and based on the 'enter method', in order to determine the significant factors, which were later used to formulate a predictive equation for academic achievement through use of stepwise analysis. The results are shown in Table 3.

Table 3: Multiple regression analysis of those factors affecting the level of academic achievement of the students using the 'enter method'

Predictors	b	SE* _b	β	t	P-values
X ₁	.480	.116	.490	4.137*	.001
X ₂	-.161	.103	-.187	-1.562	.120
X ₃	-.036	.121	-.040	-.296	.768
X ₄	-.215	.124	-.262	-1.735	.085
X ₅	.217	.090	.260	2.398*	.018

Predictors	b	SE _{*b}	β	t	P-values
X ₆	.317	.093	.312	3.404*	.001
X ₇	-.252	.113	-.252	-2.225*	.027
X ₈	-.061	.097	-.077	-.632	.528
X ₉	.398	.111	.468	3.601*	.001
X ₁₀	-.112	.082	-.129	-1.365	.174
X ₁₁	.127	.123	.134	1.030	.304
X ₁₂	.145	.128	.145	1.127	.261
X ₁₃	.001	.107	.001	.008	.994
R = .451		R ² = .204	a = .872	F = 3.263	P-values = .000

*P < 0.05

In Table 3 it can be seen that for those factors used as a predictive set - those which had a relationship with academic achievement (comprising thirteen variables), the multiple correlation coefficient was 0.415. In addition, the predictive variable set could explain 20.4% of the variance in the curriculum management process of the institution. In addition, the predictive variable set could predict the level of overall academic achievement to a statistical significance of 0.05. The five factors that produced an overall prediction of academic achievement, to a statistical significance of 0.05, were: 1) the environment at the university (X₁), 2) the original fundamental level of knowledge (X₅), 3) knowledge of the education profession (X₆), 4) attitudes toward the Arts Education Program (X₇), and 5) the achievement motive (X₉).

The results of the Multiple Regression Analysis (Table 3) were used to formulate a predictive equation for academic achievement using the stepwise method. The analysis results are shown in Table 4.

Table 4: Multiple Regression Analysis using the stepwise method to predict academic achievement

Predictors	b	SE _{*b}	β	t	P-values
X ₅	.329	.082	.395	3.993*	.001
X ₉	.181	.078	.213	2.311*	.022
X ₁	.179	.085	.183	2.119*	.036
R = .295		R ² = .087	a = .764	F = 5.595	P-values = .001

*P < 0.05

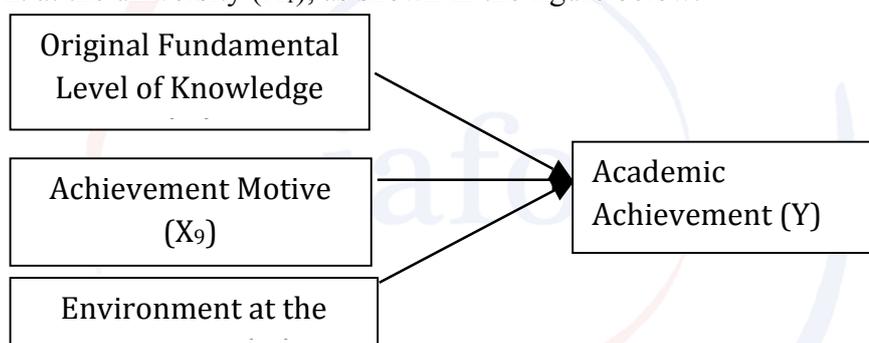
Table 4 – which includes the results of the analysis of those predictive variables which revealed a relationship with academic achievement, shows that, overall, the multiple correlation coefficient was 0.295, and the predictive variables were able to explain 8.70% of the variance in academic achievement. In addition, the predictive variable set was also able to predict the overall level of academic achievement to a statistical significance of 0.05. When arranging the regression coefficients of the predictive factors set in a standard score form (β), and in descending order, the results were as follows: 1) the original fundamental level of knowledge (X_5), $\beta = 0.395$, 2) the achievement motive (X_9), $\beta = 0.213$, and 3) the environment at the university, $\beta = 0.183$.

According to the stepwise multiple regression analysis carried out, the raw and standard stepwise prediction score equations could be formulated as follows:

$$\text{Raw Score equation: } \hat{Y} = .764 + .329 (X_5) + .181 (X_9) + .179 (X_1)$$

$$\text{Standard Score equation: } Z_Y = .395 (X_5) + .213 (X_9) + .183 (X_1)$$

From the analysis of those factors affecting the level of academic achievement of the bachelor's degree students, it can be concluded that the top three predictive variables affecting the level of academic achievement, to a statistical significance of 0.05, were 1) the original fundamental level of knowledge (X_5), 2) the achievement motive (X_9), and 3) the environment at the university (X_1), as shown in the figure below.



Conclusion

According to my study of those factors affecting the level of academic achievement of the bachelor's degree students studying on the Arts Education Program, the research conclusions are as follows:

1. Relationship between the educational institution and the level of academic achievement of the bachelor's degree students on the Arts Education Program at the Faculty of Education, Loei Rajabhat University

1. The original, fundamental level of knowledge of the students had a positive but low-level relationship to academic achievement.
2. Those predictive variables showing a strong, positive relationship with academic achievement included: the environment at the university and measurement and assessment; attention and the achievement motive; friendship and class ambience, and; friendship and measurement and assessment.
3. All the predictive variables had a moderate mutual relationship, except for the original fundamental level of knowledge factor which had a moderate, negative relationship with the other variables.

2. Factors affecting the academic achievement of bachelor's degree students on the Arts Education Program at the Faculty of Education, Loei Rajabhat University

The researcher employed a stepwise multiple regression analysis with a predictive variable-dependent variable correlation technique and using the 'enter method', to identify the significant factors, which were later used to formulate predictive equations for the academic achievement of the students. The results of the analysis are as follows:

1. The factors used as a predictive set and which had a relationship with academic achievement, comprising thirteen variables, showed that overall, the multiple correlation coefficient was 0.415 and that the predictive variable set could explain 20.40% of the variance in the curriculum management process of the institution. The five factors that produced an overall prediction of academic achievement, to a statistical significance of 0.05, were: 1) the environment at the university, 2) the original fundamental level of knowledge of the students, 3) the knowledge of the educational profession, and 4) the attitude of the students towards the Arts Education Program, and the achievement motive.
2. The predictive variables which displayed a relationship with academic achievement showed that overall, the multiple correlation coefficient was 0.295 and the predictive variables could explain 8.70% of the variance in academic achievement. In addition, the predictive variables were able to predict overall academic achievement to a statistical significance of 0.05. When arranging the regression coefficients for the set of predictive factors in a standard score form, and in descending order, the results were as follows: 1) the original fundamental level of knowledge, 2) the achievement motive, and 3) the environment at the university.

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English Teachers' Attitudes Toward English Policy of Grade 1-9 Curriculum in Taiwan:

A Case Study of ShanTian Elementary School

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Abstract

In September 2001, Taiwan implemented the policy of grade 1-9 curriculum for Elementary School and Junior High School. In this new curriculum, English is listed together with Mandarin, Taiwanese, and other local languages in one subject called *Language Art*. This study is a case study examining how this language policy exerts an influence on the attitude of the English teachers and on English teaching at elementary school in Taiwan. Two English teachers at *ShanTian* elementary school, located in central Taiwan, were recruited and interviewed. They were interviewed for two times and each interview lasted for about twenty minutes. The results show that the participants hold both positive and negative attitudes toward the policy. Participant one indicates that learning English at early age is good; however, participant two considers learning English from early age to be resulting in low learning motivations. Two major issues were raised by the participants. First, the proficiency level of the students shows double peaks in class, causing major problems in teaching. Second, course time is limited to forty minutes per class, making it difficult to teach all the materials and do exercises. The results suggest that the government should propose solutions or strategies to overcome these problems, which may play an important role in successful delivery of the language programs.

Keywords: *Language Attitudes, Language Policy, Policy of Grade 1-9 Curriculum*

1. Introduction

English has become more and more important and it had become a global language. In Taiwan, a lot of enterprises and schools regard English ability as a requirement condition. Therefore, people must pass a specific level and then they can enter those enterprises and schools. Because of this reason, getting related English certificates become very popular in Taiwan. For example, the related English certificate tests of GEPT (General English Proficiency Test), IELTS (The International English Language Testing System), TOEIC (Test of English for International Communication)

and TOFEL (Test of English as a Foreign Language). The government of Taiwan would promote domestic people's English ability. The governor provides many related policies to develop Taiwanese English ability. In September 2001, Taiwan implemented the policy of Grade 1-9 Curriculum for Elementary School and Junior High School. In this new curriculum, English is listed together with Mandarin Chinese, Taiwanese, and other local languages in one subject called "*Language Art*".

The purpose of this study is to examine how this language policy exerts an influence on the attitude of the English teachers and on English teaching at ShanTian elementary school in Taiwan. There are twofold research questions addressed in the study: (1) What are English teachers' attitudes toward English Policy of Grade 1-9 Curriculum at elementary level? (2) What influences would English teachers face on their teaching because of the policy of Grade 1-9 Curriculum?

2. Background of primary English Language Teaching (ELT) in Taiwan

Prior to the official introduction of English to the elementary school curriculum, many experimental projects were conducted to explore the feasibility and impact of teaching English in elementary schools. For example, in Kaohsiung, the metropolitan city in the southern part of Taiwan, English instruction had been offered as an extracurricular activity at public elementary schools since 1991, and in 1997 English was officially implemented in the curriculum for fifth graders (Dai, 1998; Yeh and Shih, 2000). Taipei City also went through several stages of policy development to finalize English instruction at elementary schools (Huang, 1999). In 1997, the Taipei Bureau of Education implemented a four-year experimental English program in 19 schools, with another 85 schools incorporating English into their extra-curricular activities (Huang, 1999; Wang, 1998). By March 1998, more than 93% of public elementary schools in Taipei had added English to their curriculum and allotted one to two hours each week for English instructional activities (Dai, 1998).

3. Literature Review

This chapter provides an overview of the literature concerning language policy and language attitudes. This chapter is organized as follow: section 3.1 the researcher introduces the definitions of language policy and language attitude. In section 3.2 introduces research in language policy and the research in language attitudes will be showed in section 3.3.

3.1 Definitions of language policy and language attitude

According to Spolsky (2004), the language practices, beliefs, and management decisions of a community or government are known as language policy. Language

policy has many different meanings. The first meaning in the dictionary (Longman, 2004) describes how a government set up policy through legislation officially, court decisions, and executive action or by other means in order to determine how a government establish policy officially by legislation, court decisions, and executive action or in other ways in order to determine how languages are used in public or to cultivate the essential needs for language skills. Secondly, a government may establish principles for language use in a country and then define it as language policy.

In the Longman Dictionary of Language Teaching and Applied Linguistics (1992:199) “language attitudes” are defined as follows: the attitudes which speakers of different languages or language varieties have towards each others’ languages or to their own language. Expressions of positive or negative feelings towards a language may reflect impressions of linguistic difficulty or simplicity, ease or difficulty of learning, degree of importance, elegance, social status, etc. Attitudes towards a language may also show what people feel about the speakers of that language. Wenden (1991) sees attitude as including three components: (1) Attitude tends to have a cognitive component. It could involve beliefs or perceptions about the objects or situations related to the attitude. (2) Attitude has an evaluative component. It means that the objects or situations related to the attitude may generate like or dislike. (3) Attitude has a behavioral component. That is to say certain attitudes tent to prompt learners to adopt particular learning behaviors.

3.2 Research in language policy

English is considered as a global language. Many governments are conscious that they should change their language policy to cater for this tendency.

Su (2006) researched on EFL teachers’ viewpoints of language policy at the elementary level in Taiwan. The purpose was to investigate teachers’ perspectives on English as a compulsory subject at the elementary level and the good/weak points of the policy in teaching. The participants included ten female English teachers in different public elementary school in Taiwan city. It used interview, classroom observation and document analysis to collect data. The result showed that all teachers supported the policy of English as a compulsory subject at the elementary level and perceived that this top-down policy has positive and negative effects. About the positive effect, it is useful for learners to enhance their language skills if learners learn English earlier. The negative effects that some participants illustrated that Taiwan overemphasize English learning and that teachers were worried about how this trend may be the cause of neglect towards learning the native languages.

3.3 Research in language Attitudes

Chen (2003) investigated her participants' language use and language attitudes toward three languages: Mandarin, Taiwanese and English. The participants among different age groups and it included five age groups (under 12, 13-18, 19-29, 30-45 and 46-59). Chen (2003) showed that the participants' aged between 19 and 29 have the most positive and favorable language attitudes towards English. Besides, this group of participants has the highest frequency of English use among the five groups. The age under 12 showed the least favorable language attitudes towards English and the age under 12 and between 13 and 18 use least English.

Deborah A. Byrnes & Gary Kiger's (1997) study addresses regular-classroom teachers' attitudes toward language diversity and linguistically diverse students. The literature contains some references to teachers' attitudes toward students who speak non-standard English or Spanish, but there is a paucity of research findings on teachers; attitudes toward the "new" linguistic-minority students-immigrant children who are not in bilingual classrooms. This study investigates the contextual variables that have been hypothesized in the research literature to influence teachers' language attitudes. The subjects of this study were 191 regular-classroom teachers enrolled in teacher-education courses in three states: Arizona, Utah, and Virginia. And the instrument of this study was that the dependent variable in this study was the "Language Attitudes of Teachers Scale (LATS)" (Byrnes & Kiger 1994). The study finds that language attitudes differ significantly with experience and across region, with the most positive attitudes expressed by teachers from Arizona. A major focus of this study was on less commonly spoken languages in the U.S. by children in public schools. Experience is associated with positive language attitudes and earning a graduate degree is also associated with positive language attitudes. Finally, the significance of region for language attitudes must be considered.

4. Methodology

This chapter is about how researchers do to precede this study and whom researchers interview with. First, the participants would be introduced in section 4.1; the instrument and data collection and data analysis would be described in section 4.2.

4.1 Participants

This study includes two participants who teach English in ShanTian elementary school now. Both teachers are female and each of them will be introduced as follow:
a) Teacher C. I Chen, she has been teaching English for three and a half years in ShanTian elementary school. Before she teaches English in ShanTian, she teaches

English for one and a half years in WenGwang elementary school. Moreover, she also has been teaching English in a private language institution (usually called “cram school” in Taiwan) for ten years. The grade she teaches from one to six.

b) Teacher W.C Yang, she has been teaching English for more than five years in ShanTian elementary school. Besides, she is a substitute teacher and teaches English for one and half years each in DaAn and GongGuan elementary schools; and then one year in BeiShi elementary school. Now she not only teaches in ShanTian but also in BeiShi elementary school. She has been teaching English in a private language institution for more than ten years. The level of students that she teaches also from grade one to grade six in ShanTian. But the level of students that she teaches in a private language institution from elementary, junior and senior high school.

4.2 Data collection and data analysis

The research method that researchers used is interview. Frey and Oishi (1995:01) define interview as "a purposeful conversation in which one person asks prepared questions (interviewer) and another answers them (respondent)" This is done to gain information on a particular topic or a particular area to be researched. An interview is more one-sided than a conversation because one person, the interviewee (participant), talks more and offers more explanations, while the other person, the interviewer (researcher), has to listen very carefully to what is being said and ask follow-up questions. Interviews are a useful tool which can lead to further research using other methodologies such as observation and experiments (Jensen and Jankowski 1991:101). The research method of interview has its advantage and disadvantage. For example, freedom for the respondent to answer how they wish to is important in giving them a feeling of control in the interview situation. But the disadvantages are like that it needs the amount of time to collect and analyze the responses (Wimmer and Dominick 1997:139).

Each teacher would be interviewed for two times because it is not possible to have an interview for a very long time. Every interview lasts about fifteen to twenty minutes. In this research, researchers would ask them eight open-ended questions. During the interview, researchers would use the voice recorder to record their speech and take notes on paper sheet.

In this section, according to participants' answer that there are two categories conducted. These two categories are “Attitudes toward English Policy of Grade 1-9 Curriculum at elementary level” and “Influences on teaching of English policy of Grade 1-9 Curriculum at elementary level”.

4.2.1 Attitudes toward English Policy of Grade 1-9 Curriculum at elementary level

The participant one, Teacher Chen, shows the positive attitude toward this policy. She indicates that let students learn a language in earlier age is good. But the education in Taiwan focus on test and exam, it would lead the negative effect that students may lose their interesting in learning English. Moreover, English is listed together with Mandarin Chinese, Taiwanese, and other local languages in one subject called "Language Art". Teacher Chen considers that students approach many languages are good to them and if they have language disorder just make more practices. However, she thinks that the time of English class is not enough and teacher cannot teach all materials and do exercises in one class. Actually, what students need is a learning environment not just the policy.

Different to teacher Chen, the second participant Teacher Yang shows negative attitude toward this policy. She indicates that the government does not consider the result of implementing English Policy of Grade 1-9 Curriculum. For example, the difference between town and country and the economic background of family and so on. Moreover, the version of the textbook is "one outline and multiple textbook". Every school has different system in different town and country, so how to supplement the discrepancy should be concerned carefully. In addition, teacher is also a problem. The amount of teacher is insufficient for all elementary schools and teacher Yang also indicates that some teachers are not qualified to teach in elementary school.

4.2.2 Influences on teaching of English policy of Grade 1-9 Curriculum at elementary level

Both teachers think that the big problem is the degree of students. It shows double peaks in class that some students are good enough but some are not. This kind of phenomenon can be observed in the first grade of students. Chern (2010) indicated that differences in students' English proficiency have created problems for teachers. Though class size has been reduced to around 30 students per class due to lower birthrate, it is still difficult for teachers to design lessons to cater to students with different proficiency levels and readiness to learn English. Teacher Yang indicates that it is possible for her to teach all materials and do activities in forty minutes not to say design another course for students. She can only handle inside class materials could not consider the level of different students. Therefore, it is a big problem that

As specified in Nine-year Integrated Curriculum guidelines, the goals of English curriculum are (1) to help students develop basic communication skills in English; (2)

to cultivate students' interests in learning English; (3) to promote students' awareness of local and foreign cultures and customs (Ministry of Education, 2000). It is hard to achieve the goals because the degree of students and poverty gaps; some students give up learning English because the failure to exam and lost their interests in English. However, students who are in better family and have the chance to study outside language institution would in upper level. Then, the gap of double peaks will be larger and larger. Moreover, exam lead to teaching that would not give rise students' interests in learning English.

5. Results and Discussion

According to the Ministry of Education (1998), English instruction is introduced to elementary school curriculum to (1) instill an international perspective into students; (2) best utilize students' "critical period" in language; (3) optimize the timing of the implementation of new curriculum; and (4) follow the trends of new era and fulfill parents' expectations. Actually, the differences in students' English proficiency have created problems for teachers not to say instill an international perspective into students. It does not have enough time to teach extra material that students should learn and do exercise in class and there are only forty minutes per class.

6. Conclusion

The study is a case study examining how this language policy exerts an influence on the attitude of the English teachers and on English teaching at elementary school in Taiwan. As for research questions, teacher Chen has a positive attitude and she indicates that learning English at early age is good. However, teacher Yang has a negative attitude and she considers that learning English from early age to be resulting in low learning motivations. Moreover, both teachers think that the proficiency level of the students shows double peaks in class, causing major problems in teaching. The course time is limited to forty minutes per class, making it difficult to teach all the materials and do exercises.

As for a lot of problems, government should consider that the differences between town and country and the poverty gaps. Moreover, different schools adopt different strategies although the government establishes the English Policy of Grade 1-9 Curriculum. Discrepancies between schools and government also make the problem. As the textbooks have been turned into a competitive and open market, many resources are now provided and distributed through publishers rather than the local education bureaus. With the growing interest in and attention paid to English education in Taiwan, there will be more innovation policies and practices in years ahead (Chern, 2010).

6.1 Limitation

There are some limitations in this study. It is a small research and the participants are not enough to represent the whole phenomenon. Moreover, there are a lot of factors not considered in this study such as the teachers' resource, location of school and school system. Furthermore, it is a case study and there is only one school which in a country and not compare to the town school and so on.

6.2 Suggestions for Further Studies

It is suggested that further studies can include more elementary schools from town and country. Moreover, researchers can interview more teachers or design a questionnaire to help collecting data. In addition, it can be a research compare to town and town, country and country or town and country. Not only teacher's attitude but parent's attitude could involve then it can also help researchers to understand the effect of this policy.

6.3 Contribution

The purpose of this research is to understand English teachers' attitudes toward the policy of Grade 1-9 Curriculum in elementary school and its influence on English teaching at elementary level. It is hoped that this study may offer some information about learners' language attitude toward English policy. For example, young students like learning from doing and playing, not only practice and a lot of tests. Teachers can consult and adjust their teaching and the government can also care about the teachers and students' need and establish new policies to improve the English education in Taiwan.

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The Effects of Visual Support from E-books on Young Learners' English Listening Comprehension and Attitudes

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Abstract

Listening comprehension is essential for effective communication, but is often particularly challenging for young learners of English. A number of studies have indicated that visual support, also called visual aids, may help listeners to comprehend spoken language input, because they create concrete symbols linking to objects and events in the text. On the other hand, other studies have identified drawbacks in using visual aids. Hence, the use of visual stimuli to aid listening remains controversial, and more examination is required. Moreover, E-books, especially electronic storybooks, offer original animations with sound effects to enhance comprehension and to arouse motivation in language learning. This study aimed to investigate whether providing students with different types of visual aids from electronic storybooks could influence their listening comprehension achievement, attitudes toward English listening, and attitudes toward electronic storybooks. A 12-week quasi-experiment was conducted with 90 sixth graders, who were divided into three groups. Each group was provided with a different kind of visual aid: text only, picture only and text-and-picture. Five instruments were employed to gather data, including five electronic storybooks, a listening comprehension test, two questionnaires on attitudes toward English listening and attitudes towards electronic storybooks respectively, and quizzes. The findings of this study indicated providing students with different types of visual aids positively influenced the listening comprehension achievement. Listeners who received text-only aids performed significantly better than those in the other two groups. Positive responses toward electronic storybooks were also found. However, students' attitudes toward English listening were not significantly influenced. Based on these results, some pedagogical suggestions are offered.

Keywords: Visual support, visual aids, electronic storybook, listening comprehension, English listening attitudes

Introduction

Listening is a key skill that is essential to the achievement of effective communication (Petress, 1999; Rost, 2002). During the process of listening, people perceive a new message, then match it with preexisting knowledge, and finally make use of it (Osada, 2004). Therefore, according to Osada (2004), effective communication does not exist without the critical first step of comprehending aural input. Many researchers (Bernhardt & James, 1987; Brown, 1987; Byrnes, 1984; Dunkel, 1986, 1991; Krashen, 1982; Morley, 1991; Omaggio, 1990; Richards, 1983, 2005; Rost, 1990; Ur, 1985) have also found that listening comprehension is an essential and a critical first step in the field of foreign language learning. However, Foreign Language (FL) or Second Language (L2) learners often have problems with listening comprehension (Goh, 2000; Kao, 2006; Tercanlioglu, 2005). The findings of language acquisition research show that listening comprehension is particularly difficult for foreign language learners and frequently causes them anxiety (Goh, 2000). This is because listening comprehension is an ongoing process that requires listeners to simultaneously listen to, process, and then respond to the stimuli input.

According to Petress (1999), listening is a skill that can be learned and improved by employing the learners' prior background knowledge. That is to say, using interesting and authentic materials associated with prior background knowledge of the learners can promote comprehensible input in listening so as to decrease the learners' difficulties and can improve their listening achievement. Accordingly, many researchers (Brown, 2000; Chang & Read, 2007; Canning-Wilson, 1999, 2001; Krashen, 1982; Rubin, 1994; Wu, 2004) have investigated the effects of supporting listening materials with different types of visual aids for listening comprehension instruction. The findings demonstrated that providing related texts, related pictures or a combination of related texts and pictures could enhance students' listening comprehension (Brown, 2000; Chang & Read, 2007; Wu, 2004). At the same time, learners' motivation to learn listening can be aroused if English teachers can provide them with input such as interesting scenarios (Chang & Read, 2007). The statements mentioned above suggest to educators that visual aids may facilitate student's listening comprehension.

On the other hand, with advances in technology, it has been claimed that a combination of media such as audio and visual aids, which can be referred to as multimedia or electronic storybooks, can improve learners' listening comprehension (Huang, 2005; Lonergan, 1989; Yeh & Wang, 2001). The combination of audio and visual modalities is dynamic, immediate and accessible (Lonergan, 1989). The texts combined with pictures and audio can assist learners in having a better understanding

of a given content (Yeh & Wang, 2001). Moreover, Huang (2005) examined the influence of computerized multimedia and found that a vocal message plus two visual aids of word and animation facilitated elementary school students' listening comprehension most. As a result, according to the afore-going studies, advantages exist in the use of multimedia with verbal and visual aids within a language learning environment.

On the basis of the previous findings, it can be seen that listening comprehension achievement is important but challenging to acquire. Therefore, it is necessary to find some methods to enhance elementary school students' listening comprehension achievement. In order to solve the problems mentioned above, the advantages of applying visual aids from electronic storybooks in enhancing listening comprehension may be a solution. It may promote students' attitudes toward English listening. Visual aids may arouse motivation and decrease anxiety about listening, and so improve students' listening comprehension achievement. Moreover, advancements offer new tools for applying visual aids in listening instruction. As a result, the purpose of this study was to see whether the integration of visual aids with electronic storybooks would improve elementary school students' English listening achievement. In addition, students' attitudes toward English listening and listening materials used in this study were also explored. In order to achieve the purpose of this study, some research questions were addressed as follows:

1. Do different types of visual aids influence students' listening comprehension achievement?
2. Do different types of visual aids influence students' attitudes toward English listening?
 - 2.1 Do different types of visual aids influence students' motivation toward English listening?
 - 2.2 Do different types of visual aids influence students' anxiety about English listening?
3. What are the responses toward electronic storybooks?

Method

Subjects

Ninety sixth graders from three classes in Tainan County in Taiwan were involved in this study. The achievement levels in the three classes were normally distributed. In addition, the participants' English teacher has indicated that participants can use the letters of the alphabet, some simple sentence patterns, and engage in simple daily conversations. Moreover, participants can read the short stories in each lesson which are sourced from relevant academic learning materials. For the purpose of this experiment, the three classes were supported by different types of

visual aids when listening to audio materials. The distribution of the participants is shown in Table 1.

Table 1. Distribution of Participants in Different Types of Visual Aids

	Class One (TG)	Class Two (PG)	Class Three (TPG)
Male	16	15	15
Female	14	15	15
Total	30	30	30

Research Design

A quasi-experimental design with three experimental treatments involving particular forms of visual support from e-books was employed in this study. There are three phases in this 12-week study. The first phase, completing the pre-test, young learners' listening comprehension achievement and attitudes toward English listening were conducted in the first week. The second phase, implementing the treatment, the three groups were supported respectively by different types of visual supports from e-books when listening to audio materials lasting from the second to eleventh week. Four classes were employed for finishing one story selected from e-books. In the first class hour, the texts, pictures, or texts and pictures of listening material were presented individually for TG, PG, and TPG. Then, the participants listened to and discussed the contents of the listening material for the purpose of comprehending the material. In the fourth class hour, the participants engaged in a brief review of the listening material and then completed the quiz. Finally, the third phase, young learners' listening comprehension achievement and attitudes toward English listening were investigated in the twelfth week.

Instruments & Data Analysis

For the purpose of this study, four instruments were used: (1) Listening materials from Tumblebooks, (2) An English listening comprehension test, (3) A questionnaire of attitudes toward English listening (see Appendix A), (4) a questionnaire of students' response to the electronic storybooks, and (5) Five quizzes. First, the listening materials consist of five electronic picture books selected from the series of Story Books from TumbleBooks Library, which is an online collection of animated, talking picture books which includes many categories of electronic storybooks to suit a variety of children's age levels. Second, the questions for the English listening comprehension test (ELCT) are based on the design of those in the Listening Fun series published by Caves Educational Training Co., Ltd. The ELCT

was used in the pre-test and post-test. Moreover, an analysis of one-way ANCOVA was used to investigate whether different types of visual supports influence the young learners' English listening achievement.

Third, the questionnaire of attitudes toward English listening (QAEL) was developed based on a free online magazine, Jafari's (2009) English Listening Comprehension Motivation Scale (ELCMS), and Horwitz, Horwitz, and Cope's (1986) Foreign Language Classroom Anxiety Scale (FLCAS), to investigate all the learners' attitudes toward English listening in the pre-test and post-test. The students' response to the electronic storybooks (QRES) was employed to investigate learners' attitude toward the listening materials. Finally, five quizzes were employed to examine the learners' listening comprehension of each selected story book from the TumbleBooks Library. The five quizzes were designed in terms of the content of each selected story book. The scores for each quiz, compared using one-way ANOVA, served as supportive evidence to see the effects of different types of visual support on listening comprehension.

Results & Discussion

Listening Comprehension Achievement Supported by Different Visual Aids

Research Question One aimed to find out if different types of visual aids influenced students' English listening comprehension achievement. Based on the analysis in the pretest, there was no significant difference in listening comprehension achievement among the three groups in the pretest ($F=.181, p=.835$). In the posttest, as shown in Table 2, the English listening comprehension achievement of students in all three groups improved after the treatment ($F=3.431, p=.037$). According to the results of Scheff's post hoc test, students in TG performed significantly better than TPG and PG ($MD=14.111, p=.011$).

On the other hand, students' scores on five quizzes also displayed a similar result. Students in TG performed the best among all the three groups based on the mean scores from Quiz 2 to Quiz 5. Moreover, based on the result of Scheff's post hoc test, there was a significant difference among the three groups in the last four quizzes. TG performed significantly better than TPG and PG.

Table 2. The Results of One-way ANCOVA on ELCT

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Between Groups	3011.561	2	1505.78		
Within Groups	37746.733	86	438.916	3.431	.037*
Total	647962	90			

Note. * $P < .05$

Table 3. The Descriptive Statistics for Five Quizzes

Story	TPG (N=30)		PG (N=30)		TG (N=30)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Quiz 1:Always	66.13	18.40	53.07	14.52	59.20	15.63
Quiz 2:Stretch	63.60	16.18	53.60	16.29	68.93	16.50
Quiz 3:Read anything good lately	62.93	21.83	67.47	22.62	79.33	19.63
Quiz 4:Red is a dragon	63.07	18.69	71.47	16.57	74.13	16.57
Quiz 5:Big or little	63.6	23.14	68.53	23.25	77.87	20.23

The results of the treatment demonstrated that different types of visual aids could significantly influence students' English listening comprehension achievement. Generally speaking, students in all three groups made progress in listening comprehension achievement in the posttest by listening to stories with visual aids showing that most students can improve their listening comprehension achievement if teachers can apply visual aids well.

According to the analysis of pretest and posttest, students in TG performed significantly better than students in TPG and in PG. Students' performances from Quiz Two to Quiz Five also conformed to the analysis. A possible explanation is providing texts only may facilitate the focusing on the clue of listening whereas animation may disturb the students' attention of the listening passages. The performance of TG was in accordance with the finding that texts play a more critical role and are more beneficial than other factors for improving students' listening comprehension achievement (Markham, Peter, & McCarthy, 2001; Su, 2003). On the basis of the informal observation in class, students became used to learning by words from the 2nd electronic storybook, showing TG made a significant performance from Quiz 2. Students in TG also responded on the questionnaire that texts as visual aids helped them to spell and comprehend the vocabulary of the listening materials.

On the other hand, with too much attention on the pictures, the attention on listening to the passage may decrease or lose. The performance of TPG and PG corresponded with the findings of Baltova's (1994) study that visual aids would result in negative consequences, despite enhancing students' listening comprehension. Students may put too heavy emphasis on the visual stimulations rather than their own listening competence. In class, even students in PG asked for texts to help them comprehend the listening materials. These excerpts from students' responses on the

questionnaire may help explain why students' listening comprehension achievement in TG was the best among the three groups.

...I could comprehend more about the listening materials by texts aiding...(Student 1 in TPG)

...I could not keep on listening if there were no texts aiding...(Student 6 in PG)

...I could easily remember and spell the vocabulary of the listening materials by texts aiding...(Student 3 in TG)

As for the comparison between students in TPG and PG groups, there was no significant difference found in the listening comprehension achievement. It was possible that providing students with pictures and texts at the same time may have confused them. Two kinds of visual support shown together may bring more distractions. It resulted in worse performances from students who were provided with texts and pictures simultaneously than students who were provided with pictures only. This could explain why students in TPG performed worse than students in PG.

As for the result of Quiz One, students' listening comprehension achievement in the three groups failed to reach significance. The possible explanation is that all students of the three groups stayed in the stage of needing time to be familiar with this new curriculum. However, the interference of the animation appeared to influence TPG students' listening comprehension in the later quizzes. It resulted in the TPG students recording the lowest level listening comprehension achievement overall.

In a word, the discussion above has shown that providing different types of visual aids significantly influenced students' English listening comprehension achievement. The text-only type was more beneficial for promoting students' listening comprehension of the listening materials than the picture-only type and the text-and-picture type.

Attitudes toward Listening Supported by Different Visual Aids

The QAEL was employed to investigate whether different types of visual aids influenced students' attitudes, including motivation and anxiety about English listening, and the results did not display any significance. However, the increasing mean scores of the three groups all showed that using visual aids may slightly influence students' attitudes toward English listening, shown in Table 4.

Table 4. Descriptive Statistics of QAEL

	Pretest				Posttest			
	Motivation		Anxiety		Motivation		Anxiety	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
TPG	3.58	8.42	2.79	7.14	3.63	9.21	2.89	8.52
PG	3.26	7.36	2.92	7.49	3.3	8.03	2.92	9.21
TG	3.38	9.38	2.81	7.44	3.46	7.10	3.04	6.85
Total	3.41	8.51	2.84	7.29	3.47	8.22	2.95	7.29

Items 1-10 on the questionnaire were used to investigate whether students' motivation toward English listening changed after the treatment. In the pretest, the three groups' motivation toward English listening were not significantly different ($F=1.26, p=.289$), indicating students had similar motivation toward English listening.

In the posttest, according to the results of one-way ANCOVA shown in Table 5, there was still no significant difference among the three groups' motivation toward English listening after the treatment ($F=.527, p=.470$). The result suggests that students' motivation toward English listening in the three groups was not apparently influenced by providing them with different types of visual aids. However, the mean scores for each item related to students' motivation toward English listening was higher in the posttest. The total mean score of students' motivation toward English listening in the TPG was the highest in posttest, indicating that students' motivation made progress during the study, but not to reach significance enough. Students in TPG had more positive motivation than students in PG and TG. Aiding students with text and pictures at the same time resulted in the highest motivation toward English listening among the three groups.

Table 5: The Comparison of One-way ANCOVA on Students' Motivation toward English Listening

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Covariance	38.274	1	38.274	.527	.470
Between	175.804	2	87.902		
Within	6244.059	86	72.605	1.211	.303
Total	110988	89			

Items 11-20 on the QAEL were used to explore whether different types of visual aids influenced students' anxiety about English listening. In the pretest, there was no significant difference among the three groups in their anxiety about English listening ($F=.179, p=.836$), indicating students had similar levels of anxiety about English listening with average means of 2.79, 2.92, and 2.81 in TPG, PG, and TG respectively.

Similarly, in the posttest, the results of one-way ANCOVA in Table 6 demonstrated that there was no significant difference among the three groups in students' levels of anxiety about English listening ($F=.1.173, p=.282$). The results indicated that providing students in the three groups with different types of visual aids would not significantly influence their anxiety about English listening. This means that students in the three groups would not be made to feel anxious by different types of visual aids.

Table 6: The Comparison of One-way ANCOVA on Students' Anxiety about English Listening

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Covariance	79.718	1	79.718	1.173	.282
Between	88.692	2	44.346		
Within	5845.515	86	67.971	.652	.523
Total	82579	90			

In spite of the increased mean scores in the posttest, based on the results of one-way ANCOVA for the questionnaire, the three groups' changes in attitudes toward English listening did not reach the significance. This means that students' motivation and anxiety about English listening were not apparently influenced by supporting them with different types of visual aids. This result contradicts earlier findings that visual aids can significantly improve students' motivation (Bowen, 1982) and decrease their anxiety (Chang & Read, 2007) about English listening. One possible explanation is that the time period of the treatment was not long enough to make a distinguished improvement in students' attitudes toward English listening. Therefore, increasing the time period of the treatment may generate a different result. As for motivation toward English listening, the questionnaire results showed that students had higher mean scores for each item in the posttest. This result may indicate that providing students with different types of visual aids may enhance their motivation toward English listening with enough time of the offer of visual support. A longer study may help to discover what kind of visual aid could significantly influence

students' attitudes toward English listening. With regard to anxiety about English listening, the questionnaire results showed students were not significantly influenced by different types of visual aids. However, the mean scores of the three groups increased a little. It is likely that the quiz following each story made students feel anxious and hindered the advancement of their motivation toward English listening. This result suggests that in future studies it may be better to decrease the number of quizzes or support students with varied listening testing methods to reduce their anxiety.

The response to the electronic storybooks

The QRES was employed to investigate students' response to the listening materials. The results of this study showed a positive attitude toward the use of the listening materials. TPG, PG, and TG had an average of 3.32 in mean scores, and TPG earned the highest. (M=3.54, M=3.12, M=3.3). In addition, students' responses to the two open-ended questions also displayed a positive result.

It is likely that the electronic storybooks, especially the one with animated pictures and texts could attract students' interest the most when listening to stories. The students in the other two groups responded that it would be much better if they were provided visual with both text and pictures simultaneously when listening to stories. This result corresponded with that of Armstrong and Rentz's (2002) study, which found that students' listening motivation can be significantly increased through the use of authentic materials such as electronic storybooks. It was found that electronic storybooks can attract students' interest and help to focus their attention during the process of listening. However, teachers should be aware that too much animation may not increase the listening achievement, shown in the discussion in this study. Animated pictures may have increased the students' motivation in the listening materials, but not bring the same positive results in listening achievement.

Besides that, most students agreed that the listening materials would not make them feel that English was boring and they would connect the listening materials with their prior English knowledge. The results above may suggest that it is beneficial to use electronic storybooks, also called computerized storybooks, to teach English listening. Electronic storybooks are believed to increase children's engagement and enjoyment, serving as a beneficial and effective material in English listening training (Grimshaw, Dungworth, McKnight, & Morris, 2007). Learning from electronic storybooks was a new experience for them. It would attract students' interests so as to

engage them in the learning activity more. In addition, the listening materials for students were challenging and innovative. They would spark students' interest and students would have more curiosity about the listening materials so as to be absorbed and become used to listening. Also, some students in the three groups responded that the treatment for them was interesting and they hoped to receive similar courses in the future.

Conclusion and pedagogical implications

According to the results of this study, applying different types of visual support can influence learners' English listening comprehension achievement. Students also have a positive response to the electronic storybooks although the attitudes toward listening did not reveal a significant difference. Therefore, three pedagogical implications are offered. First, it is suggested that English teachers integrate visual aids into their English listening class extensively. Visual aids can provide clues to help learners to comprehend the audio input. They can help learners understand more about the listening materials, especially when they cannot follow the speed of the audio. However, teachers need to be aware of the possible distraction caused by providing learners with animation as a visual aid. Students sometimes may be easily fascinated with the animation. They may put heavy emphasis on watching the attractive animation and forget to concentrate on listening practice. Hence, teachers need to decrease the interference of animation while employing it as a visual aid to cultivate students' listening skills. Second, electronic storybooks are recommended as a kind of learning resource. They can be helpful for enhancing learners' independent learning in English class. Since electronic storybooks are usually graded to suit a variety of reading or age levels, it is easy for learners to choose electronic storybooks suitable for them and that motivate them. Learners can read the selected electronic storybooks at their own speed. Once learners are motivated, they will continue to read electronic storybooks by themselves. The storybooks are helpful for popularizing reading activities in school. English teachers or school administrators can arrange a regular learning time for students to read electronic storybooks by themselves or in groups. Finally, since quizzes may be a negative influence on students' attitudes toward listening English, it is recommended that English teachers use alternative assessments to replace quizzes in teaching English. Only paper and pencil assessments may increase students' anxiety about learning English. Employing alternative methods of

assessment, students' anxiety about learning English may be decreased and their learning confidence will be enhanced. Alternative forms of assessment, such as working together to tell the story, role playing the story, indicating the key words, getting the main ideas, asking-and-answering the story and changing the form of questions may be employed in class.



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Appendix A: The Questionnaire of Attitudes toward English Listening

I. Basic information

Gender : Female Male

Do you go to cram school? : Yes No

How much time do you spend on listening to English per week?

Less than 30 minutes Between 31 to 60 minutes More than one hour

II. Multiple Choice

(SA=strongly agree; A=agree; D=disagree; SD=strongly disagree)

	SA	A	D	SD
1. I enjoy in practicing English listening.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I have a sense of achievement when I perform better than others in English listening course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Teacher's encouragement positively helps me practicing my English listening ability.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I get good grades in English listening course in order to receive compliments of others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. In order to be more realizable of foreign culture, good English listening ability is very important for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Good English listening ability enables me to make friend with foreigners more easily.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I believe my English listening ability will be good if I strive to train my listening.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. In order to improve my English listening ability, I have to develop the habit of listening to English.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. English listening practice is not important, because it is not helpful for my English learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I am often unable to be concentrated in English listening class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I often feel uncomfortable when I listening to English.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I get nervous when I am not familiar with the topic of the listening materials in English listening class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I get nervous when I don't understand every word of listening materials in English listening class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I get nervous when I listen to English without visual aids.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 15. I will discuss the difficulties of the listening materials with others after English listening class.
- 16. I feel nervous if the speaking speed of the listening material is too fast.
- 17. I get nervous when I don't understand what the English teacher says.
- 18. I am usually at ease in English listening class.
- 19. I don't worry about making mistakes when I answer questions in English listening class.
- 20. Even if I have prepared well, I still feel anxious when attending English listening classes.



Reflections on the Current State of the Arabic Language.

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Abstract:

In the Arab world, Modern Standard Arabic (MSA) is the language of writing and formal speech. It is the official language that unifies Arab countries in books, newspapers, conferences, and TV. However, due to socio-cultural and geographical factors, each nation has its own "Colloquial Arabic." Local dialects are derived from MSA by dropping some linguistic rules, deleting some phonological sounds, and skipping some morphemes to make speech smoother. Consequently, Arabs become unable to understand each other. Arabs can fully understand, read, and write in MSA, but have difficulty using it to communicate fluently with Arabs from other countries. This paper discusses the problems with language education in the Arab world and how to fix them

Introduction

The Arabic language has gone through critical stage that has never gone through before. It is one of the serious problems facing Arabs in the present time. Arabic is the pot of the Arabian Islamic heritage with its various forms: religion, culture, history and so on. Through the Arabic language, the past of Arabian nation was preserved and through it Arabs were taught, and, are still learning, the heritage of Arabian nation and its civilization. Although the Arabic language spent many centuries resisting the sweeping steam of illiteracy, colonialism and the break of slang in the private and public sphere, today it goes through various blocks in the process of its extension in all aspects. Consequently, the proportion of those who can speak and write properly is shrinking. So what are the factors behind the weakness and backwardness of the Arabic language?

The evolution of Arabic

Arabic is an ancient language originated in the northwestern region of the Arabian Peninsula. Basically, it was exclusively spoken by Arabs in the deserts and has no written record. Since the 4th century, however, the Arabic scripts had been inspired from the Nabataea Aramaic scripts by creating new letters and adding dots in order to avoid ambiguity. Dr Hamden Bekhet Imran stated in his book The Arabic Writing, Its creation and Development: “the scientists of Semitics reached, after studying and comparing the patterns calligraphy that the origin of Arabic calligraphy is taken from the Nabatean inscriptions and there is a relation between the two, calligraphy”.

It consists of 28 letters and 3 vowels and written from right to left.

ر	ذ	د	خ	ح	ج	ث	ت	ب	ا
Raa'	Thaal	Daal	Xaa'	Hlaa'	Jiim	Thlaa'	Taa'	Baa'	'Alif
r	d	d	kh	h	j	t	t	b	a
ف	غ	ع	ظ	ط	ض	ص	ش	س	ز
Faa'	Ghayn	'Ayn	Thaa'	Taa'	Daad	Saad	Shiin	Siin	Zaay
f	g	z	t	d	d	s	sh	s	z
ي	و	ه	ن	م	ل	ك	ق		
Yaa'	Waaw	Haa'	Nuun	Miim	Laam	Kaaf	Qaaf		
y	w	h	n	m	l	k	q		

It is named the language of ‘al-dahd i.e. **ذ**’, the letter that is only found in Arabic. The Arabic language belongs to the Semitic languages. Thanks to the rise of Islam, Arabic has remarkably flourished through the Qur’an, Islam’s holy book. It ranks sixth in the world’s table of languages. As the language of worship and prayer, Arabic is widely used throughout the Muslim world by approximately 200 million people who are Muslims in general and Arabs in particular.



Muslims believe it is a God-given language. As He said in his holy book: ‘...Indeed, We have made it an Arabic Qur'an that you might understand...’ It is unique in beauty and majesty, very wide and expressive, with magical words. It has the hugest number of roots of speech among languages. Linguistically, Arabic has special characteristics that make distinctive from other languages in terms of grammar, vocabulary, structure and meaning expression.

Three thinkers reveal the greatness of Arabic in history and its impact on other language. Phillip says in his book History of Arabs: ‘Arabic was the language of learning, culture and intellectual progress for the whole of the civilized world with the exception of the Far East. From the IX to the XII century there were more philosophical, medical, historical, religious, astronomical and geographical works written in Arabic than in any other human tongue.”

Raphael Patai, as a nine language speaker (Arabic, English, French, German, Indian, Armani, Hebrew, Persian and Hungarian) expresses his opinion towards Arabic and says: From my personal experience, I testify that there is no language, among the languages I know,

parallel Arabic in its ability to penetrate the level of understanding and feelings and leaving a deep impact. In this regard, it is not to be compared but with music.

Arabic is a derivational language. Every verb in Arabic made of three letters can be derived into innumerable words cannot be counted. This capacity of words structure pushes Thomas Irving in his article Modern Language Journal under a title 'How Hard Arabic is' says : 'These various roots and the unlimited changes that undergo make Arabic one of the greatest language in the whole world. Therefore it deserved to be learned. It stands in the same level as Greek and Sanskrit'

However, Arabic has three distinct forms:

- Classical Arabic
- Modern standard Arabic
- Colloquial Arabic

Classical ancient Arabic is basically the Arabic of the pre-Islamic era. It is highly nuanced, intricate and very sophisticated. Its grammar is complex and its vocabulary is sensitively inspired from nature. Arabs used to pride themselves on their poetry. God has glorified this language by making it the language of the holy Qur'an. Classical Arabic now is primarily learned for reading the Qur'an and reciting Islamic religions text in mosques.

Modern Standard Arabic (MSA) is a formal form adapted for classical Arabic. It is a simplified, skimmed version of it. MSA is the universal language of the Arabic speaking world and is also known as Fuss-ha. In the Arab world, MSA is primary taught in schools and universities. It is used in books, newspapers, TV, radio and conversation between educated Arabs from different nations in conferences.

Fuss-ha has linguistic characteristics in terms of phonetics, phonology, semantic and syntax. It is the language of literature and science, with a distinct method and mesmerizing expressions. For, the four aspects mentioned must be accurately taken into account while using it and avoiding banal language.

While MSA is the definitive form of written Arabic, there are many spoken Arabic dialects. They differ from one Arab country to another and from one region to another called colloquial Arabic or slang. This latter is generally spoken which Arab speakers learn it as their first language. It is used in daily conversation and treatment at home, in the market, between friends...

In order to understand the relationship between Fuss-ha and colloquial Arabic, it is important to understand the concept of diglossia: according to Charles Ferguson, literally meaning "two tongues", conveys a situation where, in addition to the primary dialects of a language, there is a high codified form which is the vehicle of a large and respected body of literature.. Colloquial Arabic is derived from MSA, except that it underwent significant transition. It experienced a shift in pronunciation and freedom from grammar rules.

One factor in the differentiation of dialects among Arab countries is the influence from languages previously spoken in the areas, Berber in Maghreb for example. They have typically provided a significant number of new words, changes in accent, or word order. The

main dialectal division is between the Maghreb dialects and those of the Middle East. ‘Ammiyya’ in Eastern parts and ‘ad-daija’ in Arabic North Africa are mutually unintelligible.

Middle Easterners usually claim they have difficulty in understanding Maghrebis, whereas Maghrebis can generally understand them due to the widespread popularity of films and drama, especially Egyptian. Therefore, the vernacular is unable to achieve understanding neither among all Arabs territories nor often among people in same country due to regional varieties.

There are over 30 different varieties of colloquial Arabic:

Country	Spoken colloquial
Afghanistan	Tajiki
Algeria	Algerian Saharan
Bahrain	Bahraini, Gulf
Chad	Chadian
Cyprus	Cypriot
Djibouti	Ta'izzi-Adeni/South Yemeni
Egypt	Egyptian, Saidi, Libyan, Eastern Egyptian Bedawi
Eritrea	Hijazi
Iran	Mesopotamian, Gulf
Iraq	Mesopotamian, Najdi, North Mesopotamian, Gulf, Judeo-Iraqi
Israel	Judeo-Tripolitanian, Judeo-Moroccan, Judeo-Iraqi, Judeo-Yemeni, Judeo-Tunisian
Jordan	Najdi, South Levantine, Eastern Egyptian Bedawi
Kenya	Omani
Kuwait	Gulf
Lebanon	North Levantine
Libya	Libyan
Mali	Hassaniyya
Mauritania	Hassaniyya
Morocco	Moroccan/Maghrebi, Hassaniyya, Judeo-Moroccan
Niger	Libyan, Hassaniyya
Oman	Gulf, Omani, Dhofari, Shihhi
Palestinian West Bank & Gaza	South Levantine, Eastern Egyptian Bedawi
Qatar	Gulf
Saudi Arabia	Najdi, Hijazi, Gulf
Sudan	Sudanese
Syria	North Levantine, Mesopotamian, Najdi, North Mesopotamian, Eastern Egyptian Bedawi
Tajikistan	Tajiki
Tanzania	Omani

Tunisia	Tunisian, Judeo-Tunisian
Turkey	North Mesopotamian
UAE	Gulf, Shihhi
Uzbekistan	Uzbeki
Yemen	Sanaani/North Yemeni, Ta'izzi-Adeni/South Yemeni, Hadrami, Judeo-Yemeni

The Decline of Classical Arabic

The western colonialism in the nineteenth century participated in the weakness of classical Arabic and the break of colloquial Arabic. After the First World War the Arab Islamic World has been divided into nations and the western colonialism has become the master of it. Its purpose was to cover the Arabian culture and spread their culture and language for the next generations. The first of these attempts were done by “Ataturk”, Mustafa Kemal who ruled Turkey after the defeat of Othman, by replaced the Arabic letter that the Turkish culture and civilization were written with by the Latin letter as a step to modernity. Since then, Turkish people faced many difficulties in translating their cultural heritage from their language in 1926 to their contemporary language.

At the same period, Europe put its interest on Arab world and tried to understand the Arabian thought and its social, religious and political values. They found out there is a strong tie between the Arabic language and its culture, civilization and religion. They became interested in the learning and promoting colloquial Arabic as an alternative to Classical Arabic. Egypt and Levant were the first station from which some orientalists started their journey to strongly advocate colloquial in all over the Arab world.

The first schools of Orientalism was founded in Italy, as a close point to Arab world, in 1927 named Napoli school of oriental lessens as well as in Austria in 1754 , France in 1759, Germany, England... They were devoted to teaching Colloquial Arabic and spread in elsewhere. Many books were published by some orientalists, for example, The Grammatik des arabischen Vulgär dialects von Ägypten by Wilhelm Spitta-Bey (1880), The Modern Egyptian Dialect of Arabic by Karl Vollers(1895) and The spoken Arabic in Egypt by Selden Wilmore (1905). Since then, Arabs start using Vernaculars as a regional culture and each Arabian nation stand alone with its dialect. This division caused serious consequences.

Illiteracy and ignorance among the Arab families, at that era, have greatly affected on the child’s tongue. In his first stage of learning, the child acquires the language from his family

members and his social environment. He naturally picks up distorted Arabic that lacks eloquence and expression. Thus, the process of learning the classical Arabic may not have an easy chance facing a strong approach of the quantity and quality of slang in the child's linguistic repertoire. What is worse, in schools the teacher deals with students in colloquial Arabic. The use of it is more dominant whereas the use of classical is limited only in writing. In other words, when the student feels that the classical language is not the language of daily life and practice, he may not give it attention which deserves.

As we already know, the language or any language cannot be mastered unless the student speaks it and practices it regularly. Besides, the educational curriculum of teaching Arabic becomes poor and the hours of learning are so few so that it gives space to private foreign schools to establish in many Arab communities on a large scale. They adopt English and European languages, not as a second language, but as a first language on the expense of Arabic. Most parents, nowadays, are prone to send their children to foreign schools as a kind of prestige and modernity and disregard Arabic.

Fus-ha and the Theory of Public Thought is a piece of art written by Dr. Marzouq Iben Ditan Tinbak, the advocator of fush-ha. It won the Arabian education office of Gulf's prize in Arabic language. Iben Tinbak, who has a distinct vision in literature, states that many of these vernacular's lovers and advocators did not have the chance to deeply learn the original of the Arabian culture and do not know about the other contemporary cultures and its evolution. They cannot realize the danger that threatens the ideology and unity of Arabism. They are not aware of the importance of fush-ha and its function, its strength and the reason of its weakness and division into various independent dialects different from its original throughout time.

Vernacular's propagandists have an exclusive pretext by saying: "slang has remarkable role in the past of peninsula. Its poetry expressed, at the time of illiteracy, the feelings and passion of the peninsula people and registered their tribal battles"

Colloquial Arabic effectively exists in people's life and in their daily conversation and treatment. However, it should not be raised to the level of Formal Arabic and make it a language of fine thought, literature and publication. It reduces the worth of fush-ha and weakens the interest of its study. Some of them have the enthusiasm to write novels and publish newspaper and magazines in slang. They want it to have an eminent intellectual dimension in press not less than fush-ha.

The development of written and audio-visual media has a great impact on people's awareness in all aspects of life. This effect may sometimes guide and correct minds and may sometimes mislead and distort minds depending on the style used in corresponding to the audience. The tools used in the media are many in various forms: newspaper, magazines, radio, television, internet... Nowadays Internet is most

the used means of communication worldwide by all generations. Through it we see Arabic is written in Latin in chatting.

These tools are watched and heard every day through dramas, films, theater, music but when vernacular dominates upon formal Arabic it pollutes the ears of all generation particularly on children. When some programs and cartoon are broadcasted in colloquial it sticks in the child's memory and hinders somewhat on the classical acquisition and affects his listening and pronunciation. When it is heard and spoken for a long time, it deteriorates the device of articulation and alters the movement and of function of the phonological organs.

Dr. sami Al-alfi says in his book the Arabic Language that one of the characteristics of Arabic is: "... it is a musical language based on ear before eye..." because it was taken through speaking and hearing before writing. The ancient Arabs cared more about the music of speech. In other words, they used to enjoy the eloquence of Arabic through rhetoric and recitation. Arabic counts on timbre of words and expression that pleased the ears and souls. The Dean of Arabian literature assured that the Arabian literature is a spoken and heard literature before it was written read literature. Therefore, vernacular changes the melodic characteristic of Arabic and scrabbles the ear and tongue.

The tyrannical spread of dialects in the Arab world will result a gradual withdrawal of Fuss-ha. It will eclipse the contact and vitality of Arab culture, heritage, belief, and history. The variety of dialects among Arab nations will cut off the unity of Arabism and there will be only a geographical proximity. This lingual division will create isolation and misunderstanding between Arabs. Then new for foreign new languages will establish and replace Arabic language.

Ways to save and protect Arabic language

Colloquial Arabic is becoming ubiquitous within the culture of everyday life we must protect and propagate the Arabic language through the education and popular media in the mind of families and in the mind of developing children. Now we try to give some possible means to save and protect Arabic language from corruption and make people aware of its worth.

The Arabic language we are looking for differs depending on many social levels. In a sense, the Arabic of daily life is not the Arabic used in media, policy, poetry and literature. The extreme limit of Arabic we are seeking for is the proper pronunciation and correct used of expression without any violation to the rules. Consequently, all Arabs will use unified Arabic through which they can communicate and understand each other.

First, we must stress the importance of using Arabic in the educational institutions as the main study language particularly in the primary schools. In his first two years of his learning, the child must only Arabic language without any influence of any foreign language so that he can master it starting from Quran.

Hikmate Fahl. Reflections on the current state of the Arabic Language.

For Arabs and Muslims, learning Arabic is related firmly to the holly Quran as an original book of Arabic language. Quran preserved Arabic more than 14 century as an ancient survived language in the world. Quran keeps it alive and helps in its development through the Islamic History. Arabic and Quran are so correlated and when Arabs and Muslims learn Arabic through Quran they master it better than those who learn it through other educational systems. Quran is not only an Islamic doctrine but also a book of refine language and rhetoric. We should decide it the basic book in the educational system for learning Arabic.

Second, we should arabize human sciences and technological educations in universities. All the developed countries teach natural sciences in their respective national language but Arabian universities. Lectures should be conducted in Arabic language so that it will become easy and affordable to students to understand sciences in terms of quantity and type have access to the world of discovery and invention

Third, we should reinforce the use of formal Arabic in media. We must avoid reading novels and magazines written in colloquial Arabic as well as listening to slang songs. We should promote cultural programs, theatre, dramas and advertisement in formal Arabic. We should band children watching cartoons in vernacular Arabic that have negative effects on him linguistic repertoire. We should also protect Arabic characters in digital communication. It is better to use the Arabic keyboard for text messaging, e-mail, and blog comments and avoid mixing Arabic with Latin.

Finally I call for Arab countries to legitimize a law to protect Arabic language and encourage it in the fields of education, science, technology, economy, media.... These will strength the use of Arabic language in our life and communication with other Arabian nations.

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**Reading - Writing Connection : Reading English Novel to Develop
Creative Writing Ability and Word Recognition**

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ABSTRACT

The benefits of the reading can be far reaching. Reading is a source of pleasure and entertainment , a way of relieving stress , a means of finding things out , of learning and improving knowledge and of self development. It is especially vital for EFL teachers , through reading and writing connection , to provide students with abundant opportunities and resources to help them become reflective readers and writers. This study , thus investigated the effects of using English novel - The Oliver Twist - as an extensive reading source to develop creative writing ability and word recognition of the first-year undergraduate Engineering students enrolling in Technical English 1 in the first semester of the 2009 academic year at Rajamangala University of Technology, Lanna , Chiangmai. Thailand. The experimental instruments were 4 lessons of creative reading activities , the word recognition test and the creative writing test used before and after the implementation of reading English novel – The Oliver Twist. The data obtained were analyzed by mean of percentage , mean and standard deviation. The findings of the study showed that the students' word recognition scores in the posttest were higher than those in the pretest 22.66 % and creative writing scores in the posttest were higher than those of the pretest 32.33 % . In conclusion , it is logical that creative reading can contribute to creative writing , reading for pleasure makes reading a means of entertaining and creative reading activities are meant to inspire students , to stir their imaginative thoughts, and generate alertness in their minds.

INTRODUCTION

In this paper reading English novel – The Oliver Twist – as a source of pleasure reading is implemented through creative reading activities to develop creative writing ability and word recognition of the engineering students . From reading we gather all we need to know about form , register , technique , style , metaphor , genre. Most of the university writing courses are either linked to the literature courses or include a major component on learning how to read as a writer , that is , reading is not only for content , but also for method. We cannot deny that the more we read , the better improvement in language we get. Since reading for pleasure is not a must to read but it is a will to do , it can increase the amount of reading in English. What we gain from reading a lot is fluency in reading which leads to speed and ease of reading (Catherine Wallace , 1992).

To write better , we must learn to read better. Many people read newspapers and novels but never write an original word themselves. All writers must be readers! We cannot write without reading as we write. We cannot write without first understanding how the language works to communicate ideas.

Reading can teach us some things about the language , and reading good essays can go so far in enabling us to become better writers. Writing well involves more than simply having something to say and knowing correct spelling , grammar , and punctuation. Writing also involves an understanding of how ideas can be pieced together to convey broader meaning. And while we can learn much from experience and contact with good examples , we cannot consciously improve our writing without knowing how the language works to convey ideas to readers.

Traditionally, teachers of English as a second or foreign language have tended to teach reading and writing separately from each other. However, some specialists have argued that reading and writing are closely connected and should be taught together.

David Morley (2007) said that “ Novels and poems are usually the first causes of wanting to be a writer, and you must start and stay with them. Reading poems, stories and novels is of the first importance to every individual writer at whatever stage they have reached, for it offers you models, helps you find a style, teaches you technique and builds your vocabulary.”
 Beginning readers recognize very few words instantly. Through repeated exposure to the same words, instant recognition vocabulary grows. It is particularly important that developing readers learn to recognize those words that occur very frequently in print.
 Therefore the 4 lessons of creative reading activities used in this study were designed to implement reading the English novel – The Oliver Twist – to develop students' abilities in word recognition and creative writing.

METHODOLOGY

Twenty one first year's engineering students studying at Rajamangala University of Technology, Lanna, Chiangmai Campus, academic year 2009 participated in this study. The content of The Oliver Twist (14 chapters) was divided into 4 lesson plans focusing on creative reading activities and creative writing tasks.

The research instruments designed by the researcher included 4 lesson plans, the word recognition test, the creative writing test, the criteria for evaluating word recognition ability and rubrics for scoring creative writing test. The story of The Oliver Twist was divided into 4 lesson plans and the creative reading activities were anticipation guide, reading and thinking aloud, directed reading and thinking activity, discussing, reflecting on the story, question – answer relationship, jig saw reading and role play. The 4 lesson plans were implemented in the classroom in 24 periods (1 period = 50 minutes). The word recognition test and the creative writing test were applied before and after the experiment. The criteria for evaluating word recognition ability and rubrics for scoring creative writing test were used to measure and interpret the students' ability in word recognition and creative writing. The data collected were analyzed by mean of percentage, mean and standard deviation.

RESULTS

The mean score of the word recognition test after the implementation is 25.9 or 51.8 % while the mean score before the implementation is 14.57 or 29.14 %. The mean score of creative writing test after the implementation is 9.73 or 64.86 % while the mean score before the implementation is 4.88 or 32.53 %. The statistic value illustrates the increase in word recognition and creative writing ability of the students after implementing the creative reading activities through reading novel - The Oliver Twist -.

DISCUSSIONS

The results of the research can be discussed in the following aspects :

Word recognition ability

The students' ability in word recognition has increased after the implementation of reading English novel in the classroom. All students gained more scores in posttest than in pretest. In pretest, no student gained scores more than half of the full score (50 points). 13 students gained scores between 11-19 and score interpretation is in fair level while 5 students gained scores between 8-10 and score interpretation is in poor level. Only 3 students gained scores between 21-23 and score interpretation is in fairly good level. After having learned and being exposed to these words repeatedly in the novel they read and through the creative reading activities they have done, 10 students gained more than half of the full scores and 6 out of 10 gained scores between 30-39. 8 students gained scores between 20-24 and 3 gained scores between 17-19. The mean scores of the posttest scores were higher than those of the pretest scores by 22.66 percent.

The possible explanation for the improvement of word recognition ability could be as follows :

1. The improvement can be the effects of seeing and being exposed to these words several times through the story. The story itself kept students' attention to keep reading since they felt like to know the incidents in the story in each chapter. Reading for pleasure promotes positive attitudes toward reading and therefore it helps the students learn the words with their willingness. Moreover, novel is a good medium for learning a lot of words in meaningful way. The story, the setting, the plot, as well as the characters in the novel provide good examples of the language in using the words and this helps the students to retain their vocabulary knowledge.
2. The opportunity to learn the words in the meaningful and motivating context can foster the students to understand the meanings of the words more correctly and properly. The researcher has taught and encouraged the students guess the meanings of the words from the context. In addition, the setting, the plot, as well as the characters are good supporters for guessing the meanings of the words. These factors can enhance the learning process of the new words.
3. Based on the reading activities used in this study: reading and thinking aloud, discussion, question-answer relationship, jig saw reading and role play, the students were provided with

more opportunities to read , to write , to speak and to listen the words many times. Their brain interacted with the words which are learning words , seeing words , speaking words and using words. Through the reading activities and writing tasks in each chapter , the students were given the opportunity to review the meanings of the words several times throughout the experimental period. The process of learning words is correlated with the nature of learning process of constructivism in the area of dynamic interaction between task , instructor and learner.

4. From observation , it is found that the students sometimes used the dictionary to look up the meanings of the words and this rarely happened in their regular English classes. This habit could indicate their enthusiasm to know the meanings. The ability to recognize words can be the results of finding the word meanings by themselves , not just copying down the word meanings in Thai on their textbook.

Creative writing ability

On the account of creative writing ability ,the creative writing skill of the students has noticeably increased. The scores of creative writing in the posttest were higher than those in the pretest. All students gained more scores in the posttest. The mean score of the posttest is double higher than the mean score of the pretest. Although only 2 students gained 12 marks (out of the full scores 15) in the posttest and the score interpretation is in excellent level , no students gained scores lower than 7.5 which is half of the full score. The data obtained from the students can verify their creative writing ability which has developed through the period of studying.

This finding can be discussed as follows :

1. The development of the creative writing ability of the students can be the effects of several creative writing tasks given to them in each activity. These writing tasks helped develop their writing skill. The increase of writing skill can be contended with the practice of writing both in reading activities and writing activities. The students were asked to write a paragraph of what they wanted to do or wanted to be accordance with the story in the novel. The more opportunities to write in English , the more confidence in writing gained. Less confident students might feel under pressure but the novel could be their models , helped them find a style and taught them the structures and built up their vocabularies.(Morley , 2007)
2. From interviewing the students before conducting the research , their difficulties in writing are due to limitation of vocabularies , little knowledge of English structures and not knowing what to write. After having read novel and done the tasks , the students did improve their writing significantly. They felt worried and stressed at the beginning of the experiment but after a few weeks the researcher could feel the easiness and relaxation in them. Moreover , the researcher could see the fluency in their writing. The students were provided with good models of language used , imagination and the style of the writer. The researcher believed that to write better , we must learn to read better. All writers must be readers. We cannot write without reading as we write. We cannot write without first understanding how the language works to communicate ideas. Reading can teach us some things about the language , and reading good essays can go so far in enabling us to become better writers. Writing also involves an understanding of how ideas can be pieced together to convey broader meaning. And while we can learn much from experience and contact with good examples , we can improve our writing with knowing how the language works to convey ideas to readers
3. One of the creative reading activities that the researcher provided in the experimental process was a role play. The researcher made a group work and assigned the students to do role play on any chapters they liked , it was surprising that they did it very well. They rehearsed the role play several times before performing their role play in class. They enjoyed doing the role play and enjoy watching their friends doing the role play as well. From the role play they did , the researcher could see the students' ability to write dialogues by using and paraphrasing some structures and vocabularies from the novel. From the observation , the researcher felt that the students didn't have much difficulties in writing the scrip and performing the role play. They were more confident to write in English. They could produce the language with the help of the languages in the novel and the group working. Therefore , it can be assumed that the students learn the language by recognizing it and using it. The activities which the researchers provide for

them correlate with the principle of cooperative learning and the principle of learning by doing and thinking.

SUGGESTIONS

Suggestions for Teachers of English

1. With the rational and the findings of this study , it is strongly recommended that English teachers should encourage the students to read more for pleasure. The causes of difficulties in reading and writing in English can be due to the fact that students did little reading except which was required for school assignments. The solution to this problem is to provide more sources for pleasure reading.
2. The English teachers should implement creative reading activities to help students obtain a sense of achievement or accomplishment by finishing the tasks and feeling good about themselves. The positive attitudes toward reading can lead the positive attitudes toward writing. The connection of the reading and writing skills were to provide students with abundant opportunities and resources of reading and writing help them become reflective readers and writers. More importantly, students need to be instructed to realize that both reading and writing are acts with communicative purposes and are inseparable. Students can improve language proficiency through reading and writing activities , and develop these two literacy skills in a meaningful way.
3. The English teacher should bring creative writing to their classes. Allowing students to write with their thoughts and feelings in an imaginative way will stimulate their interest in writing.
4. The English teacher should bring novel , short story , fairy tale or any kinds of pleasure reading to their classes. Pleasure reading can create love and good attitude in learning the language.
5. Since this study was conducted with the students in the field of Engineering , there is a need to study further the implementation of pleasure reading in enhancing writing skill for students in other fields.

Suggestions for further research

1. Further research in correlation of students' personalities and learning styles to the effectiveness of strategies to develop reading and writing skills.
2. Further research in investigation of using reading for pleasure to enhance the development of listening and speaking skills.
3. Further study should be conducted to survey the use of extensive reading in classroom and the effects of extensive reading on Thai students in language learning.

Title of the Paper:

The Relationship between Students' Knowledge of Word Formation and Their Reading Comprehension Skill in EFL Contexts

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The Relationship between Students' Knowledge of Word Formation and Their Reading Comprehension Skill in EFL Contexts

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Abstract

The main goal of teaching English as a foreign language (EFL) in universities is to improve the students' reading comprehension skill. The books that are designed for this purpose mainly include a section which provides students with an opportunity to get familiar with the basic stems, prefixes and suffixes of English language. Students are supposed to memorize the meaning of the given stems and affixes and do the related exercises in order to make general language competence over the appearance of items and guess the meaning of the new combinations of the familiar components, (i.e., taught stems and affixes) in particular contexts. The purpose of the study was to find the relationship between the students' knowledge of word formation and their ability to comprehend the unseen texts. The subjects of the study were 300 undergraduate university students who had passed a course entitled "Study Skills" including a comprehensive chapter of word-formation knowledge. Two researcher-made tests of word-formation knowledge and reading comprehension, standardized by experts and acceptable index of reliability, were administered to the research subjects. The high correlation coefficient between the scores obtained from the administration of the two tests and their feedback concerning the use of their knowledge of word formation suggest that if students learn how to use the knowledge of word formation when they encounter a new word in a passage, they will become independent readers.

Key Words: Reading comprehension, Word formation, EFL, Affixes, Derivational suffixes, Prefixes

Introduction

Among different language skills to be taught in language courses in Iran, where English is considered as a foreign language, reading skill has usually been in the center of attention. In the introduction of their book entitled: "Reading through Reading", Varzegar et al. (1994) refer to the Foreign Languages Committee on Curriculum Development and its ratified decisions in 1980, and mention that the goal of foreign languages in Iran is to strengthen the reading comprehension skill. This idea is not limited to Iranian educators as Gentry and Graham (2010) cite Barzun who believes that, "no subject of study is more important than reading ... all other intellectual powers depend on it" (P. 2). It is believed that the basic need of university students is to read and obtain information from different sources available in their field of study. Aside

from the reading skill, the language component which is normally in the limelight is vocabulary. The books intended to provide students with an opportunity to practice reading skill include various vocabulary exercises. This is also backed by experts like Broughton et al. (1980) who believe that reading skill involves correlating elements of language with meaning. Words are the most familiar elements among others. It is clear that to understand a text, one should understand the meaning of individual words which form the text.

Bowen et al. (1985) also mention that the study of vocabulary is valuable in making general language competence over the appearance of items in particular contexts in the readings. The analysis approaches which help describe word formation in English language is particularly useful. To build vocabulary, one suitable way is understanding and application of word formation process.

While some experts in the field of reading skill believe that knowledge of morphological rules help learners with understanding the meaning of words, and in turn, of sentences (Varzgar et al, 1994; Paulston and Bruder, 1976; Yorkey, 1970; Bowen et al., 1985), some other experts doubt the significant effect of word formation on language learning. Broughton et al. (1980) mention that understanding the meaning of words is not the readers final goal. He should be able to understand the semantic patterns of lexical items as well as grammatical relationship between them. Identifying the problems and principles of syllabus designing, Widdowson (1990) asserts that studies in second language learning have defined linguistic knowledge in terms of learning morpho-syntactic rules of the language system. But Widdoson doubts whether it is true. He adds “what is not clear, though, is how freely available such rules are in respect to different lexical realization and contextual function” (P. 142). A learner may know a rule, but only in a limited range of usage. The learner may know the rules as they are related to certain words, but not be able to generalize the rules to other lexical items. He may also know the rules as he uses them to understand a few communication functions, but not be able to use them to realize other functions. Therefore, Widdowson doubts the significance of internalizing morphological rules in second language acquisition. The dilemma of devoting or not devoting a part of any reading course to the knowledge of word formation has led the researcher to investigate the relationship between students’ knowledge of word formation and their reading comprehension skill in EFL contexts.

Regarding the aforementioned problem, the following research question would arise:

Is there any significant relationship between students’ ability of analyzing words and their reading comprehension?

Methodology

Participants

The population of the study consisted of all students (i.e., around 2100) in the English department of Islamic Azad University, Roudehen Branch, in the academic year of 2010-2011. The method of selecting the research sample as Best and Khan (2006) refer to was non-probability sampling. The technique of sampling applied in this study was “convenience” which, according to Best and Khan, suits the educational researches where there are administrative limitations. In other words, the available classes are chosen as the research sample and the

results can be generalized to the similar classes. Following this sampling technique, that is, “convenience” technique, the subjects of the study consisted of 306 freshman students (8 classes) who took the courses of Study Skills and Reading Comprehension One. The subjects were both boys and girls and from different age ranges.

Instruments

There were no standardized tests appropriate for the purpose of the study. So, the researcher set down to design two tests; in order to assess the knowledge of word formation, and to evaluate the application of this knowledge in the students' reading comprehension. Each test comprised 35 multiple-choice items which were standardized through different phases. The word-formation test was developed on the basis of different affixes which subjects had been taught during the semester. The level of the passages used in the reading comprehension test was as difficult as the subjects' text book. The readability of the reading passages was estimated through using Edward Fry's readability graph (qtd. in Farhadi, 1994).

Since the reading test was to be given as an unseen test, the researcher decided to choose passages with readability lower than the students' textbook reading material which was from 8 to 11. The readability grade level of the test passages was between 6 and 9.

In addition to the readability of the material, the other criterion for selecting the reading passages was the number of words which had been formed through affixation and could be decomposed and analyzed by the subjects. The subjects were to guess at the meaning of the unfamiliar words using the knowledge of word formation and contextual clues.

In order to examine the content validity of the tests, a group of experts in the field of English Language Teaching reviewed the items and the weak items were modified according to their comments.

Design

Regarding research design, this research falls into the category of descriptive (non-experimental and correlational) studies. Descriptive research is a kind of research which refers to “investigation which utilizes already existing data or non experimental research with a preconceived hypothesis” (Seliger and Shohamy, 1980, P. 117).

Piloting

Before an instrument can be administered to the subjects, it should be tried out. The goal is to assess the quality of the instrument while it can be revised and improved before it is used with the research subjects. To follow the process of piloting, the tests were given to 40 students at the same level. Then, the scores of the pretests were obtained. In order to improve the quality of the two tests, the indexes of item facility, item discrimination, and choice distribution were taken into consideration, and the weak items as well as their options were modified, or totally discarded from the body of the tests.

The reliability of the tests also was examined by KR-21 formula, and the obtained indexes of reliability appeared to be 0.78 and 0.65 for reading comprehension and word-formation tests respectively.

The next step was to administer the two newly constructed standardized tests to research subjects. First, the word-formation test was administered to research subjects. The time allotted was 35 minutes. Second, the reading-comprehension test was given to the subjects. The time for this test was 55 minutes.

Results

When the raw scores were obtained, the researcher set down to analyze the research data. In order to compute the coefficient correlation between two sets of scores obtained from the administration of the two tests, the Pearson product-moment coefficient method was applied.

The result of applying the Pearson formula was that on a two-tailed test at the 0.01 level with 304 degrees of freedom, the null hypothesis was rejected. The t-observed valued of 10.98 exceeded the t-critical value of 2.58. The rejection of the null hypothesis proved that the ability to analyze words played a role in reading comprehension skill.

The results of the study were also justified by the similar studies done by Toosi (1995) and Emadin and Yazdani Moghadam (2008).

Discussion and Conclusions

Although a single research, like this, is not able to provide enough proofs for establishing a new teaching technique or rejecting the existing one, it may show that which one is more effective than the others and deserves to be exactly taken into account.

The first implication of this study corresponds to language teaching. While some teachers ask students to memorize all the words provided in pre-reading part of the textbooks, the results of the present study suggest that instead of this, students had better be taught to analyze the unfamiliar words and learn them through their parts.

Another implication of the study corresponds to syllabus designers. As the results of the research emphasize on the importance of word-analysis knowledge in reading comprehension skill, this may provide directions for preparing textbooks which satisfy the students' needs, and include the exercises that make students independent and autonomous in their readings.

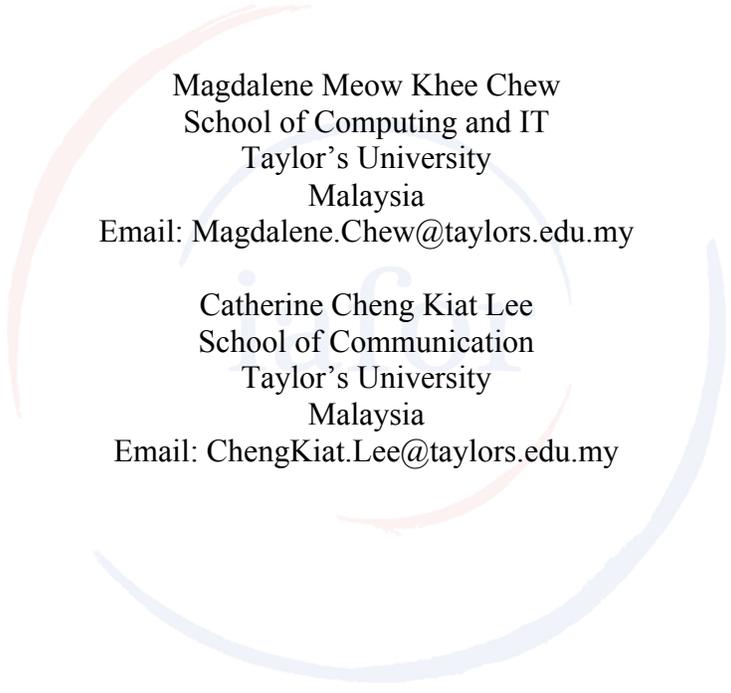
In order for students to practically use their knowledge of word formation, the final exams should include unseen tests which provide students with opportunities to analyze the unfamiliar words in order to get the main idea. The passages that consist of essential information or are taught in the class seize students the chance of applying their knowledge. The kind of exam that does not reflect the students' practices in the class makes the whole process fruitless and lead to negative backwash effect.

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Using a blog to facilitate Extensive Reading: An exploratory study



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Using a Blog to Facilitate Extensive Reading: An Exploratory Study

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Abstract

Research shows that extensive reading (ER) has many benefits for language acquisition. The challenge today is making ER appealing to the digital generation. For a possible solution, it is pertinent to look to the social media embraced by today's youths. This study was conducted to explore the use of the blog as a space for sharing peer-selected reading material to enhance reading motivation among English Language learners. The research questions that guided this study are whether the blog is a viable tool to facilitate ER, and how students perceive the use of this Web 2.0 tool for ER. The sample comprised two groups of students in a private university in Malaysia: 12 undergraduate students in a remedial language class and 18 students enrolled in an English for Specific Purposes (ESP) course. A blog was set up for each group of participants to post reading materials of their choice for blog members to read over a period of 8 weeks. A questionnaire was administered at the end of the study together with focus group interviews. The qualitative approach enabled insights into process and attitudes. It was found that the students were positive about the use of the blog for reading beyond the classroom but required tangible rewards and complementary activities to reinforce their motivation to participate. Most significantly, the results of this study indicate that the blog is a viable tool for facilitating ER.

Keywords: Blog, Extensive Reading (ER), Web 2.0

INTRODUCTION

Few language teachers today would argue about the benefits that Extensive Reading (ER) can have for the language learner. Research over the past decade underscores the usefulness and effectiveness of this reading strategy which is also referred to as 'pleasure reading' (Mikulecky, 1990 cited in Day and Bamford, 1997), and which Krashen describes as 'self-selected voluntary reading' and 'recreational reading' (2006, p.2-3). Extensive reading has been found to improve reading skills, vocabulary, spelling and writing (Krashen, 1993). In addition, ER strengthens the student's motivation to read more (Hayashi, 1999).

With such an impressive 'resume', ER should be employed in every English Language programme. Yet, the reality is that it is not. The reluctance of teachers to implement an ER programme in their classrooms has been attributed to a host of deterrent factors amongst which are cost, time constraints and the work required to set up such a programme (Day & Bamford, 1998:46). A decade later, problems still exist. Macalister's (2010) study on the attitudes of teachers of University preparation courses in New Zealand towards ER revealed that time constraints within teaching programmes and uncertainty about university students' view of the relevance of a reading programme discouraged them from implementing ER in their institution.

Another study on Taiwanese language educators highlighted logistical issues concerning the management of the process of ER (Sun, 2003). The online reading programme designed by Yu-Chih Sun (2003) to overcome the perceived problems of implementing ER among EFL learners is based on a structured system that fulfills the requirements for ER. However, it was reported that the rigid system had problems such as workload issues, inflexibility and students' aversion for writing reflection.

We posit that the implementation and effectiveness of an ER programme is not only hampered by logistical issues but also by the learners' attitude. It is an established fact that the young people sitting in the classrooms today have grown up with technology and are called by many names including digital natives (Prensky, 2001), Millennial students (Elam, Straatton & Gibson, 2007 in Lomicka & Lord, 2009) and the Net Generation (Tapscott, 1998, 2009). This group is profiled by Prensky (2001) as needing information fast, preferring random access and thriving when networked. These learners' preference for an experiential, interactive and image-rich environment (Tapscott, 1998) also indicates a gap between their text consumption habit outside the classroom and the traditional textual experiences in the classroom. Educators have to respond appropriately to the fact that the typical teenager today encounters texts that bear little resemblance to the book on a daily basis (Bigum & Lankshear, 1997, Healy, 2000, in Green & Campbell, 2003). To increase the potential of success of the ER programme, it is only logical to look to the digital technology and media this generation is comfortable with for an alternative platform to the traditional approach.

This study examined the use of the blog to facilitate an ER programme and is based on the rationale that the characteristics of this Web 2.0 tool can support the principles of this reading programme while avoiding some of the inhibitive problems.

The characteristics of the Weblog

The Weblog or blog is a second-generation asynchronous Internet tool that is defined as an online hypertext journal that others read and react to (Blake, 2008). Its primary purpose is to provide a space for the blogger to share writings with the online community who then respond in writing. The interface is easy to negotiate and allows pictures as well as audio and video clips to be included. The postings are displayed in chronological order and automatically archived so that a visitor can search for and read earlier entries (Sharma & Barrett, 2007). Its versatility is underscored by Bhattacharya and Chauhan (2010) who describe this popular Internet communication tool as a 'dynamic place that is connected by time and topic and a frequently posted list of interesting websites, or a personal diary of events and thoughts, or a combination'. Their research on learner autonomy through blogging yielded positive results.

The blog is not a new technological platform but Lomicka and Lord (2009) rightly point out that Web 2.0 "is really an attitude and not a technology" and is about existing technologies being harnessed to do more and different things, a notion that supports this exploration of the blog for enhancing reading rather than writing which would be closer to its original purpose. There are sufficient reasons to support the idea of using the blog as a repository for authentic target-language resources easily sourced from the Internet. Setting up a blog for a class of students to share reading materials requires minimal time and cost. The blog can be accessed anywhere using any device that allows connection to the Internet such as laptops, tablet computers and

mobile phones. The collaboration made possible through an easy to access platform such as a social networking tool like the weblog could create a supportive social climate that will help motivate the learner to participate in ER.

The blog and the key elements of ER

Day and Bamford (1998, 2002) offer 10 principles for ER which deal with the characteristics of ER and the conditions and methodology needed for its success. How the blog is able to support each of these principles is explained below:

1. The reading material must be easy

The reading material would be selected by the students for the students. It is logical to assume that the chosen reading materials would be filtered and deemed accessible to the target audience. This implies that the materials posted in the blog would be comprehensible to the members.

2. A variety of reading material on a wide range of topics must be available.

The blog members would have the Internet as a resource for reading material. There is no question about the Internet being a rich resource of a vast variety of reading material. According to a Web server survey conducted by Internet Services company Netcraft in August 2011, there are more than 460 million websites in existence. Not only do these sites supply text on every topic imaginable but they also provide a wide variety of text types including comics, jokes and video clips which are the staple fare of the visual-hungry digital natives (Prensky, 2001).

3. Learners choose what they want to read.

The blog would serve as a repository of reading materials deemed interesting and suitable for reading by the learners themselves. The process requires participants to first choose from what they enjoyed reading to share on the blog, and then to select from the shared materials what they want to read. Freedom of choice is exercised at two points of the process. Not only would they choose what they want to read but they would also recommend what they enjoy reading to their friends. Hence, the materials are peer-selected and self-selected.

4. Learners read as much as possible.

The task of sharing reading material on the blog would ensure that students read for two purposes. First, the students have to search for reading material to share. They have to first read the material to determine its suitability for sharing. Next, they are instructed to read what other members have posted which provides for more reading. This time, it is a more 'conscious' reading exercise.

5. The purpose of reading is usually related to pleasure, information, and general understanding.

The Internet allows for easy access to a wide variety of reading materials. With the freedom of choice that the participants are given, they would naturally look for what interests them and gives them pleasure.

6. Reading is its own reward.

The blog is for students to read and share what they read so that they can read even more. There are no structured activities or comprehension and language exercises to interfere with the reading

activity itself. It is believed that learners will derive both pleasure and language benefits from reading the blog posts.

7. Reading speed is usually faster rather than slower.

If the reading material is interesting and easy to understand, the reader will read faster. Again, this is made possible by virtue of the resource being the Internet and the 'chooser' being a peer who likely has similar interests and language ability.

8. Reading is individual and silent.

Participating in this blogging activity requires the students to read outside the classroom at their own pace and leisure. When to read and how much to read is left entirely to the individual. Although the students are instructed to post at least once a week and to read at least half of what is posted as a guide, they are under no duress as there is no strict monitoring or accounting involved.

9. Teachers orient and guide their students

This study focused on the use of a Web 2.0 tool in ER and sought to examine its efficacy in motivating students to read. Orientation and guidance were provided at the initial stage of the experiment. Thereafter, the instructor kept in the background, surfacing when necessary to give verbal encouragement to the class to continue participating.

10. The teacher as a role model of a reader.

For ER to be effective, the teacher is expected to blaze the trail for the students. With a reading blog, the instructor can easily access what the students are reading and read what they read. The students will see the instructor's comments on the posts which can be an incentive to them to read as well.

Theoretically, the blog could help eliminate the deterrent factors that make language practitioners shy away from ER. It is then necessary to examine it from the practical perspective. Is the blog viable as a platform for an ER programme? Can it support the characteristics of ER? The other dimension that needs to be assessed in relation to the practicability of using this online social network tool is the users' perception and attitude. The learners' receptiveness towards using what they regard as a social medium for academic purposes is important to the successful implementation of the programme.

METHODOLOGY

This study explored the use of the blog as a space for language learners to share reading materials for the purpose of Extensive Reading. The primary focus of the study is to examine the viability of the blog in facilitating ER and to gain insights into the perception of the participants towards the use of this social network platform for ER. This paper employs the qualitative approach with a detailed explanation of the findings from the questionnaire administered and the focus group interviews conducted.

The Participants

The study involved two groups of students at a private university in Malaysia. The groups were taught by one of the researchers in two separate semesters. Twelve students in a remedial English language programme made up the first group. They were a multinational group made up of students from Malaysia, Indonesia, Myanmar and China, with Indonesians having the largest representation (7). These first year degree students majoring in information technology and computer science were enrolled in the language programme to raise their proficiency from pre-intermediate to intermediate level. The programme was an intensive 12-hour per week course that focused on language skills. The second group consisted of 18 students in a foundation programme. They consisted of Malaysians with those of Chinese descent making up two-thirds of the group. The students were taking Technical English, an English for Specific Purposes (ESP) course which was a core subject meant to equip them with language skills relevant to their specialism. Their English language proficiency ranged from pre-intermediate to advanced levels.

Procedure

The objective of the planned extensive reading programme was first explained to each group. The blog for the Remedial English class was created by the instructor using Blogger, a free blog-publishing platform, and given the name CPE Readers Club. The ESP group created their own blog using WordPress, another popular free blog publishing tool. The group came up with their own name for the blog – Techreaders.

The participants were instructed to post materials in their respective blogs for their course mates to read for a period of eight weeks. The guidelines for participation were also posted in both the blogs.

Figure 1: Guidelines for members of the blogs (Extracted from: <http://cpe-readers.blogspot.com/>)

GUIDELINES FOR MEMBERS

You can...

...share articles, news, comics, stories, poems, jokes & riddles

You should...

...provide a brief description of what you want to share

...post something at least once a week

...read at least half of what has been posted

...comment on what you have read

You must not...

...post material with sensitive content (e.g. about politics or religion)

...post pictures without text

The students were allowed to select any form of reading material to fulfill the ‘freedom of choice’ aspect of ER. Evidence that they had read a post was derived from their comments. They were allowed to respond very briefly to avoid deterring them from reading. If they were required to write at length, it could be perceived as too much work which was the case with the Taiwanese students using the ERO system (Sun, 2003).

The wide variety of Web content that is easily accessible also necessitated defining perimeters for this activity. Hence, there was the reminder to avoid materials of a sensitive or offensive nature such as politics and religion.

The lecturer planned to stay invisible and remain a passive observer throughout the eight weeks, only giving verbal reminders to the class to keep posting and reading. This was to minimize the influence of external factors and maintain the study's focus on the use of the social media platform.

Feedback and Evaluation

A post-study questionnaire focused on gaining information on the students' participation (frequency in posting and reading), the procedure involved (how they looked for reading material and how easy or hard it was), their feelings about the activity of posting and reading, and their opinion of the blog (whether it needed improvement, how to motivate students to participate and its usefulness, effectiveness and relevance to language learning).

Seven students who formed the focus group were interviewed for a more in-depth examination of their understanding of ER and its benefits, their views of reading on the Net, the collaboration aspect of the reading blog, their level of involvement and to find out their opinions of the blog. These seven represent the spectrum of participants – from the active participant to the observer.

FINDINGS

The viability of the blog for facilitating ER

The results of this experiment are presented from the viewpoint of how they support the ten ER principles (Day & Bamford, 1998, 2002).

The approach adopted in this study required the reading material to be selected by the students for the students. The participants reported that they evaluated what they read for suitability in terms of level of difficulty and appeal before sharing it. A focus group member described the process involved in selecting reading materials succinctly: "Two steps – browsing and coming across something worth sharing, ask 'Is it appropriate to share?' Yes? Then post." This implies that the materials deposited in the blog were comprehensible to the members and therefore supports the principle that reading material has to be easy.

The participants who reported that it was easy to look for reading material comprised 46 per cent. Of these, half said it was because of the Internet which makes available a wide range of reading material (principle number 2). However, there were five students who found the task of deciding what to share with their friends on the blog difficult. There were also a couple of students from the Remedial class who said that they had difficulty understanding what they read on the Internet. This narrowed down their options for what to share which made this part of the programme difficult.

Freedom of choice was central to the whole experience. The participants were free to select any reading material to share within the set perimeters. They could decide whose posts to read, when,

where and how to read, and also whether to respond and comment or not. In this liberated environment it was found that the main criterion used by 46 per cent of the participants to pick what to post was peer influence. Another 18 per cent specified that they looked for humorous materials that would make the others happy. They had a clear sense of the audience when they selected what would interest their friends rather than what interested them. The outcome was 86 per cent of the participants reported that they enjoyed reading the peer selected materials on the blog. Also significant is the fact that over two-thirds of the participants maintained that they enjoyed looking for materials to share with their friends. About a third of this group said they gained new information and knowledge from this exercise. This observation is also relevant to the fifth principle which relates the nature of the reading materials and the participants' interests. Clearly, pleasure, information and general understanding form the basis of the students' decision making.

The 2-stage approach which requires students to first read to search and post, and then to read the shared materials increased the learners' exposure to texts. Forty per cent of the students contributed to the content in the blog at least once a week. Sixty per cent of the members read the blog at least once a week. These participants had the opportunity to read as much as possible which supports the fourth principle of ER.

The experiment yielded two significant results that relate to the principle that reading is its own reward. The first is that the participants did enjoy both the reading to search stage and reading the blog stage. However, more participants (86%) reported that they enjoyed reading their friends' posts at the blog stage than those who liked reading at the search stage (68%). The second discovery was unexpected. Although reading was perceived to be academically rewarding, a number of participants (18 per cent) felt that some form of activity such as discussion or language exercise based on the posted material would have motivated them to be more active on the blog. Even more surprising was the suggestion by 25 per cent of the participants that some prize or token be offered as an added incentive to the readers.

Fulfillment of the seventh principle can be inferred from the participants' affirmative responses about their enjoyment when reading the posts on the blog. A significant percentage (86%) reported that they enjoyed reading the shared materials.

The eighth principle states that ER has to be individual and silent. The students read at their own pace during their free time. The largest group (32%) read the blog at least once a week while the second largest group (29%) read whenever they felt like it which varied between twice a week to once in 2 weeks. They maintained that the frequency of their reading activity depended on whether the materials were interesting and whether they had free time.

The last two principles of ER emphasize the role of the instructor. In this study, the lecturer explained the objectives of ER and introduced the blog as the platform for the programme. Guidelines and rules of conduct were given and then posted on the blog as a permanent reference for the blog members thereby meeting the ninth principle.

The researcher deviated from the tenth principle which requires the teacher to be a role model of a reader for the reasons already explained in the previous section of this report. In the first part of

the study which involved the Remedial Class, the instructor kept in the background throughout as planned, reading the posts but withholding comment. This was to find out whether the students were motivated by the social media platform to keep the momentum they had. It was observed that by the fourth week, that is, mid-way through the experiment, the posts became less frequent and activity slowed down. A number of the participants expressed their wish to see the lecturer involved in posting reading materials, and initiating discussion of what was posted.

With this discovery, the instructor played a more active role in the blog for the ESP class in the following semester. However, that role was limited to reading and commenting on what was read. The teacher abstained from posting reading material so as to maintain the learners' freedom of choice of reading material. This is based on the rationale that any material selected by the teacher would be obligatory reading for the students. It was found that the students preferred the teacher to be even more active. One student felt that the blog members became less motivated with time and stronger leadership would have restored interest.

Students' perception of the blog as a tool for ER

The students viewed the use of the blog for this reading programme favourably. Feedback on the effects and benefits of using this approach was obtained via the post-study questionnaire and focus group interview.

Usefulness and Effectiveness in supporting language learning

Three quarters of the participants felt that every English class should have a reading blog. They specifically said that it would help improve their reading and writing skills, vocabulary and general language. There were a few detractors (14%), however, who thought the reading blog was ineffective or uninteresting.

Effect on motivation to read

On whether the blog motivated the students to read more, and read more carefully and purposefully, the focus group were unanimously affirmative on all points. All the focus group members thought that it was a more interesting way to read. One said it was fun while another explained that the collection of reading materials on the blog allowed her to encounter new kinds of reading materials that she would otherwise not read. A more comprehensive explanation was offered by one member of the focus group: "We are the Y Gen. Content flows faster on the Net and so better captures interest. I cannot see people needing books any more."

One of the reasons for the participants' liking for the reading blog has to do with the design of the blog. They liked the versatility of the blog which allows the design to be changed, the attractiveness of the design and the user-friendly interface.

Benefits from collaboration

Of the 86 per cent who enjoyed reading the posts in the blog, three quarters gave reasons that point to the social aspect of the blog. The responses of ten of the students reveal a consciousness of their relationship to the other participants. For example, two participants said they appreciated the hard work put in by their friends to find materials to share with them. Eighteen per cent of the participants endorsed the blog because it let them share their knowledge and also reading materials that interest them with their friends which is further evidence of the advantage of the

collaborative aspect of this social online platform. One of the students interviewed reinforced this idea saying that the blog gave them a greater sense of community. Another opined that the Internet is so 'huge' that it is not easy to look for specific knowledge, but with the reading blog, others did the searching and posted materials that advanced his knowledge.

Ideas for improving the reading blog

Although a decisive proportion of the students reported that they approved of the reading blog, it was observed that they did not participate as actively as they should. Their responses to the questionnaire items about what would have made the blog more effective plus input from the focus group indicate where the problems lie.

A surprising 25 per cent of the students thought that a reward such as a prize, gift or token would motivate students to participate in the blog. Another 21 per cent suggested that the design of the blog be improved further. Complementary activities such as quizzes, contests, brain teasers, discussion and even exercises were thought to encourage more participation. Five participants mentioned that the lecturer needed to be more active and to motivate them. One of the focus group members pointed out the need for more 'leadership' in the ER programme. The lecturer's participation was cited by several students to be a source of motivation. In addition the posts themselves were said to augment reader engagement if they contained humour, pictures, music and videos.

One of the focus group members who was not as enthusiastic about the reading blog as his counterparts opined that linking the blog to Facebook would generate more interest and attract more participation. Another focus group member echoed this sentiment with the rationale that Facebook is so popular with these young people that linking this social network to the blog would help reduce the academic-ness of the activity and remove the pressure of perceived expectations from both peers and instructor, thus making this approach to ER more casual and engaging.

CONCLUSION

This exploratory study confirms that the blog is a useful and viable platform for supporting an ER programme. Its benefits are derived from allowing easy access to a vast resource of reading materials to cater to the diversified interests of a group of learners and the convenience and ease with which a group can select reading materials and deposit them in a common space for members to exercise the free will to read, not to read or to read again.

The students' favourable perception towards this social networking tool is another important endorsement for this alternative approach to ER. This study confirms that the use of this Web 2.0 tool appeals to this representative group of the Net Generation because it permits them to collaborate with their peers and to share their interests in the form of text. In the words of one of the participants, this generation "crave their fellowmen's approval more than anything else" and they "by nature like to share and know about each other".

While this Web 2.0 platform appears to have passed the test as a tool in an alternative approach to a traditional language learning enhancement programme, there are some concerns that need appropriate response and further examination. One such issue is the difficulty faced by the learner in selecting reading materials.

In spite of or perhaps it is more accurate to say *because of* the huge resource of online reading materials, searching for reading materials to share was not as enjoyable as reading what was shared especially among the lower proficiency group. Hence, having too many options is also a deterrent. A possible solution is to provide a list of recommended websites for those learners who need assistance at this stage of the programme while still allowing the rest who are more adept at Web searching to go beyond that list.

Contrary to Bhattacharya and Chauhan's (2010) research finding, the results of this study have debunked the idea that this interactive online platform could make the learner more independent and responsible in their learning. The warning by Day and Bamford (1998, p.126) that lack of encouragement and concern on the part of the instructor would definitely lead to diminished interest and participation in an ER programme was found to be valid. Evidently, the use of the Web 2.0 resource does not eliminate the need for the teacher or lecturer's catalytic role. In spite of the accessibility, convenience and appeal of this online platform that could all encourage autonomous learning, the students were still unable to abandon their need or preference for traditional hand-holding. The use of the blog for ER was found to have minimum impact on learner autonomy which is evident in the students' preference for more active participation by the lecturer, structured activities to accompany the reading and some form of reward for their participation.

Further investigation is recommended especially on how and whether using the weblog and other social networking sites can significantly increase the effectiveness of ER in improving language. Once it can be established that the online platform can support the ER programme in all aspects of language learning, it would provide language instructors with an alternative approach that would help remove the reservations currently impeding the implementation of this worthwhile programme.

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Classification of the Student Learning Ability Using Discriminant Analysis: A Case Study of Administration and Management College, King Mongkut's Institute of Technology Ladkrabang, Thailand

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Abstract.

The purpose of this study was to find important factors that could classify the group membership of second year to fourth year undergraduate students in the Administration and Management College, King Mongkut's Institute of Technology Ladkrabang, Thailand in terms of learning ability. The factors predicted and used to classify the group members learning ability were student's hometown, high school GPA, high school program, and mode of admission. Group membership classification was based on the students' cumulative GPA as of June 2011. Students who obtained a cumulative GPA of less than 2.75 were classified in low to moderate learning ability group, whereas students who obtained a cumulative GPA of 2.77 and above were classified in the high learning ability group. Questionnaires were used to collect data from 222 undergraduate students by using stratified sampling. Discriminant analysis was employed to obtain the essential factors. Results showed that student's hometown, high school GPA, high school program, and mode of admission were the essential factors that could classify the group membership of these undergraduate students. Seventy point seven percent (70.7%) of group membership was predicted correctly. Thus, the Administration and Management College can utilize the findings of this study to predict which students in the next academic year enrolment belong to low to moderate learning ability group so that the administrators of the Administration and Management College can arrange intensive courses or tutorial classes for these students.

Keywords: Admission System, Quota System, Student Learning Ability, Classification, Discriminant Analysis

1. Introduction

At present, education has a very important role in the development of the country's human resources with high potential. According to the 10th National Economic and Social Development Plan of Thailand (2007 – 2011) for human resources development "Thai people will be ready for the development towards a knowledge-based society. Human resources, as the center of development, will be an efficient production factor and a crucial input to increase the national competitiveness in the global market. It will also strengthen the development foundation in every dimension." Thus, the development of human resources and quality of education is essential to the country's development. (Office of the National Economic and Social Development Broad, 2010).

Education in Thailand is provided mainly by the Thai government through the Ministry of Education. The constitution guarantees 12 years of free basic education. Formal education is divided into 4 stages. The first level, Prathom 1-3, is 3 years in the elementary school. The

second level, Prathom 4-6, is another 3 years from Grade 4 to 6. The third level, Matthayom 1-3, covers the first 3 years in high school. The fourth and last level, Matthayom 4-6, comprises the last 3 years in upper level high school. Thais are obliged to attend 6 years in the elementary and at least the first 3 years in high school. Students are also required to take the NET (National Educational Test) after each level. After graduating high school, 2 tests are also needed to be taken to continue tertiary education –O-NET (Ordinary National Educational Test) and A-NET (Advanced National Educational Test). Many public and private universities in Thailand offer excellent curriculums in Medicine, Information Technology, Humanities and the Arts which are highly sought. Law and Business degrees from abroad are also starting to gain popularity amongst Thai students. Every aspiring college student has to pass the CUAS (Central University **Admission System**) before pursuing any bachelor degree. The CUAS contains 50% of O-NET and A-NET results and 50% from fourth level GPA (Grade Point Average). Many changes and experiments in the university admissions system have taken place since 2001, but by late 2007 a nationwide system had yet to be accepted by the students, the universities, and the government. On return to democracy in early 2008, after the December election, the newly formed coalition led by the People's Power Party announced more changes to the national curriculum and university entrance system. At present, state-run universities screen 70% of their students directly, with the remaining 30% coming from the central admission system. The new system gives 20% weight to cumulative grade point average, which varies greatly depending upon the school's standard. Some students have voiced distrust in the new system and fear it will encounter score counting problems again as what happened with the A-Net in its first year of implementation. The new aptitude test held for the first time in March 2009 was supervised by the National Institute of Educational Testing Service replacing the Advanced National Education Test (A-net). Students can sit for the aptitude test for a maximum of three times, with their best scores counted. After the first test in March 2009, the next two were scheduled in July and October. Direct admissions are normally held around October. The new test comprises the compulsory General Aptitude Test (Gat), which covers reading, writing, analytical thinking, problem solving and English communication. The voluntary Professional Aptitude Test (Pat) gives students a choice of seven subjects. (spainexchange.com, 2011)

The Admission System is organized by a committee consisting of representatives from public universities and the Office of Permanent Secretary for University Affairs. Some public universities think that the Admission System still has some problems and it might be an unfair way to get into public universities. Many public universities want to recruit new students directly through their own **Quota System** and conduct their own entrance examinations, interviews, physical examination and an aptitude test, which may differ from one institution to another.

Administration and Management College (AMC), King Mongkut's Institute of Technology Ladkrabang (KMITL) is one of the public universities which recruit new students from both Admission System and Quota System. But one problem arose using these systems. The quality of students taken into public universities has declined. As shown in Table 1., the percentage of students who have GPA less than 2.75 has increased from 2008 to 2010.

Table1. Percentage of Students who had GPA less than 2.75 in 2008 – 2010

Year	Cumulative GPA < 2.75		Cumulative GPA ≥ 2.75		Total	
	Number	%	Number	%	Number	%
2008	73	50.3	72	49.7	145	100.0
2009	169	59.1	117	40.9	286	100.0
2010	243	56.5	187	43.5	430	100.0
Average Growth Rate		+ 6.6		- 5.7		

Source: King Mongkut's Institute of Technology Ladkrabang, Thailand

Autthayanwutthikul's (2001) study showed that the important factors that could classify the group of learning ability of first year computer science students were mathematics entrance examination score, gender, high school GPA and high school program. Chaisiwamongkol (2011) surveyed undergraduate students at Khon Kaen University in order to compare the academic performance of students in Quota and Admission groups. Results showed that the grade 12 GPAs of students in the Admission group were higher than the grade 12 GPAs in the Quota group. After completing the Bachelor's degree, the GPAs of students in the Admission group were higher than the GPAs of students in the Quota group. A study conducted by Saul G. and Maria Veronica S. (June, 2007) indicated that high school grade point average (HSGPA), the outcome indicator most often employed in predictive-validity studies, is consistently the best predictor not only of freshman grades in college but of four-year college outcomes as well.

2. Objective

The objective of this study was to find the important factors that could classify the group membership of learning ability of undergraduate students admitted by AMC, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand from June 2008 to June 2010.

3. Data and Methodology

Sample

The sample consisted of 222 undergraduate students who entered AMC, King Mongkut's Institute of Technology Ladkrabang from June 2008 through – June 2010 chosen using stratified random sampling. Questionnaires were administered in June 2011.

Variables

Data were collected from two groups of students. One group consisted of students who got cumulative GPA of less than 2.75 and were classified in low to moderate learning ability group. The other group consisted of students who got cumulative GPA of 2.75 or higher and were classified in high learning ability group. The factors used in this study to classify the group members learning ability were gender, student's hometown, high school GPA, high school program, mode of admission, parent education, and parent income.

Data Analysis Technique

The data were analyzed and summarized by using Statistical Package and Discriminant Analysis to create a predictive model of group members learning ability. Finally, findings and conclusions were made on the basis of this test.

4. Findings

Background of the Respondents

Table 2. presents the respondents' background.

Table 2. Background of Respondents

Background	Cumulative GPA < 2.75		Cumulative GPA \geq 2.75		Total	
	Number	%	Number	%	Number	%
Student's Hometown						
- Urban	59	27.6	76	35.5	135	63.1
- Rural	55	25.7	24	11.2	79	36.9
High School GPA						
- GPA < 2.75	17	7.7	2	0.9	19	8.6
- GPA \geq 2.75	103	46.4	100	45.6	203	91.4
High School Program						
- Science – Math Program	39	17.6	54	24.3	93	41.9
- Math – Art Program	81	36.5	48	21.6	129	58.1
Mode of Admission						
- Admission System	39	17.6	55	24.8	94	42.3
- Quota System	81	36.5	47	21.2	128	57.7

Source: Developed for this study

Table 2. showed that the majority of respondents who had cumulative GPA less than 2.75 lived in urban areas, had high school GPA higher than 2.75, graduated from Math – Art Program, and entered to AMC by Quota System. While the majority of respondents who had cumulative GPA equal to or more than 2.75 lived in urban areas, had high school GPA higher than 2.75, graduated from Science – Math Program, and entered to AMC by Admission System.

Classification

Using Discriminant Analysis, important factors were obtained to classify the group membership of learning ability of undergraduate students in AMC. The group members learning ability of students in this study are presented in Table 3. through Table 6.

Table 3. Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
Student's Hometown	.937	14.214	1	212	.000
High School GPA	.946	12.163	1	212	.001
High School Program	.953	10.460	1	212	.001
Mode of Admission	.952	10.586	1	212	.001

Table 4. Standardized Canonical Discriminant Function Coefficients

	Function
	1
Student's Hometown	.603
High School GPA	-.538
High School Program	.654
Mode of Admission	-.356

The results in Table 3. and Table 4. indicate whether there is a statistically significant difference among the dependent variable means (*group membership of student learning ability*) for each independent variable at level of significance 0.05. It was found that the important factors that

could be used to classify the group membership of student learning ability in the AMC were high school program, student’s hometown, high school GPA, and mode of admission with the standardized canonical discriminant function coefficients 0.654, 0.603, 0.538, and 0.356 respectively (– or + sign is not considered). Among the four factors, High School Program was the most important factor that could classify the students’ learning ability.

Table 5. Classification Function Coefficients

	Cumulative GPA	
	GPA < 2.75	GPA >=2.75
Student's Hometown	8.545	7.238
High School GPA	30.315	32.074
High School Program	7.110	5.733
Mode of Admission	6.044	6.788
(Constant)	-64.290	-67.026

Fisher's linear discriminant functions

Table 6. Classification Results^{b,c}

			Predicted Group Membership		Total
			GPA < 2.75	GPA >=2.75	
Original	Count	GPA < 2.75	86	34	120
		GPA >=2.75	31	71	102
	%	GPA < 2.75	71.7	28.3	100.0
		GPA >=2.75	30.4	69.6	100.0
Cross-validated ^a	Count	GPA < 2.75	86	34	120
		GPA >=2.75	32	70	102
	%	GPA < 2.75	71.7	28.3	100.0
		GPA >=2.75	31.4	68.6	100.0

a. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

b. 70.7% of original grouped cases correctly classified.

c. 70.3% of cross-validated grouped cases correctly classified.

The discriminant function (equation) was obtained to create a predictive model of group members learning ability. In this study, two equations (Table 5.) were used:

$$\hat{D}(\text{GPA} < 2.75) = -64.29 + (8.545 \times \text{Student's Hometown}) + (30.315 \times \text{High School GPA}) + (7.11 \times \text{High School Program}) + (6.044 \times \text{Mode of Admission}) \text{ ----- (1)}$$

$$\hat{D}(\text{GPA} \geq 2.75) = -67.026 + (7.238 \times \text{Student's Hometown}) + (32.074 \times \text{High School GPA}) + (5.733 \times \text{High School Program}) + (6.788 \times \text{Mode of Admission}) \text{ ----- (2)}$$

Using these equations, the learning ability of a new student accepted by AMC can be assessed until the student graduates by substituting his or her information in the equation (1) and (2). If discriminant scores in (1) is greater than (2), he or she is classified as belonging to low and moderate learning ability group, otherwise, he or she is classified in high learning ability group. The classification results (Table 6) reveal that 70.7% of respondents were classified correctly into “GPA < 2.75” or “GPA \geq 2.75” groups. Group of “GPA < 2.75” students were classified more accurately (71.7%) than the group of “GPA \geq 2.75” students (69.6%).

5. Conclusions

By applying Discriminant Analysis, it was found that the important factors that could be used to classify the group membership of student learning ability in AMC were high school program, student’s hometown, high school GPA, and mode of admission. 70.7% of group membership was predicted correctly. AMC can use the findings of this study to predict the learning ability of students who will be admitted to AMC in the next academic year. If some students are predicted to be in low and moderate ability group, the administrators of AMC should arrange intensive courses or tutorial classes for these students.

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VISUALIZATION MODEL FOR ELECTRIC CIRCUIT

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VISUALIZATION MODEL FOR ELECTRIC CIRCUIT

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Abstract:

In a newly revised science-curriculum in Japan, the concept of energy is highlighted as an important concept across all levels and is first introduced to Grade 3 pupils as ‘stored force’ in a stretched rubber band or force of the wind. In Grade 4, electrical energy is described by comparing the brightness of bulbs or speeds of a battery and motor-attached toy car. In Junior high school, water flow model is used to define electrical energy ‘voltage’, electrical current and resistance. However, a number of researches claimed that water flow model creates confusion for students in differentiating energy and current. Other studies pointed out students’ difficulty in terms of the flow of charge and energy, and voltage and its relationship to current. From our analysis of selected electric circuit models, and taking into account the ‘energy concept’ presented in Grade 3, we developed a ‘Rubber Band – Net – Water Flow Model’ for electric circuit as a tangible visualization on how electrical energy is ‘consumed’ in the bulb. In a 30-min lecture-demonstration to the 29 Grade 4 pupils of the university’s attached elementary school, we analyzed the pretest and post-test results to elucidate the model’s role of establishing a connection and coherence in the way pupils define and visualize energy.

Introduction

Electricity is seen as a central area of physics and science curricula at all levels of education, namely primary, secondary and tertiary levels (Gunstone, Mulhall, et al., 2009). Hart (2008) outlined that this same topic itself poses many challenges for both teacher and students. In primary level, pupils may enjoy constructing simple circuits and finding out how to light the miniature bulb by connecting pieces of wire into the battery and miniature bulb. However, in the course of exploration puzzling observations might create dilemma even for teachers. Using equations and formulas to explain what has been observed in the circuit is inappropriate for beginning pupils, as they are already abstract representation of the circuit.

In junior high school level, some curriculum introduced different models like *water flow model* as analogy to explain the concepts of current, voltage and resistance. However, Gentner and Gentner (1983) pointed out that ‘this model is not effective in showing the difference between the intertwined concept of current and energy when beginning students do not have the requisite understanding of water pressure and flow’. Potential difficulties of the said model are further accentuated by the tendency of textbook writers to describe the model using words as ‘push’ or ‘pressure’ to describe ‘voltage’, without making the model itself explicit (Mulhall, et al., 2001).

Furthermore, a study of Shipstone, et al., (1988) on 15-17 year-old students’ understanding of electricity in five European countries revealed that ‘students across participating countries substantially have common difficulties in understanding concepts which include flow of charge and energy, and voltage and its relationship to current’.

Statement of the Problem

Since electricity occupies a prominent place even in primary education, how can primary school science teachers build a 'starting bridge' between the physical circuit for the grade school pupils and the abstract formulas introduced in junior high schools in order to facilitate coherence and continuity in the way students define and visualize electrical energy and other electrical terms? Specifically:

- 1) What appropriate visualization can facilitate understanding on the concept of 'consumption of energy' in the bulb for Grade 4 pupils? (This topic is appropriate since Grade 4 pupils are introduced to the circuit activity at this stage)
- 2) Can this visualization provide connection on the concept of voltage along the level of understanding of Grade 4 pupils? (In Japan's science curriculum the concept of voltage is not introduced until pupils reach junior high school.)

Visualization in Science Education and Examples of Electric Circuit Models

Visualization is crucial in the production of knowledge. It can function as a 'bridge' between scientific theory and the world-as-experienced (Rapp and Kendeou, 2003). Since much of science involves the explanation of complex, casual relationships in dynamic systems, a visualization that captures salient relationships will enable students to understand the complexity underlying a conceptual theory. Gilbert (2007) outlined that 'the roles of models and of visualization in science and science education have gained theoretical and practical saliency and that one emphasis is on introducing to students, on all levels of the education system, the nature and processes of science'. Other research (Seok and Jin, 2010) claimed scientific models are tested both empirically and conceptually and change along with the process of developing scientific knowledge.

Electricity is seen as a central area of physics and science curricula. Its concepts are highly complex in ways that understanding them is dependent on analogies and metaphors (Gunstone, et al., 2008). Taber et al. (2006) pointed out further that 'electric circuits are abstract and students are expected to develop conceptual models of the relationship between non-observables qualities (current, potential difference, resistance) in terms of other non-observables such as energy and electrons'.

Duit (1991) and Heywood (2002) have pointed out that models play an important role in teaching and learning physics. Textbook treatments of electric circuits for beginning students (Nardelli, 2006; Lofts and Evergreen, 2007) commonly assume an *electron-transport model*, explaining electric current in terms of the flow of electrons around a circuit. This model is described to fit comfortably within the realist ontological framework of physics (Hart, 2008). However, the model is often not made explicit and, in any case, cannot provide a complete and coherent account of how electrons are involved in the transport and distribution of energy around the circuit (Mulhall, et al. 2001; Stocklmayer and Treagust, 1994). As a consequence, as Gunstone et al. (2007) have shown, introductory texts may simply introduce the terms energy and/or voltage with little or no explanation and, in some cases, without even clear definition. Some introductory texts invoke Ohm's law (Lofts and Evergreen, 2007) in an apparent attempt to explain energy transfers, but this is an empirical relationship that, by its very nature, cannot fulfill an explanatory

role in order to address the fundamental limitations of the electron transport model.

Some researchers (Mulhall, et al. 2001; Stocklmayer and Treagust, 1996) have argued that only an *electric field model* can illustrate the holistic reasoning about electric circuits, but its formal mathematical definitions are unhelpful for beginning students. Moreover, Stocklmayer (2010) pointed out that ‘field model is more coherent and overtly deals with the many misconceptions about direct circuitry identified in the literature’. Other alternative models are effective only on a single and specific concept. For example in Japan, *Pachinko model* is used to describe resistance. In this model, marbles are represented by electrons that are sliding and colliding on an array of concrete nails that were planted on an inclined plane. Gentner and Gentner’s (1983) ‘*moving-crowds model*’ is claimed to be effective in modeling resistance but weak in describing the concept of voltage. Hart (2008) introduced an effective way of differentiating energy from current through the use of Smarties as ‘energy’ and movement of students as ‘current’ but, posed some difficulties in explaining the distribution of energy across parallel and series circuits.

The use of overtly analogical models in textbooks, especially recent texts, appears to be quite rare, although Nuffield Primary Science (Nuffield-Chelsea Curriculum Trust, 1993) makes use of a *bicycle chain model*, where the chain represents the circuit, and each link an electron. Hart (2008) described the system as ‘when the rider pedals, energy is supplied to the system at the pedal, and the movement of the chain transfers the energy to the wheels. The links in the chain are not used up and they are there whether or not the bicycle is operating, whether or not they are transferring energy. Energy transport is effective from the moment pedaling starts, and is not dependent on a particular link in the chain travelling from the pedal end to the wheel’. This looks simpler but she further stated that ‘bicycle chain model is already abstract in that the mechanism of energy transport is not immediately apparent. This makes it more difficult to distinguish energy (transported through tension in the bicycle chain) from charge (represented by the links of the chain itself)’.

Rubber Band – Net – Water Flow Model of Electric Circuit

Development

The development of the Rubber Band – Net – Water Flow Model directly aimed to introduce the concept of electrical energy, a fundamental concept in basic electricity, as a ‘consumable substance’, and tangible experience for Grade 4 school pupils. The battery as a common representation of a source of electrical energy used in elementary level is like a ‘black box’. How it causes a current to flow is far more complex and difficult to visualize. Furthermore, explaining to the pupils the differences in the brightness of the bulbs or rotation of the propeller brought about by the differences of series and parallel connections of batteries proved to be very difficult. In contrast, the concept of current, although invisible, is easy to describe with the use of galvanometers. By connecting a galvanometer between a battery and a miniature bulb in the circuit (Mori, M. et al., 2011), pupils can verify the flow of electricity, though invisible. The strength of flow and direction of electricity is described according to the degree of deflection of the hand of a galvanometer and in what direction the pointer deflected. However, confusion arises when pupils were confronted with the fact that the readings from the two galvanometers attached oppositely on both sides of the circuit showed no changed in the currents’ readings. It is thought that our proposed model can provide a tangible visualization in addressing these concepts of ‘consumption of energy’ and ‘conservation of current’.

The introduction of this model also aimed to explore possibilities on how the concept of electrical energy using the model can connect to the analogy of water pressure and voltage. Although the concept of voltage is not introduced until Junior high school, we reckon that the tactility of the model can provide avenues for pupils to establish the link between these analogies.

The Salient Features

The first highlight of this model is the utilization of the tangible and consumable idea of energy as a 'stored force' (Mori, M. et al., 2011) in a stretched or twisted rubber band. Using the water pressure-voltage analogy, Grade 4 pupils are able to confirm the change in pressure by squeezing and comparing the hardness and softness of the plastic vinyl tube. The change in pressure is created as the pupils pull and push a movable piston (which is connected to strips of rubber band tightly held by a metal clip attached on the outer acrylic pipe) causing the rubber band to stretch and to return to its original length (Fig. 3).

The second highlight of this model is the establishment of a concrete visualization of voltage owing to hydraulic pressure that avoids gravitational effect (Kameyama, 1980). Current water flow model utilizes water potential energy-voltage analogy. This analogy is closely linked to electric potential energy in electromagnetism, a subject that is difficult for the students to visualize. By utilizing a hydraulic pressure – voltage analogy (Electrical Circuit Analogy), our proposed model utilizes the build-up of water pressure as water flows in a decreasing cross-sectional area of a pipe (Poiseuille's Law). Augmenting this provision with a common fish or harvest net as depiction of a filament and small balloon to support the image of a miniature bulb, our proposed model can provide a tangible encounter for pupils to relate to hydraulic pressure.

In a nutshell, the stretching and returning action of the rubber band makes the water flow. This water flow in return, inflates the balloon, hardens and softens the plastic vinyl pipe and lets the water itself to go and flow back (water's quantity kept unchanged) to the place where it was originally pushed. This action of 'stretching and returning' of a rubber band exemplifies the 'charging and recharging' of the battery for the 'electricity to flow' and this 'flow' inflates the balloon as equated to the glowing of a miniature light bulb, all done in a tangible, tactile and explicit manner. The materials used in this model are shown on Figure 1.



Figure 1. The Materials

The Construction

1. Grooved inner pipe mounted with O-ring, flat tape, silicon stoppers on both ends, with the check valve inserted inside it is fitted into the outer pipe.
2. Once fitted with the outer pipe, a handle connected to the rubber band is tied strongly on one end of the outer pipe using the metal clip.
3. Rubber stoppers with connecting smaller acrylic pipe, elbows, inlet and outlet pipe are fitted on both ends of the outer pipe.
4. Improvised pipe made from vinyl plastic with a balloon fitted on the plastic pipe with the net is

attached to both elbows from both ends of the outer pipe. (Once everything is fitted, water is filled through the inlet and outlet pipes)



Figure 2. Parts and components of the construction

The Operation

1. Pull the handle for the piston (Fig. 3) to move opposite side as the rubber band stretches. This movement will allow the water to flow through the check valve opposite to the direction of the piston. The water will occupy the area vacated by the piston. This act is similar to an act of charging the battery. (The piston, outer pipe, handle, rubber band comprise the image of a ‘battery’)

2. Releasing the handle will cause the rubber band (Fig. 3-2) to return to its original size. This will cause the piston to go back to its initial place while pushing the water on its way back. This ‘push’ is an explicit and tangible way of demonstrating the ‘push’ of a battery that will allow the water to flow through the pipe and back in the outer pipe. Although the pulling (Fig. 3-1) and releasing of the piston inflates and deflates the balloon, the main focus is the role of the net (as analogy for the filament) in building up the pressure difference that causes the hardening and softening (Fig. 3-2) of the tube. By utilizing Poiseuille’s Law to the pressure drop and voltage drop analogy, and at the same time providing a concrete representation of a filament in an actual circuit, we introduced the net as differentiated in its purpose from the research of (Fukuyama, Y. and Higashiguchi, S., 2004).

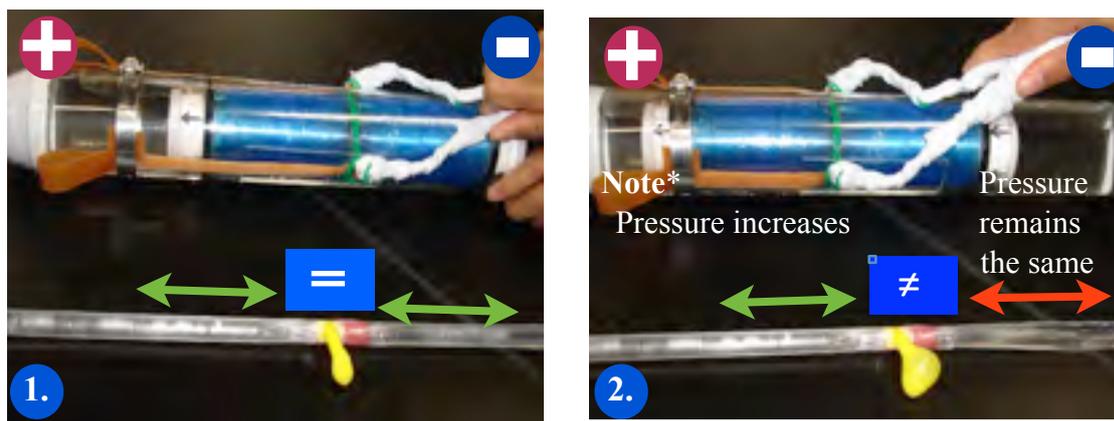


Figure 3. The tangible analogy for the battery and filament of the bulb

The Lecture-Demonstration

There were 29 Grade 4 pupils from Okayama University attached elementary school who voluntarily attended a 30 min lecture-demonstration using the Rubber Band – Net – Water Flow Model. The pupils have already covered the topics on the ‘Workings of Electricity’ where they learned how to use the galvanometer to describe the magnitude and direction of the current, and differences of series and parallel battery connections in relation to the brightness of the bulb or speeds of rotation of a propeller. The pupils were shown a simple electric circuit as a review. They were given two minutes to answer the 2-item pre-test after they correctly predicted that the miniature light bulb glowed as soon as the switch is turned on. The pre-test questions reflected the two objectives described in the beginning of this paper. Question number 1 asked ‘What kind of work does a battery do?’ Question number 2 stated as ‘What changes are taking place as current flows on each wire connected opposite the bulb?’ Before the model was presented, the pupils were shown a simple circuit where two galvanometers were connected separately opposite the bulb. They were asked to predict to the question, ‘Is the current on both wires opposite the bulb the same or will the readings on both galvanometers the same?’ Out of 29 pupils, 25 said ‘No’ and only 4 answered ‘Yes’.

The pupils were then led to the demonstration of the model (Fig. 4). Explanations were given on the identification and description of the parts of the model as paralleled to an actual simple circuit. They were asked to observe, to touch, to hold and to compare the hardness and softness of the vinyl plastic pipe as water flows through the net while inflating the balloon. Post-test was administered after the short demonstration. Discussions on what pupils had observed and learned followed after the post-test.



Figure 4. The actual demonstration

Results and Discussions

Table 1 shows the summary of answers given by the 29 Grade 4 pupils for the Pre-test and due to voluntary basis, only 16 pupils remained for the Post-test, respectively. Pre-test and post –test answers for Q1 are identical and the same. This indicates that pupils have a common understanding and agreement on the kind of work battery does, even when they were made to observe and manipulate the concrete Rubber Band – Net – Water Flow Model. Pre-test responses for Q2 also indicate that pupils have common conceptions that current's direction and strength change as it flows through the circuit passing the miniature bulb. However, answers in the Post-test for the same Q2 clearly indicate that majority of the pupils opted for different answers viewed as a result of intervention by the model, and probably some linked to persuasion by their classmates' answers. Specifically, six pupils stated that water pressure in the tube had changed by citing the hardness of the vinyl tube on one side and softness on the other side of the net, respectively. Moreover, five pupils described a change in the voltage by relating it to the hardness and softness of the vinyl plastic tube. Although they could not accurately point out the cause in the change of either pressure or voltage, it could have been pursued if we have had enough time by making follow-up questions. Nevertheless, these pupils have introduced words, which appear to be advanced for their levels like 'pressure' and 'voltage'. One pupil even used the word 'taken' representing the 'push' provided by the battery as equated to being 'consumed' in the bulb.

Moreover, two pupils still maintain that current's strength had changed supporting the idea of 'current consumption', which still remains as an attractive and persistent notion of pupils (Shipstone, et al., 1988) while two more pupils describe that current's direction had changed. It was thought that had these 4 pupils were given enough time to observe and interact with the model they might have changed their answers, otherwise.

Table1. Pre-test and Post-test Summary

Questions/Answers	Pre-test	Post-test
Q1	Push the electricity to flow Light the bulb	Push the electricity to flow Light the bulb
Q2	Direction of the current Strength of the current	6 pupils Pressure had changed 5 pupils Voltage had changed 1 pupil Battery's 'push' was 'taken' by the bulb 2 pupils Current's strength had changed 2 pupils Current's direction had changed

Conclusion

Regardless of the decrease of the number of pupils in the post-test part, their responses in Q1 for both pre-test and post-test, and Q2 pre-test showed no difference and contradiction. The pupils have a common understanding on the 'supposed' function of a battery viewed as true in relation to their level, and majority of them hold the common pre-conceived idea of 'current consumption'. The remarkable change was shown on their answers in Q2 post-test after the Rubber Band – Net – Water Flow Model was presented. It was viewed that despite some degree of probability that some pupils' answers in Q2 for the post-test were affected by persuasion of their friends and advanced learning, they were confident to introduce the words like change in 'pressure', 'voltage' and 'energy consumption' based from what they have observed from the model. Although only one pupil out of the remaining 16 pupils described the 'energy consumption' by pointing out the water as it passes through the net, it is very noteworthy to emphasize that 70% or 11 out of 16 pupils cited the hardness and softness of the vinyl tube as water passes through the net as a common reason to account for their different answers as 'changed in pressure' and 'changed in voltage', respectively. This result shows that the model can serve as a promising indication that pupils can be convinced that energy is the quantity that is 'consumed' in the bulb instead of electrical current or charge. Relating it to the definition of the pupils of energy as 'stored force' in a stretched rubber band, then this force allows the water to flow through the vinyl tube. This flow hardens the tube (connected before the net) as water negotiates to enter the net and softens the tube (connected after the net) as the water leaves the net. The hardening and softening of the tube shows the decrease in the 'force' of the rubber band as equated to the 'consumption of energy'.

Further discussions of pupils' ideas over the observed information using the model can encourage pupils to share sensory information to construct common representations that will link to the concept of voltage. Moreover, this shows that with further follow-up discussions and demonstrations using the model the hardness and softness of the vinyl tube could serve as a direct and concrete proof to support the 'water pressure – voltage analogy'. This model is viewed as an appropriate design to offer the pupils with sensory information that supported a conceptual change on their notion of energy and current. These representations serve as a 'window' into pupils' ideas and might provide teachers with communication and evaluation tool (Botzer and Reiner, 2007). Basing from the answers of this same group of pupils, it is also noteworthy to mention that they did not indicate any change in the current's strength on both sides of the circuit. This indirectly shows that the idea of 'current consumption' can effectively and possibly be replaced by the notion of 'energy consumption' with the intervention of the proposed model.

Recommendations

Basing from the discussions and conclusions presented, the following items are introduced subject for further studies and confirmation:

1. Refining the 30-min lecture-demonstration into a full-length lesson in order to facilitate ample and reasonable time for the pupils to manipulate and observe the model and at the same time provide more venues for them to explain and elucidate their thoughts.
2. Making the model lighter so that pupils can freely manipulate it, looking for alternative replacement for vinyl plastic pipe and minimizing frictional effects between the piston's

O-ring and outer acrylic pipe for the rubber band to freely pull back the piston as it returns to its original length.

3. Designing the model with provisions to quantitatively measure the targeted variables can be best fitted and introduced into the level of Junior high school students.

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Title:

From theory to practice: the learning challenges of international students to succeed in a Malaysian technical and vocational (TVE) higher education institution

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Topic submission:

Challenges, resistances and negotiations in learning and teaching

From theory to practice: the learning challenges of international students to succeed in a Malaysian technical and vocational (TVE) higher education institution

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Abstract

One of the education visions in Malaysia is to implement industrial driven approach learning in the technical and vocational (TVE) higher education institutions. This vision impacts the way curriculum is structured in TVE disciplines (such as engineering) where the emphasis is given on the practical approach. A study was conducted to address the learning experiences of engineering international students having to follow such curriculum, and the responses of academic staff teaching these students. This paper aims to discuss one part of this research which is the transition challenge from the experiences of academic staff teaching international students. Semi structured in-depth interviews were conducted with nine academic staff to gather their experiences teaching international students. Adopting qualitative methodology analysis, findings delineated academic staff observed international students encountered significant challenges learning project or design type of assignments which involve calculation and applied knowledge. These challenges affected negatively to their academic performance which in turn, unable to achieve learning expectations in the institution. This paper underscores the discussions on the transition of these students' education background as one of the possible reasons underpinning the above situation.

Keywords: learning challenges, international students, academic staff, Malaysian technical and vocational education, applied knowledge.

Introduction

This article presents a major part of the findings in a larger research which explores the learning experiences of international students studying engineering courses in a Malaysian technical and vocational education (TVE) university. Accordingly, it investigates these students' adjustment into their new learning environment and the responses of academic staff teaching them in the institution. The goal of this empirical work is to gain an in-depth understanding of these students' experiences learning in a Malaysian TVE specialise institution; the Malaysian Technical and Vocational University (MTVU). Understanding these students learning experiences is vital to enhance understanding on international students' movements since the number of these students in such university is rapidly increasing (Perkinson 2006).

This article will begin by explaining briefly the background, methodology and method of this research. It moves on to analyse the experience that the participants underwent during their learning and teaching processes in MTVU. Discussion on the findings follows which emphasises the challenges these students encountered in terms of learning applied knowledge subjects. Findings will be discussed in light of corresponding interviews with international students and relevant literature emphasising these students' previous education experiences.

Background of study

In Malaysia, a formal focus on international education has been evident only since 1995 when the intention to make the country an international hub of education was announced (Mahathir in Mohd Yusof & Sidin 2008). This aspiration was also stated in Malaysian National Vision 2020 where the goal is to achieve the status of an industrialised developed country. One of the strategies outlined in this document is to enhance the growth of international students in higher education institutions including in TVE institutions (Rajuddin 2000). Among the existence literature on international students in Malaysia (e.g. Safahieh & Singh 2007; Mohd Yusof & Sidin 2008), understandings on individual experiences of international students and academic staff in learning and teaching processes particularly in TVE institutions are still lacking. This study contributes to the expansion of knowledge in internationalisation of higher education with a particular focus in the Malaysian TVE environment.

TVE in Malaysia is offered in vocational schools, community colleges, polytechnics and higher education institutions (Md Yunos, Jailani et al. 2005). To date, TVE public higher education institutions are provided by the Ministry of Higher Education (MOHE) and are initiated in four technical universities which are known as the Malaysian Technical Universities Network (MTUN) (Mohd Zain 2008). These institutions offer preparation of professional and managerial TVE personnel such as TVE educators, engineers, architects and surveyors (Leong 2009). The uniqueness of TVE higher education institutions is the structure of curriculum is designed in an emphasis on skills based which includes work placement in industries. It is intended for students to learn in an experiential environment as in workplace. To achieve this, TVE institutions are allocated a huge amount by the government to import technologies to support better quality for the national human capital (Md Yunos, Jailani et al. 2007). Among the listed universities, MTVU has the highest engagement in increasing numbers of international students from various parts of the world (Mohd Taha 2010). For this reason, this institution is chosen as the research site for this particular study.

MTVU first recruited international students since 2004 and currently has more than 200 international students. These students are 95% male from the Middle Eastern and African continent, while the rest are from neighboring South East Asian countries such as Indonesia, Myanmar, Columbia and Brunei. Three major reasons for these students coming to MTVU are the courses offered, cheaper living and tuition costs, as well as the similar religion that communities in MTVU and these students share. The most demanding courses for these students are the engineering disciplines which are civil, electrical and mechanical.

The structure of curriculum in these three courses follows the industrial demand. Thus, it was designed in an emphasis applied knowledge skills which are hands-on and application of lecture learning in the real world of work. On top of lecture sessions, students enormously involved in applied engineering subjects that comprise project type of assignments, calculation in lectures and tutorials, site visits, laboratory sessions and industrial training. Cumulative grade point average (CGPA) system is used in assessing all students learning in MTVU. This is evaluated from students' final marks from their performance in examinations and course works throughout their candidature. To graduate as an honours undergraduate engineering student, students must get at least 2.0 CGPA which is at least C grade for each subject.

Adjustment of international students

Institutions having international students hold a big responsibility in creating international classrooms (Chang 2010). As such, institutions are expected to respond to the needs of international students. International students need support from the institution as they sacrifice

to leave behind their usual support networks to pursue their education goals (Hoj 2009). By understanding their experiences, it helps institutions to prepare sufficient support and infrastructure to help ease their transition, as well as helping to increase intercultural awareness among the existing society in the institution and build enduring relationship with countries the students come from (Furnham & Bochner 1986; Ward, Bochner & Furnham 2003; Saat 2007; Yuefang Zhou et al. 2008; Davis 2009).

There are a large number of scholars that describe the transition of travellers across places and culture (e.g. Oberg 1960; Adler 1975; Furnham & Bochner 1986; Ward, Bochner & Furnham 2003; Berry, John W. 2005). In this literature travellers are sometimes referred to as sojourners who have to adjust to the new environments they find themselves in (Ramsay, Barker & Jones 1999; Andrade 2006; Brown 2009). Travellers were said to be often anxious and overwhelmed during the transition and this is typically described as 'culture shock' (Oberg 1960; Ward, Bochner & Furnham 2003).

However, culture shock is referred as academic shock when related to international students' adjustment in the learning and teaching environment (Ryan & Hellmundt 2003; Williams 2008). Academic shock includes the overwhelming experiences of having to face the differences in a new academic setting which offers different academic culture and expectations (McFalls & Cobb-Roberts 2001). Previous studies have revealed related issues encountered by international students when dealing with academic shock; namely language difficulties, cultural-social exclusion and learning difficulties (e.g. Robertson et al. 2000; Andrade 2006; Zhang Zhiheng & Brunton 2007; Bartram 2008). These shocks were commonly described as the overwhelming experiences of international students to 'fit in' the new environment, thus strategies were suggested to overcome the feelings and assimilate into the new environment. However, this one-way approach is no longer suffice, since intercultural learning—that is, the importance to respect and negotiate differences—is an aim in this contemporary era (Berry, J. W. 1999; Cortazzi & Hunter-Carsch 2000; Davis 2009). Therefore, this study adopts adjustment as a two-way effort which is addressed by international students in their learning experiences, and the academic staff through their teaching experiences. The larger study attempts to alleviate this two-way adjustment concept, thus interviews were conducted to both international students and academic staff. However, this article aims to discuss one part of the findings which is the transition difficulty of international students from the view of academic staff.

Research approach

This research took an interpretive qualitative case study approach to address the learning and teaching experiences of international students and academic staff in MTVU. The underlining epistemological framework is related with the analysis and interpretation of the phenomenon in a 'case' (Stake 1995, p.3) or a 'bounded system' (Merriam 2009, p.41). The key philosophical assumption of the research is that students and staff construct a social reality through their interactions with their world (Merriam 1998; Kvale 2009).

In this study, minimum of three in-depth interviews were conducted to gather information from nine academic staff participants. The goal is to get a rich and thick description of their experiences—in other words, to gather rich 'descriptive', 'particularistic' and 'heuristic' characteristics (Merriam 2009, pp.43-44). Experience is socially constructed by the participants and that they are given freedom to give their own meaning on their own experiences. By understanding their experience, it gives more opportunity to the researcher to better understand the complexity of the situation under study.

Findings: Challenges in transferring theoretical to practical knowledge

As the study proceeded, themes and new knowledge was constructed with the assistance of Nvivo9. One of the overriding findings that emerged was the concern of academic staff towards international students' competency to transfer their theoretical knowledge into practical knowledge. International students were identified by academic staff as encountering difficulties when having to complete tasks that involve calculation skills including answering examples of questions in subjects and completing project or design type of assignments. One example was given by Shahrul (a pseudonym). He observed his international student was not well versed in Mathematics, thus made his teaching difficult.

I am teaching third year students [so] I'm expecting them to be well versed with their Mathematics, however ... I would say some of the students who are having problems in their Mathematics cannot solve even simple equations that will make teaching difficult.

Shahrul was teaching engineering applied subjects to senior students in his field which calculation is a vital skill to understand the subject matter. Thus, having students with lack of Mathematic skills made him had an impression that this international student was incompetent and hence below of his expectations.

Marina (a pseudonym) is another academic staff who encountered the same experience as Shahrul. Looking into her experience, she assumed her international student might had been memorising what he learned in class thus fail to apply the knowledge into calculation questions:

He [referring to her international student] is hardworking in doing calculation, but it seems that he did not get what he wanted, as if he studied but the knowledge is not grasped, hah, he's like that, hmm I don't know why ... I think he memorises but didn't understand, he only memorises the question [but] at last did not know how to apply.

Shaiki (a pseudonym) had the same opinion with Marina. He also believed international students in his class were memorising the exercises given in his subject. Shaiki stated:

All the written exercises they [international students] will complete, [so] if they had seen the questions it means that they can do them ... but if I modify just a little [on the questions] they will still answer like they have answered before, I think they memorise the answers.

However, he also observed that international students' low English proficiency is also the main reason of the problem. He explained:

There were some [international students] who came to ask questions but they still couldn't answer questions during examinations ... that's why I think English might be the cause because they can do the tasks when I explained one by one. They were okay when they did the exercises in front of me, but when it comes to examination, there will be no extra explanation so they couldn't answer ... actually the questions were standard questions, I just changed certain condition in the same type of questions, maybe they did not know how to interpret the instructions. They can pass if it is theory questions ... but they couldn't answer design type of questions.

Zulkifli (a pseudonym) supported Shaiki's opinion. Zulkifli from his point of view revealed that international students' lack of English proficiency was the root cause of failing to complete his assignment. He had experiences giving a project type of assignment which designing is a major part of completing the task. However, international students fail to show their capability to complete the task.

They [international students] struggle from the first step, it's okay when I give lectures in class, they still can accept, but when it comes to project type of assignment, they couldn't ... they have to start from scratch ... they told me that they never done such type of assignment before. They prefer everything to be guided, something like exam type, means that I have the questions [and] they know the steps to complete the questions, but in project, I gave general guidance, it's like a real case assignment, they have never done this before, so they did not have enough exposure [to complete this type of assignment]

Even though Zulkifli agreed that exposure in dealing with such tasks is important, he also agreed with Shauki where he believed that English is the main issue for these international students. With low incapability to communicate in English means they could not communicate effectively with local students. By not having the communication, international students have not been able to take advantage on the local student classmates who have had experiences in such tasks in their previous education. If international students were able to connect with local students, they might have been more effective on looking possible ways to complete the tasks.

Discussion

From these academic staff interviews, it is evident that there were two reasons academic staff perceived to be the cause of this challenge. First is international students memorise what they have learned thus unable to apply the knowledge into different situation. Second is the inability in speaking English, hence is hard for international students to communicate with local students to better understand the instructions of the task and eventually fail to meet the lecturer's expectation. In response to these challenges, interviews from international students regarding this matter were analysed. To sum, findings revealed international students did not have much exposure in project or design type of assignment. This happened because the ways these students experienced in their previous education was more theoretical, thus the practical part of learning in MTVU was a whole new experience. It was indeed true on how academic staff observed and the challenge became complex as English proficiency had contributed to the challenges as well. The only differences is academic staff were doing their own assumptions on the causes and except for Zulkifli, they were unable to provide understandings that the incapability derived from the learning these students have been the cause of their incompetence.

Education in the Middle Eastern and African countries had been discussed having the same trend. Memorising has been the tradition of learning in schools since they inherit the ways of teaching in the Quranic schools and the culture of teachers as the absolute authority (Flaitz 2006; Mahrous & Ahmed Anis Ahmed 2010). Shauki's and Mariam's view on this point complement the fact on international students' memorising their teaching, hence failed to apply the knowledge differently. Zulkifli's view also has its basis. The ways students' learn is they prefer to be told exactly what and how to learn new things (Flaitz 2006; Mahrous & Ahmed Anis Ahmed 2010). Assessment methods in schools are entirely exam-oriented where the ability to absorb knowledge from textbooks and lectures are crucial to succeed in education (Heyneman 1997; Burt 2004; Russell 2004; Bouhlila 2011). These characteristics had been embedded in the ways these students considered learning. As a result they appeared to be incompetent when they were expected to be otherwise by their lecturers in MTVU. This situation resulted conflicts between international students and academic staff, especially when academic staff are unaware of these students' previous education that could lead to this incompetency. Mismatch in expectations could occur between these two groups where academic staff expect international students should be able to complete such tasks and international students could be expecting explicit guidance and instructions are given. Such conflicts eventually, could create misunderstanding and disharmony in the learning and

teaching environment. Further investigation is suggested to be conducted on expectations and the mismatch of the expectations to better understand and support international students' transition.

Conclusion

This paper aims to discuss one part of a larger research which is the transition challenge of international students from the view of academic staff. Taking a qualitative approach using semi-structured in-depth interviews, the findings indicated these students encountered significant challenges learning project or design type of assignments which involve huge calculation and applied knowledge. Further analysis on international students' responses and related literature revealed the challenges derived from their previous education system which enhanced theoretical knowledge with memorising as the crucial skill. Thus, their transition into a TVE curriculum has been a challenge and hence need further guidance and understandings from academic staff in MTVU. This paper provided insights which can increase institutional awareness towards international students' needs and support, as well as possible reasons to increase awareness among academic staff. By having such awareness, more improvements can be made and significantly increase the education quality of the institution.

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**INFORMATION, EDUCATION, AWARENESS:
PIONEERING INTERNATIONAL SCHOOL (RSBI) CASE IN INDONESIA**

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Abstract

A Pioneering International School (RSBI) is the National Standard School, which prepares students based on National Education Standards in Indonesia and the international standard in achieving international competitiveness. Since its establishment by the Ministry of National Education, it seems that evaluation is needed regarding the uncertainty information which is spread in the society by the media. This paper is presenting a study on the importance of communication in building understanding of the pioneering international school in Indonesia. The study used a qualitative approach with secondary data. The analysis of the data is based on agenda setting and the uses and gratification theories. The results suggest that the media should support the government in giving the information on the pioneering international school to the society. This information is part of social education which brings awareness to the society about the pioneering international school. Finally, the understanding of the society will reduce uncertainty, which will bring positive perception to the pioneering international school in particular, and the Ministry of National Education in general. In return, it will support the international competitiveness of Indonesian human resources.

Keywords: *education, communication, media*

Introduction

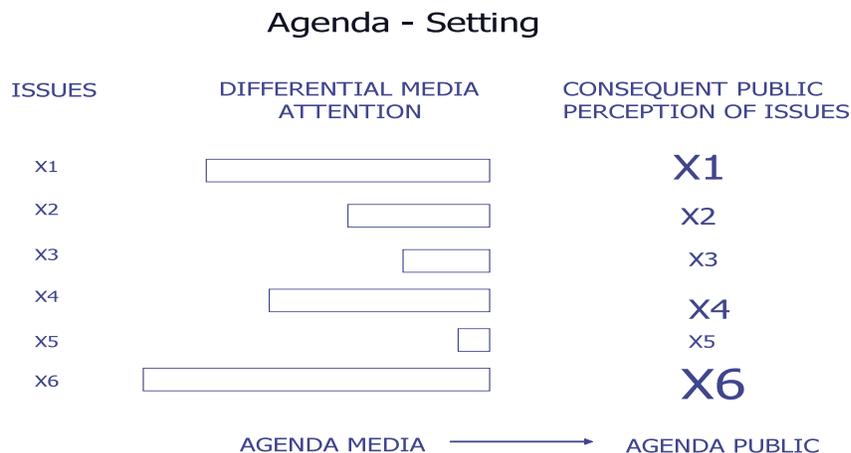
A Pioneering International School (RSBI) is the National Standard School, which prepares students based on National Education Standards in Indonesia and the international standard in achieving international competitiveness. There are some reasons why RSBI is developed; first, the globalization era demands strong competitive ability in technology management and human resources. Technology excellence will reduce the production costs, increase the value added content, enlarge the product variety, and improve the product quality. Second, the pioneering implementation of SBI (International Standard School) has strong legal foundation, which is Article 50 clause 3 of the Law no.20 of the year 2003 on National Education System (UUSPN 20/2003) stating that “the central government and/or the local government should run at least one unit of education in all levels of education to be developed as an international standard education”. Third, the implementation of SBI is based on the philosophy of existentialism and essentialism (functionalism). The philosophy of existentialism believes that education should improve and develop the existence of the students as optimally as possible with facilitation conducted through dignified education process, pro-change (creative, innovative, and experimental), and encourage and develop talent, interest, and capability of the students. In the actualization of those two concepts of philosophy, the four pillars of education, such as learning to know, learning to do, learning to live together, and learning to be, become the valuable guidelines to unify the education implementation practices in Indonesia, starting from the curriculum, the teachers, the teaching-learning process, the facility and the infrastructure, to the assessment. For instance, the learning process does not only introduce values (learning to know), but also should be able to encourage comprehension and application of those values (learning to do)

which are done collaboratively (learning to live together), and make the students confident and appreciate themselves (learning to be). Based on the data from the Ministry of National Education, the number of the Pioneering International Schools (RSBI) in all over Indonesia nowadays is 1,305 schools. The details are 239 elementary schools (SD), 356 Junior High Schools (SMP), 359 Senior High Schools (SMA), and 351 Vocational Schools (SMK). In that process, there are positive and negative things observed. Those are observed by the society, especially the people concerned with education through reviews, opinions, and news in the mass media. Moreover, the information spreads through the parents whose children study at RSBI. What is exposed by the media and what the children and the parents experience cause a very powerful opinion from the society to emerge to do re-observation towards the concept and the policy of RSBI. This matter triggers the curiosity to study it scientifically to find out what is exposed in the news by the media about RSBI, the opinions of the society, and the uncertainty that emerges. It seems that evaluation is required regarding the uncertainty information which is spread in the society by the media.

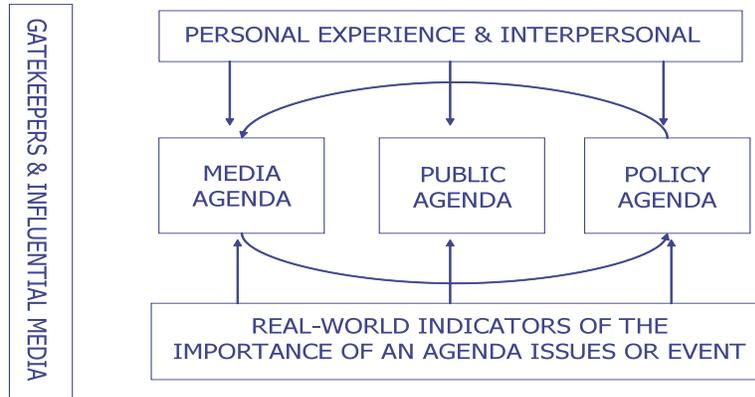
Theoretical Framework

This research applies agenda setting and the uses and gratification theories as the theoretical framework.

Agenda Setting Theory. The main point of this theory is related to the learning function of the mass media. It is assumed that people learn not only the news issues but also how important an issue or a topic is based on the way the mass media give an emphasis on the issue or the topic. Therefore, the more exposed the news is by the media, the more important the issue is considered by the people. What becomes the media agenda will then become the public agenda. In relation to the impacts, there are two levels of agenda setting impacts; the first level is agenda-setting (what to think), where the media determine the important public issues, and the second level is priming (how to think about), where the media show the important parts or aspects of the issues. The function of agenda-setting is the process of three linear parts. First is the issue which becomes the priority to be discussed in the media is determined (media agenda). Second, the media agenda has an impact or interacts with what the society think about (public agenda). Finally, the public agenda has an impact or interacts so well with what the policy makers consider important (policy agenda). Briefly, this theory could be explained as the media agenda influencing the public media, and the public agenda influencing a policy. In its development, the linear relation is believed as causality relation. Furthermore, there is an understanding that the real event gives impacts on both, the media agenda and the public agenda.

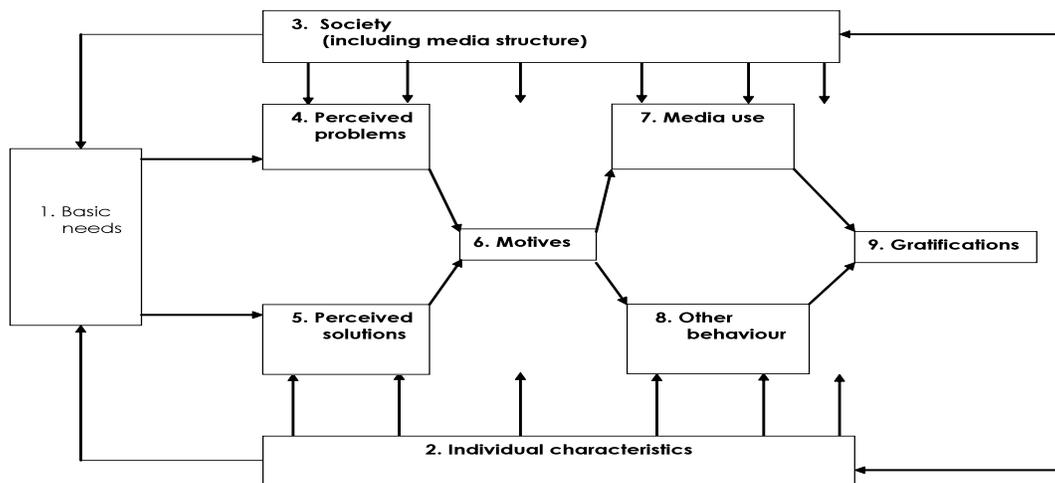


AGENDA-SETTING THEORY Rogers & Dearing, 1987



Uses and Gratification theory. The main idea of this theory is the approach towards the people and not towards the message. There are two premises in the approach of the uses and gratification; first, the people are active, selective, and purposeful in using the media. Second, the media basically compete with other media and communication sources to fulfill the need of the people. One of the theories based on the uses and gratification is the expectancy value theory, which states that humans have their orientation towards their own attitude. The attitude consists of a group of opinions and its evaluation. In addition, if the hope in using the media is fulfilled, and the experience increases through the media utilized, it will influence the opinions and encourage a point of view pattern to appear.

Paradigm for uses and gratifications research (Rosengren, 1974)



Based on those two theories, the theoretical framework in this research could explain that the news on RSBI/SBI in the daily newspapers, Kompas, is the result of the agenda setting of Kompas editorial staff policy. The issues written and presented for the readers of Kompas on RSBI/SBI in the period from January to March 2011 were, according to Kompas, important for its readers. Meanwhile, from the point of view of the readers, they seeked for the news on RSBI/SBI to fulfill their information need on RSBI/SBI.

Method

The study used qualitative approach with secondary data of news on RSBI/SBI by Kompas, from January to March 2011, and primary data by Focus Group Discussion on RSBI/SBI which was held two times with 9 participants in each group. Data were then analyzed based on the theory of agenda setting and uses and gratification.

Findings and Discussion

About RSBI

The general definition of the International Standard School is a school or an Islamic school which has fulfilled the national education standard and is enriched by referring to the education standard of one of the members of the Organization for Economic Development (OECD) and/or certain countries having certain excellence in the field of education so that this school will be able to compete in the international forum. Meanwhile, the definition according to the Government Regulation (PP) No. 17 of the year 2010, Article 1, mentions that the International Standard School is the education which is conducted after it fulfills the national education standard and is enriched with the education standard of the developed countries. Furthermore, in Article 143 it is stated that an International Standard Education Unit is the education unit which has fulfilled the national education standard and is enriched with the education standard of developed countries.

As the implementation of the government policy, SBI/RSBI has a legal foundation. The legal foundation which supports it is the integration of various regulations, such as UUSPN no. 20/2003, PP no. 19/2005, PP no. 38/2007 on the authority of the central, provincial, and regency/municipality governments, PP no. 48/2008 on education funding, Permendiknas (Regulation of the Minister of National Education) no. 78/2009 on RSBI and SBI management guidelines, and PP no. 17/2010 on managing and conducting education.

The development of RSBI is determined by the Ministry of National Education, by referring to the national education standard which is enriched with the education standard from developed countries. RSBI is also developed based on the need and the initiative of the school or the society. Related to the curriculum, it is emphasized that the curriculum should have international standard, should be the latest, and should be sophisticated in accordance with the development of science and global technology, applying the good management procedure, implementing dynamic and TIK (Specific Instructional Objectives)-oriented learning process, applying the transformational/visionary leadership principles, having professional and tough human resources with the management professionally developed, and supported with complete, relevant, the latest, sophisticated, and international standard facility and infrastructure. Therefore, it is expected that the characteristics of

RSBI graduates will have excellent capability proven by the international acknowledgement towards the process and the results or the educated graduates having good quality and proven their capability in various aspects. Besides, it also has the international acknowledgement proven with a certificate from one of the members of OECD and/or other developed countries having certain excellence in the field of education.

The curriculum of RSBI has been designed based on the content standard and the competence standard of the graduates enriched with the standard of the developed countries. Related to that matter, RSBI determines semester credits for SMA and SMK. RSBI implements the learning process standard enriched with the learning process model in the developed countries. This learning process applies the learning approach which is based on information and communication technology, and is active, creative, effective, fun, and contextual. RSBI could use English and/or other foreign languages used in the international forum as the language of instruction for certain subjects. Subjects, such as Indonesian Language, Religious Education, Citizenship Education, Local Content, and History Education, use Indonesian as the language of instruction. The use of English or other foreign languages as the language of instruction starts from grade IV for elementary school (SD). RSBI could hire foreigners to teach if there are no Indonesian teachers having the required qualification and competence to teach certain subjects or fields of study. Regarding this matter, it is determined that the maximum number of the foreigners as the teachers is 30%, and they must be able to speak Indonesian well.

Regarding the funding, the costs to run RSBI fulfill the education funding standard and apply the transparent and accountable financial management. The Central Government, the provincial governments, regency/municipality governments, and the society in accordance with their authority are required to finance the running of RSBI. School could collect the tuition fee to cover the lack of the costs above the funding standard based on RPS/RKS and RKAS. The government could provide the fund aids, facility and infrastructure, teachers, and educating staff as well as other aids for the need to run SBI established by the local government or the society. The provincial government could provide the fund aids, facility and infrastructure, teachers, and educating staff as well as other aids for the need to run RSBI established by the Central Government, the provincial government, or the society. The society could provide the fund aids, facility and infrastructure, teachers, and educating staff as well as other aids for the need to run SBI established by the Central Government, the local government, or the society. Aids for SBI are set forth in and used in accordance with the school development plan or the school work plan, the activity plan, and the school budget. Aids for SBI could be stopped if the relevant school does not show the suitable performance with the objectives to run RSBI. The procedure of the management and the finance to run RSBI relies on the principles of efficiency, effectivity, openness, and accountability in accordance with the laws and regulations. The financial management and responsibility in financing the running of RSBI are conducted in accordance with the Standard of Indonesian Accountancy.

News on RSBI in Kompas

The daily newspaper, Kompas, has the highest circulation in Indonesia and the highest credibility in the eye of the society. This daily newspaper often becomes the reference for the readers since it is believed to be quite neutral and responsible. Related to RSBI, there were 7 times of news and 2 opinions written by Kompas from January 2010 to March 2011. As a daily newspaper, Kompas puts news which is according to its editorial staff is needed by the society. If the amount of the news is

only 7 and there are only 2 opinions on RSBI, this is certainly part of the editorial staff policy. Quantitatively, the number is not a lot for the one year and three months period. The news on RSBI is probably no longer the news prioritized by Kompas. On the other hand, qualitatively the content of the news and the opinions on RSBI tends to be negative. It means that the content is the critiques and evaluation from various parties written by Kompas. There are 3 main things which become the focus in the news and opinions; they are the wrong RSBI concept, its expensive tuition fee, and its language of instruction.

RSBI concept which is considered wrong by various parties becomes the main news topic. The parties who made the statements about the wrong concept in the Kompas news are the education observers, teachers, IGI (Indonesian Teacher Association), and education consultants. According to them, as written by Kompas, the mistake of the concept lies in how an international standard school should be. They focus not only on the use of English as the language of instruction but also on the curriculum, the understanding, and the readiness of the graduates in the global context. The wrong concept brings impacts to the wrong implementation so that there are weaknesses emerging everywhere.

Expensive tuition fee. Kompas informs that because the school could collect RSBI operational funding from the students, several schools have set very high tuition fee. That tuition fee is considered to cause disparity to appear since only the upper-class society could afford it. Meanwhile, the education should be provided for all the society who need it.

Language. The use of English as the language of instruction for certain subjects is considered not effective and not efficient. This happens due to the teachers' and the students' insufficient English skills. When a teacher should deliver a difficult lesson which requires good understanding from the students, such as mathematics and physics, the use of English will make the lesson delivery from the teacher to the students become hard. Some news mentioned that instead of English, the good and proper Indonesian should be used as the language of instruction. For internationalization, it is only necessary to give an understanding about globalization and global competition to become the player and the winner in the international level.

Readers' Perspective

From two Focus Group Discussions held to find out about the readers' opinions on the Kompas news content related to RSBI, some interesting information has been obtained. The discussions particularly highlighted three things which become the focus of the news and the opinions on RSBI written in Kompas.

News about the wrong RSBI concept. Some participants of FGD from two groups said that they just thought about the wrong concept after reading the news and the opinions. There were pros and cons on this matter. Those who were the pro stated that after reading the news and the opinions, they continued to search for the information from various sources. The searching gave additional knowledge and perspective which convinced them that the SBI/RSBI concept is wrong. The main mistake is related to the financial policy and the use of English as the language of instruction. On the other hand, the readers who were the con or disagreed with the content of the news and the opinions stated that Kompas, just like other media, always revealed negative and unbalanced news. They believed that when the Central Government, in this case the Ministry of National Education, issue a policy, they have conducted the proper study beforehand. If then there are some weaknesses, it is considered normal and those could be improved as part of the process. The readers who disagreed with the

content of the news also stated that Kompas should put the opinions from the Ministry of National Education to balance the news.

The news on the expensive tuition fee. The readers who became the participants of FGD think that the tuition fee of RSBI is actually not as expensive as the tuition fee of private schools. However, the different tuition fee among schools and the fact that each school could determine its own tuition fee have opened an opportunity for the schools to set the tuition fee as they wish. Some of the FGD participants said that the content of the news on the expensive tuition fee had given them a good reference so that they found out and compared the fees among the schools of RSBI. They think that the differences in tuition fee are not good. The government should make a decision on the uniformity of the tuition fee in accordance with the level of the economy of the society where the RSBI is located. There are pros and cons towards the news content on the expensive tuition fee which causes the disparity to emerge and closes the chance for the poor family to send their children to go to RSBI to study. Some agreed with the news content by saying that the government's responsibility is to provide good education equally for the society, not creating disparity in the pursue of education. On the other hand, the readers who disagreed stated that they are from the lower class, yet their children study at RSBI. There was a student as the participant of FGD saying that the news is too generalized, because that student comes from the lower class family but manages to go to school at RSBI.

The news on the use of English as the language of instruction. The readers gave wise comments towards the news. In other words, the government policy is actually considered correct that only some of the subjects use English as the language of instruction. Nevertheless, it is the school itself which forces the use of English as the language of instruction for all the subjects. Besides the fact that not all the teachers are capable and ready, the students do not have equal English skills among them. However, most of the participants said that they agreed that all subjects should use Indonesian as the language of instruction, and that the students should improve their English through English subject they learn added with various supporting activities. The use of English is considered contra-productive with the learning of Indonesian values which should be understood very well by the students and become the main excellent point in the global competition of the human resources in the future.

Discussion

From the research results, it could be observed that the news on RSBI in Kompas shows that the topic has not been the main concern of the editorial staff. There are only 7 times of news and two opinions for 1 year and 3 months, with small columns and lines. Based on the theory of agenda-setting, for Kompas the issues on RSBI are perhaps not considered interesting for the readers to read compared with the political and economic news. As a result, the news on education, especially on RSBI, has only been placed in the small part of the 52-page Kompas which is published every day.

The small concern of Kompas towards the issues of RSBI does not reduce the concern of the society as the readers of the issues. The wrong concept, the expensive tuition fee, and the use of English as the language of instruction becoming the essence of the news and opinions in Kompas turn out to become the public agenda, in this case the education observers, parents, schools, and students. There is a reciprocal synergy between media agenda and public agenda which leads to the government policy where the government then conducts evaluation on the RSBI implementation and stops the issuance of RSBI permit.

From the perspective of the readers, the FGD results show that those who search for the news on RSBI are the ones having basic needs because of their connection with RSBI, and those people are the education observers, parents, schools, and students. The needs are related to the characters of individuals and the society which in turn cause issues to appear and solutions to be made. These two things encourage a motive or an excuse for them to 'behave differently' and 'use media' which leads to satisfaction. In this RSBI context, from FGD it is informed that in reality the society consider RSBI as a good school, and they will attempt to send their children to study at RSBI. If their children can go to school at RSBI, they assume that their children's future will be guaranteed since they are studying in a good quality school. Some of the information spread in the society on issues of RSBI, which are about the wrong concept, the expensive tuition fee, and the use of English as the language of instruction, is ignored, but some readers have searched further to find out by reading news, among others. The negative news on RSBI does not suddenly change the thinking and the attitude of the readers. This happens because the readers have the perception that the media always reveal negative things as news and do not write balanced news by covering both sides.

On the other hand, there have been groups of people who become more active in searching for information and following the development of RSBI through various discussion forums. They have also compared news in Kompas, discussion results, and statements from the Ministry of National Education. These active and critical groups of people have then encouraged the government to review the policy on RSBI, conceptually and practically. The activity eventually resulted in the public policy where the government has stopped the issuance of RSBI permit to re-evaluate its policy.

Focusing on RSBI based on agenda-setting and the uses and gratification theories, we could understand the comprehensive map among the policy of the Ministry of National Education on RSBI, the implementation of RSBI, media news, and the opinions of the readers. The media, in this case Kompas, have the function and role in delivering information to the society correctly and not taking side. For RSBI cases, most of the news content criticizes and shows weaknesses without covering the positive news on RSBI. The examples of the positive news are the good and correct management of RSBI, some of its students from the poor family, and the achievement of RSBI alumni. If the news had been balanced between the positive things and the weaknesses of RSBI, then the information received by the society would have led to a more objective thinking. This unbalanced news has caused uncertainty to appear in the society. Despite the negative news on RSBI, in reality this school has become the choice of many students to study at. The society compete to send their children to go to school at RSBI. On the other hand, the society also hesitate to send their children to study in this school and tend to be sinical towards the government and RSBI. The non-synchronity appearing between the news and the reality in turn will make the society distrust the news or lose faith towards the Ministry of National Education. If the media provide balanced information, the uncertainty in the society could be reduced. Therefore, the understanding of the society towards RSBI will be more complete so that they could evaluate RSBI and the Ministry of National Education more objectively.

Actually, the government's effort to increase the quality of Indonesian human resources in the international competition is pretty good. Referring to the fact that the effort done is still in process, there should be room for improvement and perfection. Inputs, critiques, and suggestions from various parties, including from the media and the society, become important parts of the improvement process. The media as a means of communication mostly used by the society in searching for information should also conduct public education on the importance of 'being capable to compete in the international arena'. It is true that 'being capable to compete internationally' is not necessarily

only through RSBI with all its strengths and weaknesses; however, we also have to admit that the effort to establish RSBI is one of many ways to prepare Indonesian human resources. With good understanding, the society will have a more positive perception towards that government's effort so that they will support it in various ways.

Conclusion

From the study above, it can be concluded that the policy of the Pioneering International School (RSBI) is the effort of the government to improve the Indonesian education quality so that we could compete with the developed countries in the global era. One of the ways is by adopting the international standard of the members of OECD as the additional key factor besides the National Education Standard. In its journey, the policy of SBI starts to show several weaknesses, conceptually and in its learning and teaching system. These weaknesses have become the news in Kompas on RSBI without covering the positive news content. The media, in this case Kompas, should have balanced news, from the perception of the society, the education observers, and the government.

The results suggest that the media should support the government in giving the information on the Pioneering International School to the society. This information is part of social education which brings awareness to the society about the Pioneering International School. Finally, the understanding of the society will reduce uncertainty, which will bring about positive perception to the Pioneering International School in particular, and the Ministry of National Education in general. In return, it will support the international competitiveness of Indonesian human resources.

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Development of the coding process analysis system for programming education

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Maths, Science, and Technology Learning

Development of the coding process analysis system for programming education

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Abstract

Coding style is utilized in introductory programming education. To use indentation as an example, it is confirmed that this has an effect on comprehension of a program's contents.

However, even when the coding style of a piece of source code is the same, the process that led to the source code is not necessarily so. Through analysis of the coding process, there is a possibility of revealing the main factors related to program build that cannot be understood through analysis of the source code alone.

Thus, we have developed a system for collecting and analyzing the coding process of learners. This system allows for analysis of the program's structural components and program build and viewing the coding process. Also, we have conducted a pilot program using the system in actual lectures, allowing us to collect and analyze data which has confirmed the usefulness of the system.

1. Introduction

The scale of software has become larger, and it has become commonplace for development to be carried out by multiple people. Coding styles for creating programs according to coding conventions are used as a method for improving the readability of programs among developers. Coding styles are utilized in introductory programming courses that form the launching point for the education of software engineers. From the perspective of education, coding styles, to use indentation as an example, have been confirmed to have an effect on the comprehension of a program's contents. [1][2]

However, even if the coding style of the source code in its final state is the same, a number of variations exist in the coding processes that lead to that result. Thus, it is

thought that there are characteristics of programming learners that cannot be classified through only coding style.

2. Subjects

The goal of the present research is to reveal the main factors related to the ability to build a program through detailed collection and analysis of the coding process. In this paper, we report that we have carried out the development of a system to obtain and analyze coding processes, along with an explanation of that system, and the results of the pilot program.

3. System Overview

An overview of the system is shown in Figure 1. The system is structured as a server/client model. The system was built using Java and Groovy [4], and communication between the server and client is carried out through information transfers by XML using HTTP. Students compose programs using a GUI (Graphical User Interface) editor, which comprises the client side. The editor records keystroke information as editing information related to program composition, and then sends that information to the server.

The server collects data sent from the editor, and stores that information in a database. Then, the instructor can view the information accumulated on the server through a Web browser.

Next, usage method of the system will be described. First, the instructor gives the students an assignment to create a program. Students then create a program for this assignment using the system's GUI editor. Then, by pressing a send button included in the editor, editing information such as keystrokes is transmitted to the server. The information obtained by the system is information including editing work such as the input and deletion of characters, cursor movement, and the timing of transmissions to the server. Figure 2 shows the server/client relationship when the information is sent from the editor. When students press the send button, at the same time the information is saved to the server, the server determines whether or not there are errors in the program. If it is determined that there is an error in the program, the student is notified by the display of an error message. The student may transmit the program any number of times until it is completed. In this way, it is possible to obtain a look at the

student's response to errors.

The student's input information can be reproduced on a Web browser, and the instructor can see it in detail. Also, it is possible for acquire the data of the student's input information as data formatted so as to be easily analyzed.

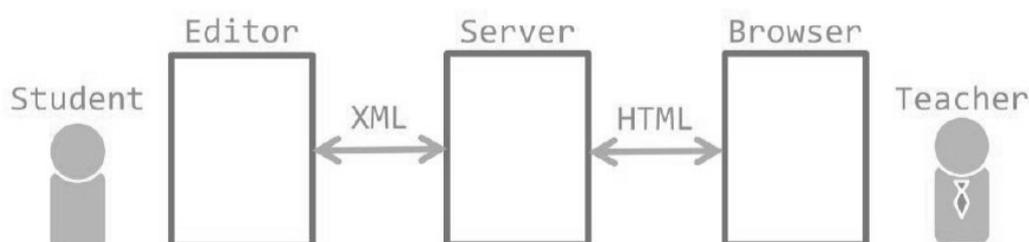


Figure 1. System Overview



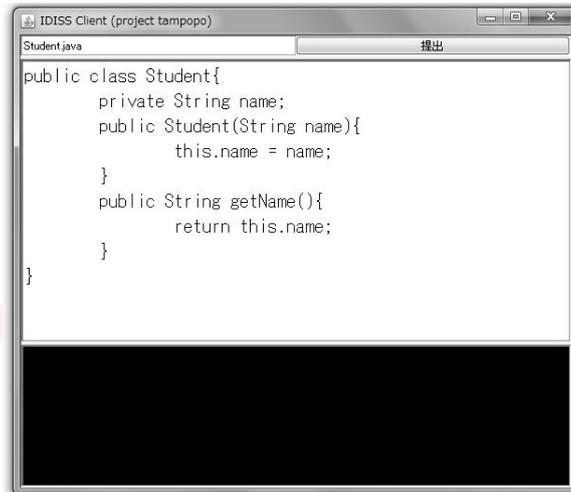
Figure 2. Client Transmission

4. Student Interface

The student interface in the system is the GUI editor that was mentioned above. This GUI editor uses Java Web Start [4] technology. Java Web Start is a technology to launch software that can be automatically downloaded and installed by clicking on a link in a Web browser on any PC with Java installed. Thus, if Java is installed on the student-side PC, this system can be used.

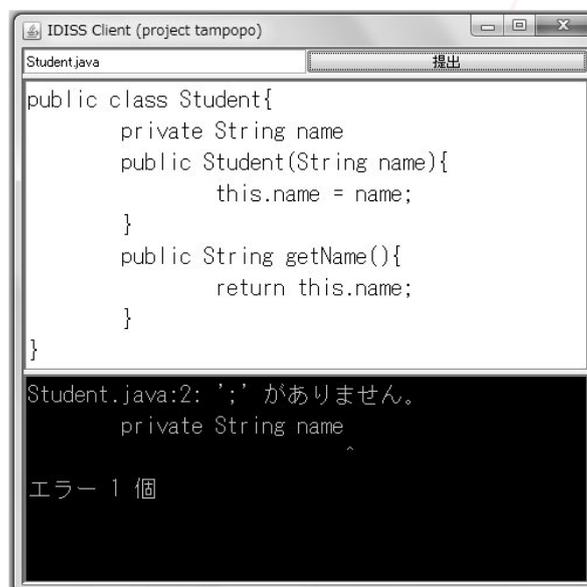
Figure 3 shows the appearance of the editor. The GUI of the editor is comprised of a text field that displays the name of the assignment program, the text area region for creating the program, the send button, and a text area region for displaying messages when the send button is pressed. The white portion of the text area is the program creation region, and the black portion is the region that displays messages.

A message is displayed when the send button is pressed if the program includes mistakes such as compiler errors or differences in method definitions. If there are no errors, a transmission complete message is displayed, and the student is notified that the program is complete. As an example, Figure 4 shows a compiler error, and Figure 5 shows a case with an error with the program's definitions.



```
public class Student{
    private String name;
    public Student(String name){
        this.name = name;
    }
    public String getName(){
        return this.name;
    }
}
```

Figure 3. Editor Appearance



```
public class Student{
    private String name
    public Student(String name){
        this.name = name;
    }
    public String getName(){
        return this.name;
    }
}
```

Student.java:2: ';'がありません。
private String name
 ^
エラー 1 個

Figure 4. Compiler Error Message

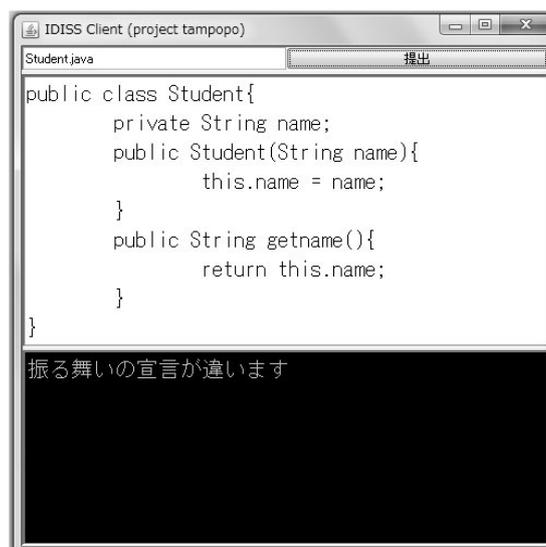


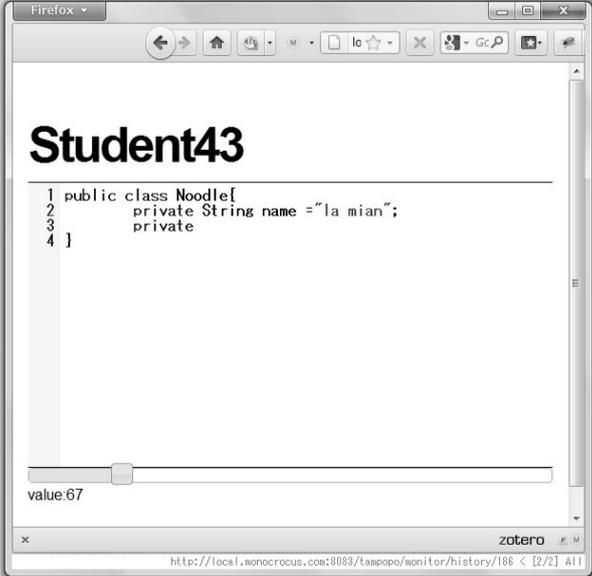
Figure 5. Program Definition Error Message

5. Instructor Interface

The interface used by the instructor is a Web browser. The instructor logs in to the system, and views the assignment and data accumulated by the system. The system includes functions for reconstructing the coding process of the student and for displaying the results of each analysis. Figures 6 and 7 show the result of reconstructing the student's coding process. Input time is indicated by the position of the slider, and the program at that time is displayed. The left edge of the slider is the beginning time of input, and the right edge of the ending time of input. In other words, by moving the slider from left to right, the appearance of the program being created can be viewed as shown in Figures 6 and 7.

The system supports Web browsers on tablet terminals and smart phones. Figure 8 shows the appearance of displaying an answer list.

On the answer list, student numbers are displayed in order, and each one is a button. By tapping this on a tablet terminal, it is possible to view information submitted by the student associated with that number.



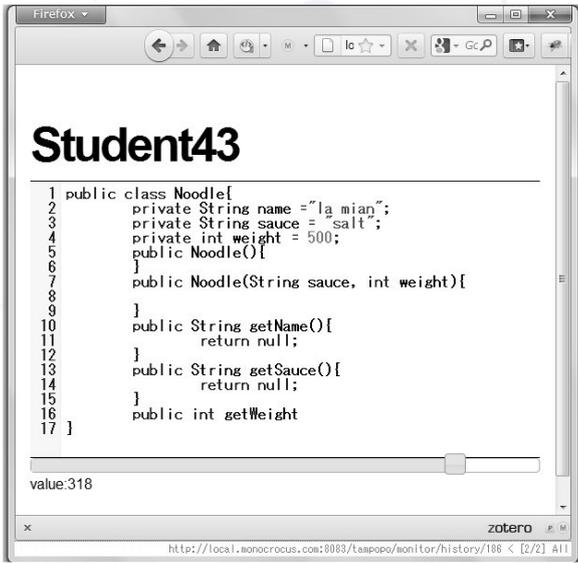
```
1 public class Noodle{
2     private String name = "la mian";
3     private
4 }
```

value:67

zotero

http://local.monocrocus.com:8083/tampopo/monitor/history/186 < [2/2] All

Figure 6. Recreating the Student Coding Process (1)



```
1 public class Noodle{
2     private String name = "la mian";
3     private String sauce = "salt";
4     private int weight = 500;
5     public Noodle(){
6     }
7     public Noodle(String sauce, int weight){
8     }
9     }
10    public String getName(){
11        return null;
12    }
13    public String getSauce(){
14        return null;
15    }
16    public int getWeight
17 }
```

value:318

zotero

http://local.monocrocus.com:8083/tampopo/monitor/history/186 < [2/2] All

Figure 7. Recreating the Student Coding Process (2)

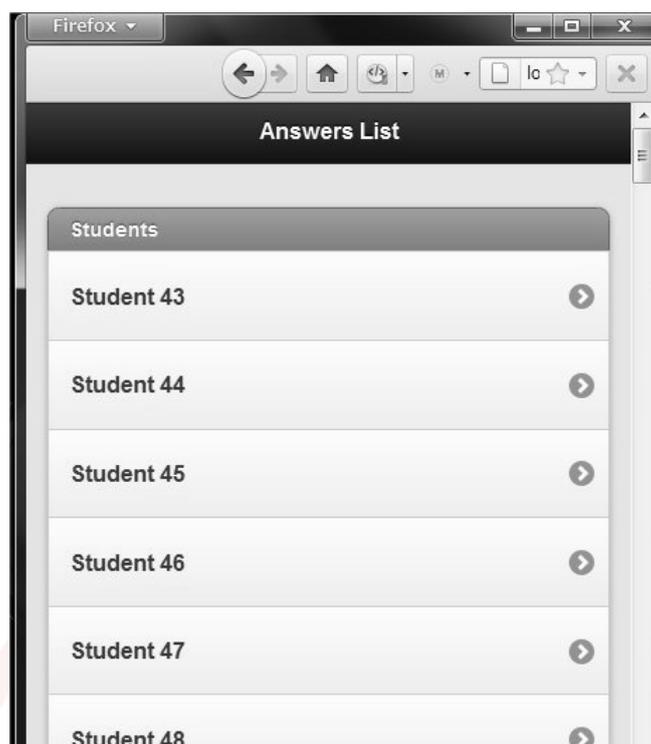


Figure 8. Displaying the Solution List

6. Analysis Functions and Implementation

The system is equipped with functionality for accumulating and analyzing student coding processes. For the analysis, compiling and parsing analysis technology is used. Through this, it is possible to analyze not only keystrokes, but also coding processes such as what methods were first created. And, from the student's keystroke information, timing for possible compiling and parsing analysis is detected, and analysis of the program's build process and such are performed.

Also, the compiling and parsing analysis handled by the system is not file-based, but rather is designed and implemented to take place in memory. By making this memory-based, processes such as file read and write and the loading of necessary classes at compile time only occur once. Thus, this allows for analyzing the program more quickly than with a file-based approach.

7. Pilot Program

To confirm the operation of the developed system, a pilot program was carried out in which it was used in an actual lecture. The target lecture was “Object Oriented Design,” a class for third year students at our university. More than 100 students were enrolled.

Students had already taken lectures on fundamental programming, and the assignment assigned for this pilot program was from within a range possible to solve with fundamental programming abilities. The assignment involved presenting students with a UML class diagram and having students write the skeleton code for a program following this class diagram. This class diagram is shown in Figure 9, and the solution skeleton code is shown in Figure 10. The answering time for the assignment was approximately 30 minutes.

94 students participated in this pilot program, and most were able to submit within the allotted solution time. Nearly 100 students used the system simultaneously, and no problems in obtaining the coding processes were found.

It was confirmed that the Web browser display for instructors executed correctly, and the keystroke information and coding process information for each individual student could be obtained and viewed. The result of this pilot program was that we could confirm that the system operated correctly.

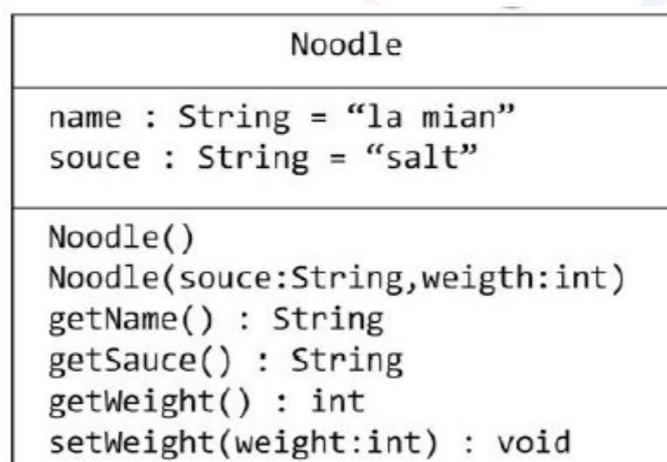


Figure 9. Assignment Class Diagram

```
1 public class Noodle{
2     private String name = "la mian";
3     private String sauce = "salt";
4     private int weight = 500;
5     public Noodle(){
6     }
7     public Noodle(String sauce, int weight){
8     }
9     public String getName(){
10        return null;
11    }
12    public String getSauce(){
13        return null;
14    }
15    public int getWeight(){
16        return 0;
17    }
18    public void setWeight(int weight){
19    }
20 }
```

Figure 10. Assignment Skeleton Code

8. Summary

We developed a system to acquire and analyze coding processes that could not be acquired using only source code analysis. We pilot tested the system, and confirmed the system's operation. Also, by using the system's analytic functions, it was possible to acquire analysis results regarding coding order. In future research, we plan to analyze student coding processes in combination with analysis results from source code analysis.

Acknowledgements

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- [3] Groovy. <http://groovy.codehaus.org/>.
- [4] Java Web Start. <http://www.oracle.com/technetwork/java/javase/javawebstart/index.html>.



1. Title: Developing Learning Achievement of Statistic I by Using Learning Packages
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Developing Learning Achievement of Statistic I by Using Learning Packages
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Background

The economic, political, cultural and social has caused all concerned to realize the expediency for the reform of Thai education. The urgently needed reform will undoubtedly redeem the country from the downward spiral. So that Thailand will arise immediate future as a nation of wealth, stability and dignity, capable of competing with others in this of globalization. This study, I have focused on the section 22 and 24 from chapter 4. It stated that Education shall be based on the principle that all learners are capable of learning and self-development. And organizing learning process including providing substance and arrange activities in line with learners' interests and aptitudes, providing training in thinking process and management, organizing activities for learners to draw for authentic experience, achieving in all subjects a balanced integration of subject matter, enabling instructors to create the ambiance environment, instructional media, and facilities for learners, and enabling individuals to learn at all times and in all places.

The main intention of teaching mathematics is to develop learners to be knowledgeable and skillful which they are able to apply in their real life both in solving problem and seeking for the knowledge. Real life problems are complicated which require more than the calculation skill. Developing skills without the application and remembering rules without the understanding are not inadequate when you face the problems. Therefore, the emphasis of teaching mathematics has been changed from memorizing to having a basic skill to understand the principles of mathematics. For this reason, students would have enough skills to achieve their learning and be able to apply the knowledge to their new experience.

Mathematics is one of the important subject concerning about human's thought. It's an important factor to develop human resources. To achieve the learning according to the curriculum depends on various factors concluding the learning management, the understanding of course objectives and different conditions, the analysis and solution of classroom problem. Due to the curriculum, it emphasized on the learner-centered curriculum, thinking process, problem-solving process, developing value process and group discussion. On the other hand, the real situation is teaching Mathematics cannot follow the process which can respond to the objectives and curriculum because most teachers use the teacher-centered. For this reason, it cannot support or motivate learners to think. Besides, teachers do not pay attention to their lesson plans, and do not realize the different background knowledge of learners. These would lead to learners are not be able to understand the learning process, lack of calculation skills and problem-solving skills. It also brings about the inefficient curriculum.

Naturally, Mathematics is an abstract which can cause learner to have low learning achievement. The other reasons are teachers, lesson plans, tasks, classroom management, classroom and classroom participation and it also concludes the motivation and interest of learners. Thus, it is important to develop and improve the method to enhance learner's learning achievement for example the curriculum development, material development and tasks development. In this study, the researcher interested to develop learning achievement of Statistics I by using learning packages.

The objectives of this research

1. to find the efficiency of statistic learning packages
2. to study learning achievement
3. to study students' satisfaction towards statistic learning packages in frequency Distribution and cumulative frequency Measure of Central Tendency and Measure of Dispersion

Scope of the study

Population

The population of this research is students who enrolled the course entitled 'Statistics I' in semester 1 academic year 2010

Sampling group

The sampling group is second students majoring in Ceramics, Faculty of Fine Arts and Architecture, Rajamangala University of Technology Lanna Chiangmai who enrolled the course 'Statistic I' in the semester 1 academic year 2010. The subjects were from the purposive sampling.

The main purpose to choose this group because they are from vocational school and high school who specialize in arts, and the fundamental knowledge of Mathematics is very low. From this reason, I would like to design learning packages which can be enhanced them to achieve their learning.

Content

The content for learning packages consist of frequency Distribution and cumulative frequency , Measure of Central Tendency and Measure of Dispersion in the course 'Statistics I' in semester 1 academic year 2010 at Rajamangala University of Technology Lanna Chiangmai

Hypothesis

Students who learn from the learning packages of 'Statistics I' have better achievement.

Significance of the study

1. To have efficient learning packages which can enhance students' learning achievement
2. To be a guideline for teachers to apply according to students' needs.

Literature review

Psychological theory

Psychological theory for designing learning packages Thorndike's learning theory

1. Rule of effect means any activities lead to the satisfaction in determined situation and will be happened again because of the satisfaction.
2. Rule of readiness means if we have a chance and ready to do, it will bring about good result and satisfaction. If students are ready but don't do anything, it also won't bring anything.
3. Rule of exercise means to keep practicing and it will link between motivation and reflection. However, if students don't usually practice, the skill will decrease.

Student-centered

In a recent paper Berry and Sharp describe a student-centered learning model for university level mathematics modules through whole-class interaction that involves co-operation, reaction and discussion. As part of the research the students completed a satisfaction questionnaire towards the learning packages to ascertain their views of learning.

Based on a research study of students' ideas of learning, Berry and Sahlberg propose a criteria for classification of good learning shown in Figure 1. The diagram shows words that they used and they have classified them as representing a passive-transmission model of learning on the lower steps to an active-transformation model on the upper steps. For most students of mathematics in higher education the development of concepts and skills follows a transmission model in which knowledge is passed from the teacher or a text to each student. A more student centered approach should encourage the active learning style of the higher steps than the passive style of the lower steps.

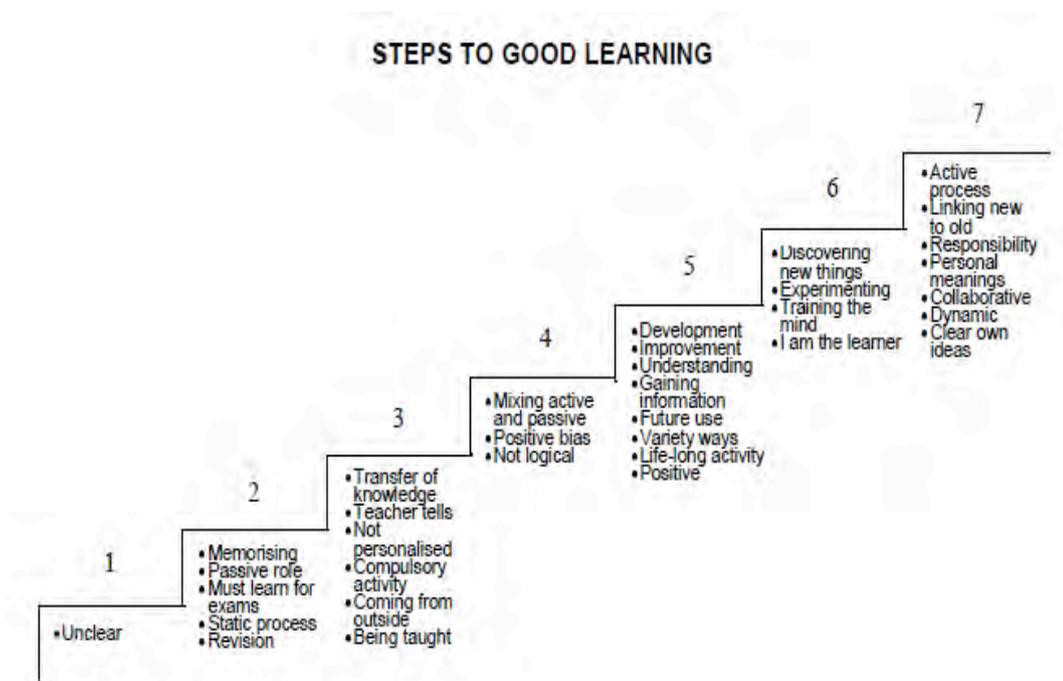


Figure1 : a criteria for classification of good learning (Berry and Sahlberg, 1996)

Research instruments

1. There were lesson plans and learning packages of frequency Distribution and cumulative frequency Measure of Central Tendency and Measure of Dispersion of the course 'Statistic I' and efficient since the criteria were found at 82.64/76.96.
2. Achievement test before and after the learning process of frequency Distribution and cumulative frequency Measure of Central Tendency and Measure of Dispersion of the course 'Statistic I' consisted of 30 items multiple choices test. The reliability of the test was 0.93.
3. The students' satisfaction towards statistic learning packages in frequency Distribution and cumulative frequency Measure of Central Tendency and Measure of Dispersion of the course 'Statistics I'

Methodology

1. Pre-test with the learning achievement test.
2. Identify the objectives and learning activities
3. Teach the learning packages according to the lesson plans; teach one hour after that students do the tasks and formative test
4. After the last lesson, the researcher asks learners to do the post achievement test

Research result

1. The lesson plan of Statistic 1, in the topic, Frequency Distribution and Cumulative Frequency Measure of Central Tendency and Measure of Dispersion had an effective 89.17/77.00 which was rather than this standard.
2. The lesson plan of Statistic 1, in the topic, Frequency Distribution and Cumulative Frequency Measure of Central Tendency and Measure of Dispersion had an efficiency .7069 which was rather than this standard.
3. After using the lesson plan of Statistic 1, in the topic, Frequency Distribution and Cumulative Frequency Measure of Central Tendency and Measure of Dispersion founded that students' learning achievement score was higher than their pre-test score with the significant .01
4. Students' learning satisfaction towards learning packages are in high level.

Discussion

From the research result, it can be discussed as follow;

1. Lesson plans and learning packages of 'Statistics I' in the topic frequency Distribution and cumulative frequency Measure of Central Tendency and Measure of Dispersion is efficiently at 82.64/76.96 which means that learners had scores from 8 formative tests and learning packages were 76.96%. It shows that lesson plans and learning packages of 'Statistics I' was efficient according to the criteria 75/75 and the hypothesis.

1.1 Lesson plans and learning packages were followed the designed process and appropriate method. The researcher started at choosing and reviewing contents, studying the curriculum, books and materials related to 'Statistics I', analyzing contents, preparing for lesson plans and learning packages, determining learning objectives and learning activities, and evaluating learning achievement.

1.2 Lesson plans and learning packages have been tried out to student individually both small and big group. They have already been examined and improved from experts in statistics before the learning process.

1.3 Because the high score from formative tests and learning packages, students have learned and practiced according to the order of contents and they helped each other. Besides, the formative tests have been done after the learning process in each lesson, so the students' score were high than expected.

1.4 Students have got the score little higher than the criteria from the achievement test because the test consisted of frequency Distribution and cumulative frequency Measure of Central Tendency and Measure of Dispersion and they are many items which did not lead to high score.

2. The post-test score was higher than pre-test score which followed by hypotheses meant that learning with The lesson plan of Statistic 1, in the topic, Frequency Distribution and Cumulative Frequency Measure of Central Tendency and Measure of Dispersion can affect students' learning achievement score was higher than pre-test, the reasons are as follow;

2.1 Lesson plans and learning packages of 'Statistics I' in the topic Frequency Distribution and Cumulative Frequency Measure of Central Tendency and Measure of Dispersion have been practiced by student individually. If students did not pass, they could redo it again individually. Students have been asked to do the pre-test and told the learning objectives, so students would know their scores immediately. These can motivate learners to be proud of them.

2.2 Lesson plans and learning packages of 'Statistics I' in the topic Frequency Distribution and Cumulative Frequency Measure of Central Tendency and Measure of Dispersion are efficient because the post test score is higher than the post test because the activities during lessons focused on supporting and developing the idea organization which are appropriate to students.

Conclusion

The goal of teaching mathematics is to develop students to be knowledgeable and skillful in mathematics. They are able to apply knowledge and skills to their real life both in solving problems and searching for information. Learner-centered approach has been determined in the curriculum which helps to manage the learning process, thinking process, solving process, value developing process and group and skill process. Naturally, mathematics is an abstract which results in the learning achievement. This research can be a guideline to solve the problem by using learning packages to support and enhance students' learning achievement and good attitude towards mathematics.

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A Study of the Supportive culture, Organizational Commitment and Job Satisfaction among Academic Female Staffs in Taiwan

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Abstract

The purpose of this paper is to examine the relationship between organizational supportive culture, employees' job satisfaction and organizational commitment at universities in Taiwan. This study utilized a questionnaire survey to collect data from 238 female staffs at universities. The study found that a supportive culture of universities is directly and positively related to job satisfaction, and the organizational commitment may affect job satisfaction in a positive way among academic female staffs. Based on a complete structural model analysis, emotional and identification-oriented organizational commitment, rather than a supportive culture, is influential to job satisfaction (full mediation effect). In other words, organizational commitment plays the role of a mediating variable.

Keywords: supportive culture, organizational commitment, job satisfaction

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The logo for the International Association for Frontiers in Education Research (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 circular graphic composed of two overlapping, semi-transparent arcs: a light blue one in the foreground and a light red one behind it, creating a sense of depth and movement.

A Study of the Supportive culture, Organizational Commitment and Job Satisfaction among Academic Female Staffs in Taiwan

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Introduction

Across most of disciplines, female faculty members expressed lower levels of job satisfaction when compared with male faculty members (Bilimoria et al., 2006; Callister, 2006; Hult et al., 2005; Olsen et al., 1995; Settles et al., 2006; Tack & Patitu, 1992). Yet, this relationship virtually disappeared when Sabharwal and Corley (2009) included several demographic, institutional and career-related factors in their research model and found that males were significantly less satisfied than females at work.

There's a tendency for Taiwanese colleges to hire female employees for administrative positions. In 2011 for example, out of the 27,249 administrative employees working at Taiwanese colleges, 70% of them, i.e. 19,051, are women (Ministry of Education, 2011). The study of staff satisfaction rates is important because dissatisfaction with any aspect of a faculty position can result in decreased productivity and quality of work (Tack & Patitu, 1992). Another reason why job satisfaction has been extensively researched is that most individuals spend a large part of their lives at work. Therefore, a detailed understanding of job satisfaction is the key to improve the well-being of a large number of working individuals (Gruneberg, 1979). The need to study female faculty satisfaction at universities also stems from the fact that the intellectual and social structures of higher education are changing over time. Increasingly, women and minorities are more likely to take higher ranks of the professoriate.

The results of a case study from the University of Massachusetts at Amherst to “encourage a culture on campus that values working” has emphasized how important it is for the campus community—especially faculty—to feel that the administration clearly places a high value on working (Aitken and Sorcinelli, 1994, p. 64). A supportive culture may reduce the likelihood of the occurrence of employees' negative experience. According to Eisenberger et al. (1986) perceived organizational support refers to employees' beliefs that their organization values their contributions and prioritizes their welfare. Organizational support has also been related to reduced perceptions of discrimination based on gender (Blau and Tatum 2000) and race (Rodriguez 2003). In addition, organizational support and culture have previously been identified as beneficial to coworker's mutual acceptance (Butterworth et al. 2000). Thus, supportive culture may alter workers' perceptions of fair treatment in the workplace. Individuals who can identify concern and care from their organizations are likely to develop a better work attitudes and perceive fewer negative experiences.

Research in educational and noneducational settings into the effect of intrinsic job satisfaction on supportive culture via “value commitment” is missing. Our research suggests that supportive culture and job satisfaction are fully mediated by organizational commitment. That is, value commitment is associated with enhanced perceptions of organizational support, positive perceptions of organizational commitment are associated with increasing job satisfaction, and improvements in organizational support are in turn linked to value commitment intentions and increase likelihood of job satisfaction. Therefore, by having discoveries on the mediating role of organizational commitment, current study not only has extended understandings of explanatory power of intrinsic job satisfaction, but also further confirmed the important mediating effects of value commitment on the constructions of universities' supportive culture.

A deeper understanding of the relationship of supportive culture, organizational commitment and job satisfaction can help university administrators and academic directors to identify (and enhance) the factors that lead to increased levels of faculty job satisfaction within and across organizational commitments. The following section reviewed literature relevant to our

hypotheses.

Related Literature

A supportive culture exhibits teamwork and a people-oriented, friendly, encouraging, trusting work environment (Wallach, 1983). It increases the likelihood of employees to feel comfortable using friendly benefits like flextime, as they are less likely to worry about possible negative career consequences (Thompson et al., 1999). The organizational culture concept proposed by Odom, Boxx, Dunn (1990) and Wallach (1983) was a result from a research project conducted on 387 mid-level managers of transportation institutions. They found that a supportive culture can help to elevate job satisfaction. A supportive culture presents a more significant level of impact on organizational performance than other types of cultures (Chiu, 2010). Moreover, there are more knowledge sharing activities among organization members (Chiu et al., 2010) which in turns helps to increase their job satisfaction.

Wayne *et al.* (1997) indicate that a supportive culture can reduce an employee's stress levels and strengthen the commitment. Existing research has found that supportive culture is related to a variety of important outcomes such as organizational commitment (Settoon, Bennett, & Liden, 1996; Wayne, Shore, Bommer, & Tetrick, 2002) and job satisfaction (Eisenberger et al., 1997; Stamper & Johlke, 2003).

Staw and Cohen-Charash (2005) argue that job satisfaction arises out of recognition and evaluation of work events and conditions, factors which are typically linked to organizational culture in extant conceptualization. In spite of such persuasive conclusions, it is surprising that the relationship between supportive culture and job satisfaction has not attracted much attention for researching. Interestingly, the few studies directed into culture and satisfaction have been largely conceptual rather than empirical (Staw & Cohen-Charash, 2005). Similarly, it is noteworthy that many studies which claimed to explore the links between culture and satisfaction typically analyzed organizational climate rather than organizational culture and commonly use climate as a proxy for culture. For example, Luthans, Norman, Avolio, and Avey (2008) argue that a supportive climate is positively related to employee satisfaction.

Extensive researches on the consequences of organizational commitment have been conducted over the past decade. Organizational commitment is a work attitude that is directly related to employee participation and intention to stay with the organization, and is clearly linked to job performance (Mathieu and Zajac, 1990). Organizational commitment refers to an employee's belief in the organization's goals and values, desire to remain a member of the organization and loyalty to the organization (Mowday *et al.*, 1982; Hackett *et al.*, 2001). Organizational commitment includes three components of affective (desire to remain), continuance (perceived cost of leaving) and normative (perceived obligation to remain) commitment (Meyer and Allen, 1991). The affective component refers to the employee's emotional attachment to, identification with, and involvement in the organization. The continuance component refers to the commitment based on the costs that the employee associates with leaving the organization. The normative component refers to the employee's feeling of obligation to remain with the organization. Affective commitment is considered a more effective measure of organizational commitment since it indirectly influences the other two dimensions of organizational commitment (Boles et al., 2007), and is more consistent with the conceptual and operational definition of attitudes (Iverson and Buttigieg, 1999). Therefore, for this study we have focused on affective and continuance aspects of commitment in Allen and Meyer's three-dimensional commitment model.

Although though Boulin (1974) proposes job satisfaction is achieved easier than organizational commitment, and can be changed easier as well. Therefore, judging from the instability and changeability of job satisfaction, it should be seen as the cause of organizational commitment rather than the effect. His study shows that job satisfaction is influential to employees' organizational commitment, and there is a positive correlation between the two.

But this study conceives otherwise. Wen & Chiou (2009) stated that among all personal

reasons, “organizational commitment” became the most crucial and personal variable influencing performance, job satisfaction and job leaving tendency since Becker introduced the concept of “commitment” to organization-related research in 1960 (Mathieu & Zajack, 1990; Meyer & Herscovitch, 2001). For example, a meta-analysis conducted on 997 research projects (Cooper-Hamik & Viswesvaran, 2005) concluded that job satisfaction was the major outcome variable of organizational commitment studies. Even though the positive correlation is not strong, it is still a reliable and valid predictor. Job satisfaction has been analyzed as a dependent variable for the antecedent of organizational commitment.

One thing worth noting is that most researchers claim that organizational commitment is a multi-dimensional concept (Cohen, 2003; Morrow, 1983, 1993) which changes according to the subjects or positions (e.g. organization, leader, labor union) used in the research (Becker, 1992; Meyer & Allen 1997).

Past research had found that even though generally speaking, the degree of organizational commitment influences members’ organizational involvement and performance, this is mainly evident in emotional or identification-oriented organizational commitment. When organizational commitment becomes a force for psychological connection and attachment towards the organization and the members of the organization, it is the explanatory variable that can best explain employees’ output. When the organizational commitment is based on a regulatory, calculated and instrumental relationship, it is proven to be less explanatory than emotional or identification-oriented commitment (Abbott, White, & Charles, 2005; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Schmidt, 2007.) Based on the above statement, some scholars believed that the affective and cognitive organizational commitment could have a positive effect on employee’s job satisfaction.

Based on the literature review, we constructed a research framework (Figure 1) and proposed three hypotheses.

H 1: Universities’ supportive cultures in Taiwan enhance female faculties’ job satisfaction.

H 2: Universities’ supportive cultures in Taiwan enhance female faculties’ organizational commitment.

H 3: The perception of organizational commitment enhances job satisfaction for female faculties at universities in Taiwan.

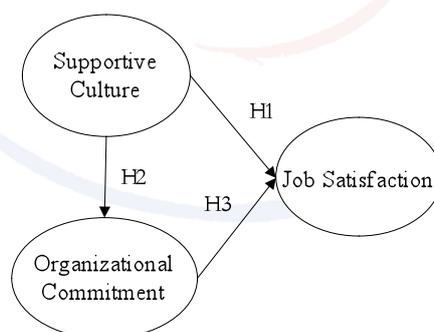


Figure 1 Research Structure

Method

Supportive culture was the exogenous latent variable, while organizational commitment and job satisfaction were the endogenous variables in this study. We applied structural equation modeling (SEM) to verify whether the proposed framework was suitable for path analysis with latent variables. Confirmatory factor analysis (CFA) was conducted in order to examine the adequacy of the hypothesized measurement relationship of the proposed model, and to assess the psychometric properties, including convergent and discriminant validity, of each construct prior to examining the structural model.

In following Kelloway (1998), three types of fit indices (absolute, comparative and parsimonious) were reported to assess the overall fit of the models. The RMSEA, GFI, and χ^2 statistics were

used as measures of absolute fit; the CFI and TLI were used as a comparative fit measure; and the PNFI and normed chi-square were used as a parsimonious fit measure. The significant chi-square value can be disregarded because of its sensitivity to the sample size and large number of items (Hair, Anderson, Tatham, & Black, 1998). After conducting CFA for the proposed measurement model, SEM was used to compare the three nested models and to select the best fitting model. The comparisons of the models were based on fit indices and the chi-square difference test (χ^2). In order to investigate the relationships among these three latent variables, we used 5 items as the indicator variables of supportive culture, included 4 items as the indicator variables of organizational commitment and incorporated 3 items as the indicator variables of job satisfaction. For each support scale, items were measured on a 5-point Likert scale that ranged from 1 = strongly disagree to 5 = strongly agree.

Table 1 Means and Standard Deviations of Items in Indicator Variables

Variable	Item	<i>M</i>	<i>SD</i>	<i>SRC</i>	<i>R</i> ²	<i>CR</i>	<i>AVE</i>
Supportive Culture	D1	3.92	.68	.84***	.71	.96	.84
	D2	3.97	.69	.92***	.85		
	D3	3.95	.71	.86***	.75		
	D4	3.93	.72	.83***	.69		
	D5	3.98	.71	.72***	.53		
Organizational Commitment	D6	3.78	.75	.72***	.52	.89	.68
	D7	3.60	.76	.67***	.45		
	D8	3.84	.69	.80***	.64		
	D9	3.89	.72	.72***	.52		
Job Satisfaction	D10	3.91	.67	.65***	.42	.76	.52
	D11	3.86	.63	.66***	.44		
	D12	3.41	.84	.45***	.20		

*** $p < .001$.

CR : Construct reliability, *AVE* : Average variance extracted

SRC : Standardized regression coefficient

Reliability and Validity Analyses

In April 2010, the questionnaires were distributed to female faculty at 31 universities of Taiwan, and a total of 238 copies were returned by May 31st 2010. All skewness values were found to be between -0.92 and -0.18, kurtosis values were found to be between -0.50 and 1.95. These results indicated that the data was normal enough to be analyzed with the maximum likelihood estimation for EFA and CFA (Kline, 1998). In addition, the correlations among study variables were shown in Table 2.

Table 2 Correlation Matrix Analysis for each Latent Variable

Variable	SC	JS
Supportive Culture (SC)		
Job Satisfaction (JS)	.26**	
Organizational Commitment (OC)	.41***	.67***

Notes: *** $p < .001$, ** $p < .01$, * $p < .05$, $n = 238$

Bagozzi and Yi (1988) referred the reliability of each variable in the questionnaires conforms to the standard of social science with a Cronbach's alpha above 0.85. In our research, Supportive Culture $\alpha = 0.89$; Job Satisfaction $\alpha = 0.71$; Organizational Commitment $\alpha = 0.80$. Thus, there was a good consistency for each latent variable.

The composite reliability value exceeds 0.60 indicating an acceptable fit to the data. (Fornell, 1992). Table 1 shows that the minimum value of the composite reliability of all the research constructs is 0.76 and the minimum average variance extracted (AVE) is 0.52. This indicates that every research construct possesses good internal consistency.

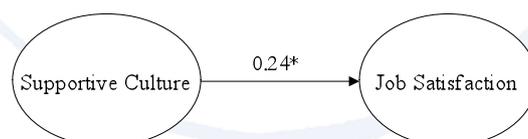
According to Jöreskog & Sörbom (1989), a constructed model has convergent validity when each variable contained within it is related to the others after applying several measuring methods from the same perspective, and that the standardized regression coefficient of each variable within the constructed model is above 0.45. As shown in Figure 2 and Table 1, each indicator variable was found to be related to the others, and the standardized regression coefficients obtained were in accordance with the standard. Generally speaking, the study questionnaire had acceptable convergent validity.

Discriminant validity refers to the different constructs. Differences exist between the items that measure these constructs respectively. Based on the suggestions given by Fornell and Larcker (1981), the method of measuring the discriminant validity is that each construct's variance extracted is greater than the square value of the correlation coefficient of the construct and other constructs. The analytical results demonstrate that the constructs which proposed herein this study have effective discriminant validity.

Baron and Kenny (1986) described how the existence of a mediating variable between independent variable and dependent variable needs to meet the following three conditions: (a) the independent variable must have a significant relationship with the mediating variable; (b) the intermediate variable must have a significant relationship with the dependent variable; (c) the value of the direct correlation coefficient between the independent and dependent variables will decrease if the intermediate variable is added in. If there is still a significant direct correlation between the independent and dependent variables, it is called the partial intermediate effect; if not, it is called the complete intermediate effect.

In conducting SEM analysis, the competing model strategy was employed to compare three models: a direct effect model, a partially mediated model and a fully mediated model (see Figure 2). From the human resources perspective, the results of this study may give university's administrators an opportunity to examine the relative contribution of extrinsic cue (supportive culture) and subjective cognitions (halo effect and organizational commitment) to predict job satisfaction among female faculty at universities in Taiwan.

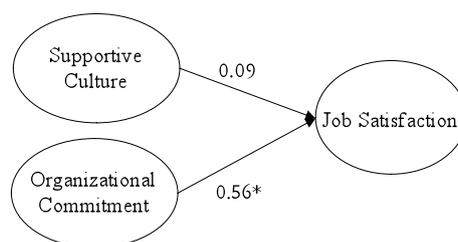
Figures 2



The direct path coefficient from supportive culture and job satisfaction was 0.24 and this indicated that there was a statistically significant relationship. Previous literature has consistently reported a strong relationship.

MODEL A: DIRECT EFFECT MODEL

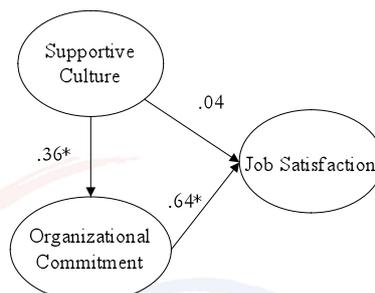
Figures 3



The direct effect model assumes that supportive culture and organizational commitment are independent of each other, and each have a direct relationship with job satisfaction. This model does not hypothesize any hierarchical relationship between the extrinsic cue and subjective cognitions, and does not test any mediation. The model was included to see if a direct effect model without any mediation fitted the data better than any of the mediated models. The direct path from organizational commitment to job satisfaction was empirically tested in this model and found that was a statistically significant relationship. The path from supportive culture to job satisfaction was no significant. This indicated that supportive culture could be the only one extrinsic cue for job satisfaction.

MODEL B: PARTIALLY MEDIATED MODEL

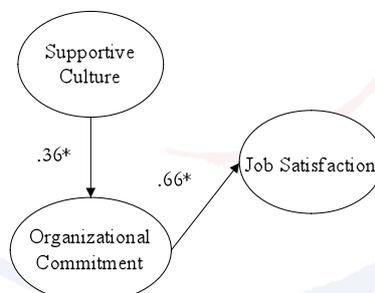
Figures 4



In the partially mediated model, it was hypothesized that supportive culture should have a direct impact on job satisfaction and indirect impact through organizational commitment as well. The difference between the direct effect model and partially mediated model is that a relationship between supportive culture and the intermediate variable (organizational commitment) must exist.

MODEL C: FULLY MEDIATED MODEL

Figures 5



The main point of the fully mediated model is that there is no direct effect of supportive culture on job satisfaction; only an indirect effect exists through organizational commitment. As discussed in the fully mediated model, Odom, Boxx and Dunn (1990) indicated the supportive culture could help the development of job satisfaction, and Wen & Chiou (2009) proposed the affective and cognitive organizational commitment positively influenced the job satisfaction. The direct effect model (Model A) is nested in the partially mediated model (Model B), and the fully mediated model (Model C) is nested in the partially mediated model (Model B). Thus comparison between three models was possible through two pairs of comparisons (A with B, and C with B). Job satisfaction on supportive culture is fully mediated by organizational commitment. Except H1, hypotheses H2 and H3 were, therefore, supported.

Results

To test the validity of our constructs, we performed confirmatory factor analysis (CFA) using structural equation modeling with AMOS. The results of the comparisons of the three models are shown in Table 3. The goodness of fit statistics indicated that Model A, the direct effect model,

did not fit the data well and was inferior to Model B, the partially mediated model. In addition, RMSEA and GFI also indicated that Model A fitted significantly worse than Model B. Thus Model A was eliminated from further consideration.

Table3 Invariance test across model A, model B, and Model C

	χ^2	GFI	RMSEA	CFI	TLI	PNFI	Normed chi-square
MODEL A	173.56 (p=0.00)	.89	.10	.91	.89	.69	3.34
MODEL B	150.34 (p=0.00)	.90	.09	.93	.91	.69	2.95
MODEL C	150.55 (p=0.00)	.90	.09	.93	.91	.71	2.89

When comparing Model B with Model C, it appeared that Model C performed slightly better than Model B. Both model B and model C had the same goodness-of-fit index (GFI)=.90, root-mean-square error of approximation (RMSEA) =.09, comparative fit index (CFI) =.93, and adjusted goodness-of-fit index (TLI) =.91.

The point estimate of χ^2/df and the PNFI value of the partially mediated model (Model B) was slightly worse than those of the fully mediated model (Model C). In Model B, the path from supportive culture to job satisfaction was nonsignificant. In Model C supportive culture was significantly associated with organizational commitment, with a beta coefficient of .36 ($p < .001$) and organizational commitment was significantly associated with Job satisfaction, with a beta coefficient of .64 ($p < .001$).

Our study showed that organizational commitment can fully mediate the association between a supportive culture and job satisfaction among female staff at universities in Taiwan. As mentioned earlier, the concept of “supportive culture - job satisfaction” has received attention from a number of theorists. However, there has been little attention directed to the interaction of this fit to concepts such as organizational commitment.

The results indicate that both paths to job satisfaction are the keys in that employees experience “supportive culture - job satisfaction” fit. The data analysis yielded similar but stronger results for organizational commitment. Clearly, any educational organization that has a supportive culture in Taiwan needs to pay close attention to its employees’ feelings.

Discussion and Conclusion

This study aims to prove that a supportive culture is directly and positively related to job satisfaction. The organizational commitment was used in this study as a mediating variable. The questionnaires for this study were mainly based on emotional and identification-oriented organizational commitment, which is consistent with Wen & Chiou’s (2009) assumption of organizational commitment as the mediating variable for supportive culture and job satisfaction. The study found that supportive culture has a significant positive correlation with organizational commitment, which aligns with the findings of Chen et al (2008) and Prescott et al (1998). A significant positive correlation was also found between organizational commitment and job satisfaction. Based on a complete structural model analysis, organizational commitment, rather than a supportive culture, is influential to job satisfaction (full mediation effect). In other words, organizational commitment plays the role of a mediating variable.

The study found that the organizational commitment has a mediating effect on supportive cultures and job satisfaction. Based on a complete structural model analysis, a supportive culture is not a directly significant element for job satisfaction, the organizational commitment is still needed (full mediation effect). This understanding leads the researcher to conclude that if Taiwanese universities want to guarantee the job satisfaction for administrative staff, only a supportive culture is not sufficient. Taiwanese universities should understand the staff’s mentality

to establish workplace identity. Some strategies include: liking open-ended problem solving, wanting to be helpful, having a sense of making a difference (such as overseeing students develop), feeling satisfied for interacting with other faculty members, feeling a sense of competence (the increase of professional skills and knowledge), learning opportunities and to use of professional skills and knowledge, and having autonomy-independence (self-determination), for maintaining organizational commitment.

From the above findings, it is reasonable to argue that if Taiwanese colleges want to enhance job satisfaction of administrative staff, they need to do more than just provide a supportive organizational culture. To achieve better results with less effort, universities need to help employees to fully identify themselves with the goals of the organization, actively participate in organizational activities and further commit to the organization's pride and/or disgrace, and be willing to stay and face the challenges alongside the whole organization.

There are still many other elements that are influential to organizational culture and job satisfaction, for example: leadership style, organizational learning or work performance, etc, which are worth future research efforts. It is suggested that future researchers adopt a research methodology that includes multiple sources, multiple features and methods or adopt a longitudinal research approach to enhance the quality of the survey results. Individual interviews might be a valid addition to understand better the problems in practice and to collect suggestions.

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“An Investigation of the Impact of Active Learning Approach within the Ismaili Karachi, Pakistan Religious Education Class”

Active Learning in Religious Education

Student Paper

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Chapter One

Introduction

“*The aim of teaching is simple: it is to make student learning possible*”. (Ramsden, cited in Higgs & McCarthy, 2005)

The above quote by Ramsden beautifully describes the philosophy of teaching that I aspire for as a teacher. I have always felt that as a teacher my foremost responsibility is to make learning possible for my students. However, the idea of *active learning* is still a relatively new concept in Pakistan where teachers still prefer to follow the lecture based approach. This teacher-centred pedagogy makes learning a one-way process. This not only hampers students’ cognitive growth but also has adverse effects on their social development.

While conducting my practicum in the U.K., the *active learning* environment that I experienced opened up new avenues of inquiry for me. The contrasting attitudes and approaches to learning between my students in the U.K. and Pakistan and the level of engagement shown by the students in the learning process here reiterated my belief in the active learning approach. Therefore, in view of all these facts I intended to investigate through my research at how an active learning approach can be more beneficial to both the students and the teachers in our RECs.

Aims and Purpose

The objective of my research was to examine the ways in which an *active learning* approach could be helpful in the context of the Ismaili RECs in Pakistan. My hypothesis was that this approach would be highly beneficial for the students as it provides them with the opportunities to be actively involved in the process of reflection, analysis, synthesis and decision making. It helps them become thinking individuals as they have the opportunity of being responsible for their own knowledge creation. This responsibility results in the higher level of engagement from the students. Moreover, working with their peers, an important part of the *active learning* environment also helps in developing social skills amongst the students.

Context

The research was conducted in grade VIII of the Darkhana REC, Karachi and the age bracket for my students was 12-14 year and comprised eight girls and seven boys. The class duration was two and a half hours; however, the last fifteen minutes were used by the students to write their reflection of the class. The chosen students knew each other as they had previously been in the same grade during the primary level. However, as the REC had separate classes for boys and girls for the secondary level students, they had been in the different sections of grade VIII during last one-and-a-half year.

Chapter Two

Literature Review

The term *active learning* has been described in many ways. Warren (cited in Peterson, 2001 p.3) posits that active learning is “the process of making students the centre of their learning”. While Bonwell & Eison (1991, p.5) describe active learning as “instructional activities involving students in doing things and thinking about what they are doing”. Many research have shown that the student attention span during the lecture does not exceed more than fifteen minutes with the number of students losing attention increasing dramatically, which leads to low lecture retention (Hartley & Davies 1978, Wankat, 2002). In contrast, it has been pointed out that students are able to comprehend at a higher level when they are eager to learn something and are provided with the opportunity to “discuss and participate in the learning process” (Gibbs cited in Revell & Wainwright, 2009 p.210). The two most important aspects of active learning approach are collaboration and knowledge construction.

Collaboration

Collaboration between different students in the classroom is another important aspect of active learning. Collaboration assumes that student learning is a result of the process where students learn while interacting with others and “not only from authorities” (Abercrombie, 1979 p. 21). The interactions that children have with others allow them to have feedback on their activities, learn socially appropriate behaviours and understand “what is involved in co-operating and working together” (Dewey cited in Gillies, 2003 p.2). Therefore, the learning process should have the child at its centre by responding to develop his/her “social interests and activities” therefore, making the whole process “active and dynamic” (ibid).

Collaborative learning makes students engage in a discussion and take responsibility for their own learning thereby making them critical thinkers (Totten et. al, 1991). The discourse that emerges as a result of this is more conceptual and thoughtful than the one that is the result of an individual effort (ibid). Therefore, the students engaged in a discussion are expected to learn more than the ones who are passively receiving the ‘knowledge’ from a teacher. Finally, active learning not only makes students learn the content of information but also improves upon many dimensions of their personality. Skills such as critical thinking; time management; interpersonal, communicational, speaking and writing are also improved upon using an active approach in the class (Warren, 1997).

Knowledge Construction

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 (ibid). Vygotsky (1934) believes that others play an important role in mediating learning. He states that a student can learn on his/her own to a certain extent however, with the help of others s/he can learn more. He calls it the ‘Zone of Proximal Development’ where a student is provided with ‘scaffolding’ by his learning mentor to help him/her reach to a higher level (ibid). As the student becomes more independent, this support is gradually withdrawn, making him/her responsible for his/her own learning.

Dewey considers (cited in Krain, 2006) active learning as one of the most effective ways to teach concepts. The role of the instructor is to “try and encourage the learners to discover the principles by themselves” (Brunner, 1996). The learner and the instructor should be actively engaged in a dialogue with the instructor translating the information to the learner into a format which is appropriate to the learner’s current understanding (ibid). Additionally, much of the literature on active learning (Bligh 1998; Gibbs and Jenkins 1992; Ramsden 1992 cited in Higgs & McCarthy, 2005) demonstrates that the internalisation, understanding, and application of learning do not occur if the students are not actively involved in the process of learning. When students engage through active processing of information, they reconstruct it in new and personally meaningful ways and are expected to remember and apply it in new situations (King, 1993). Therefore, the objective of replacing the 'traditional' style of learning with active learning is that it enables students in using, and therefore, better retaining the information taught in the classroom (Peterson, 2001).



Chapter Three

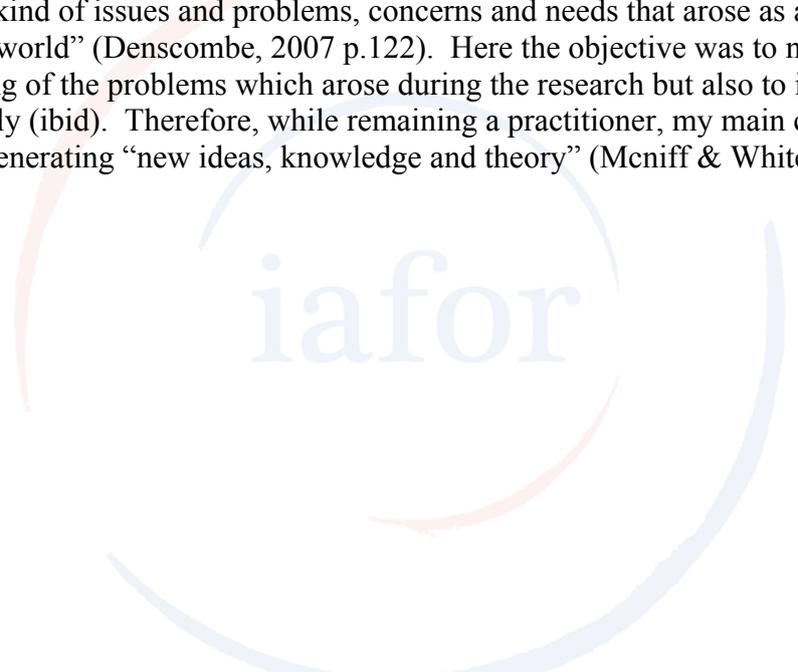
Methodology

Qualitative Approach

A qualitative approach was adopted for my research as the descriptions and theories that are generated by such research are grounded in reality (Denscombe, 2007). This approach helps to bring forth the occurrences that are otherwise overlooked in the class, allowing the researcher to “ask questions” instead of only trying to “answer” one set question (Strauss cited in Internal IOE MTeach paper, 2009). However, while doing my research, I ensured that my hypothesis would not affect the objectivity or the outcome of my research.

Action Research

McNiff & Whitehead (2006) describe action research as a kind of enquiry that allows practitioners to examine and assess their practices. Therefore, I carried out my study through Action Research 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). Here the objective was to not only have a better understanding of the problems which arose during the research but also to improve upon them simultaneously (ibid). Therefore, while remaining a practitioner, my main concern was to improve practice generating “new ideas, knowledge and theory” (McNiff & Whitehead, 2006).

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Chapter Four

Data Collection Methods

The below three methods were utilised to collect my data:

Focus group interviews (FG 1 & 2)

I conducted two semi-structured focus group interviews with all 15 of my students at the beginning and at the end of my research. The objectives behind the interviews were to:

- acquire first-hand knowledge of the students' previous experiences, if any, regarding active learning approaches in their secular schools and RECs;
- their views on the advantages and limitations of the active learning approach/environment;
- their expectations from the class;
- their experiences regarding different activities used during the research and;
- their feedback regarding advantages and disadvantages of various activities used in the class.

Audio-recording

I recorded the interviews using an audio-recorder as it offered a “permanent and most complete record of what was said during the interview” (Hitchcock, 1995 p. 171). I was able to secure the data which I could refer to at any time during my research and analysis. The data recorded here was in Urdu, the national language of Pakistan; however, I had to translate it in English while transcribing it for my report. During the process of translation and transcription I have tried my best to represent the views expressed by my students.

Pupils' Diaries

Pupils' diaries can be a great source to collect “information related to particular activities” therefore I used them as one of my data collection methods (Hinds, 2000 p.51). As important stakeholders of my research, students were made a part of this process by making their voices a part of my study. Moreover, this pupil perspective acted as a “triangulation” for my study giving me a better understanding of my research by viewing it from a different position (Denscombe, 2007).

Reflective journal/field notes

My field notes/reflections during and after every teaching session were an important part of my data collection methods to “relate incidents and explore emerging trends” (Hopkins, 2002 p.103). Moreover, as a practitioner of Kolb's (cited in Eastcott & Farmer, 1992) learning cycle of “doing-reflecting-thinking-planning”, this journal enabled me to turn my experiences into concepts which then guided me to plan new experiments. Additionally, it was impossible for me to record the conversations from the class in my journal. Therefore, I took field notes during the class to be able to report my “observations, reflections and reactions to classroom problems” (Hopkins, 2008 p.103).

Ethical considerations

As my research study involved under-age students, full consents of their parents were taken through the concerned authorities of the REC. The parents were informed of the objective(s), nature and the methods of data collection to be used during the research (Hopkins, 2002). As an important part of this research, students were also taken into confidence; however this was done in a manner which would not affect or construct pre-conceived ideas in their minds about the study. To maintain confidentiality, no pictures were taken during the study. Moreover, none of the students' real names are mentioned in this report.

Chapter Five

Findings and analysis

In this chapter, I will present and discuss the findings that emerged as a result of my study using various data collection methods discussed in the previous chapter. My approach here will be thematic where I will analyse those themes that became more prominent during the process of my study.

Conceptual understanding of the active learning approach or deeper meaning(s) attached to it?

One of the initial and most prominent themes to emerge from the study was the awareness shown by students regarding the active learning approach. Although most of them did not use the term active learning explicitly, the way they articulated their responses were suggestive of ideas which comprise active learning.

We learn more by experience than just by listening.
(Student response, FG 1, 25-05-10)

Furthermore, the session also indicated that students were eager to experience the new pedagogy as they seemed to have sufficient knowledge of the many advantages related to a more interactive way of learning.

I feel that "active speaking and active participation of the student is more interacting" ...teacher should not be like 'as in 24 hours radio', continuously speaking and students just listening.
(Student response, FG 1, 25-05-10)

When we research and do something ourselves, we understand it better.
(Student response, FG 1, 25-05-10)

Upon reflection, it is evident that the views expressed by my students during the session were different from what I had assumed in my hypothesis which was a result of my own teaching/learning experiences. While discussing with regards to interacting with other students, the students also expressed that it helps in exchanging ideas, sharing and developing knowledge, building confidence, developing better relationships among them, etc. However, it was difficult to gauge what their level of understanding of these terms was when they used words such as 'exchanging ideas' and 'sharing knowledge', etc.

If there's someone in the group who knows about the topic which others do not, then they get that "knowledge" from him/her which increases their "knowledge" about that topic.
(Student response, FG 1, 25-05-10)

It is not clear whether here by 'knowledge' they meant just exchange of information or were there deeper meanings attached to their answers.

Reflecting back on the session, I feel that more elaboration was needed from the students on their understanding of these terms during various data collection methods; pre and post teaching sessions. This research would have benefitted greatly if it had been clearly understood how the students engaged in this research; defined, internalised and related these terms to their learning and how different or similar their understanding was to the way literature has defined. On the basis of the findings of this research it would appear that the students participating here were already

exposed to the different terms and tools associated with active learning and could relate/connect them to the many benefits associated with this approach.

The data showed that the students had a very clear understanding of the teacher's role in the classroom in view of a more active learning approach.

If we have one hour then for 15-20 minutes you should provide us with information about the topic. Afterwards, you should ask us to do the research and present the role-plays etc.
(Student response, FG 1, 25-05-10)

We should have both. Teacher should deliver the lecture and we should also do the activities. If it is only us doing the activities then what is the "requirement" to have a teacher? What is the need to have him/her (in the class)?
(Student response, FG 1, 25-05-10)

The study revealed that despite being exposed to a more active environment and being aware of the advantages of this approach, students still looked towards the teacher as an authority in the classroom. It would be interesting to note that the social context may have played a significant role in the development of this attitude among the students. The Pakistani society at large views the elders and teachers as higher in high regards, the rank and, therefore, people to be listened to and respected. Therefore, it would be important to consider this fact while implementing an active learning approach in the Ismaili RE classes in Pakistan.

Collaboration through role-play

Collaboration is one of the most essential elements of active learning. In this part, this theme will be analysed to see how an active learning environment fostered collaboration among my students and whether some of the advantages associated with it were achieved or not.

We get to know about the level of "knowledge" others in the group have...we are inspired from them; we have the opportunity to learn so much (from them).
(Student response, FG 1, 25-05-10)

During the course of the study, there were many instances when clear signs of collaboration among students were noticed. To elucidate this I will use a role-play conducted during one of the classes as a case study to explore some of the aspects of collaboration in active learning. The content in this class dealt with an excerpt from the famous Fatimid jurist *Qadi al-Nu'man's* book *Da'a'im al-Islam*. The excerpt used in the class described the principles on the art of governance – *ahd* - which meant the contract between the ruler and subjects.

The 15 students were divided into three mixed-gender groups and asked to prepare a role-play on what, in their opinion, were some of the most pressing issues in Pakistan. Moreover, as a problem-solving based approach, students were also asked to propose solutions to these problems using their respective role-plays.

One of the most important things to come out of the case study was that a more active environment provided students with the opportunity to interact with other students.

"As students start brainstorming, I move around the class. I note that: 'Students look excited. Everyone starts giving the ideas on which issue to choose.'"
(Teacher's reflective journal/field notes, 09-06-10)

Furthermore, this collaboration extended beyond gender boundaries as both boys and girls had the opportunity to work in a close proximity in an active environment.

“As I go to group 1, I see Taimoor and Alvi very comfortably discussing with the three girls of their group. ‘T’ usually keeps very quiet during all kinds of activities. However, I see him very comfortably discussing points with the girls he is assigned with. This is the first time I have seen the students so comfortable with each other. There’s no usual awkwardness between boys and girls”
(Teacher’s reflective journal/field notes, 09-06-10)

This was contrasting to how they had behaved during some of the initial classes when the students had found it difficult to work in a mix gender group.

“Time does matter!” Initially, we did not know each other but gradually when we came to know that we have to work together, we had to make ourselves feel comfortable. We realised that if we do not talk to each other then our group would be left behind.
(Student response, FG 2, 14-06-10)

In view of the above response, it could be speculated that as students were provided with more opportunities to work together, it became easier for them to create positive working relationships with students of opposite sex.

Furthermore, the thought of achieving a common task played a very essential role in students’ overall responses to group dynamics.

...when we came together (for this) our understanding (with each other increased quite a lot.
(Student response, FG 2, 14-06-10)

New friends were made, there were problems also, there were differences but then I forgave.
(Students response, FG 2, 14-05-10)

Therefore, this collaboration also resulted in students developing positive relationships with each other as they interacted with each other during the tasks. It is also evident that there were differences of opinion but the students were able to resolve them amicably.

The overall response of the students seemed to be very positive as they showed examples of some of the advantages that are linked to an active learning approach such as developing social skills and understanding among students.

“Zenia who has lost her voice due to a sore throat also wants to play a part in the role-play although I had given her the option of becoming an observer. Her group had a problem of how to accommodate her. They discussed and deliberated and came up with the idea of her being a mute person who contributes in the family income by sewing clothes in her spare time, a very common practice in Pakistan.”

(Teacher's reflective journal/field notes, 09-06-10)

The positive response of her peers towards Zenia not only ensured that she is actively involved in the learning process but also provided her with the opportunity to learn something new out of this experience.

I came to know about how those people feel who cannot talk, what are their feelings.
(Zenia, FG 2, 14-06-10)

Furthermore, the opportunity of interaction seemed to generate student talk, as I observed them discussing and deliberating at various stages of preparing their respective role-plays.

"They are quite animated. They are discussing in their groups on how to present their selected issues. Ideas are being bounced back and forth."
"The second group is concentrating well and has already started rehearsing for their parts before I have even joined them to observe. I enquire about different aspects of their play. They tell me they collectively decided the story and which characters to be played by which members of the group"
(Teacher's reflective journal/field notes 09-06-10)

We took ideas from everyone and if it was a group work then everyone's ideas would come...so a solution would come out soon. Everyone's ideas would come so that way the work used to be done quickly like someone is compiling, someone is telling (talking). We used to do this therefore a better result would emerge.
(Student response, FG 2, 14-06-10)

In light of the above data, one would suggest that the feeling of being responsible for their own learning also made students realise the importance of dividing the responsibility which, in their opinion, was a more productive way of achieving their shared goal.

However, some of the students' responses brought a new and contrasting dimension to the study.

Its advantage was that we learned about everyone's opinions and understanding increased, and disadvantage was that sometimes there would be misunderstandings...everyone has their own opinions therefore if someone has one opinion and (then there's) another opinion then it causes misunderstandings.
(Student response, FG 2, 14-06-10)

If opinions are slightly different then we can merge them but if they are completely opposite then they cannot be merged.
(Student response, FG 2, 14-6-10)

If there is a group of five and two of them object then (we) ask from the majority.
(Student response, FG 2, 14-06-10)

The above responses showed that differences of opinion did occur among students while collaborating on various tasks. Their responses also showed that different students had used different ways to resolve these differences. However, the act of seeking majority to resolve an issue reflected an understanding where the majority's decision was always right. This is against the very idea of collaboration. The responses also demonstrated the fact that negotiation forms an important aspect of collaboration.

During the session it was noted that one of the groups found it difficult to concentrate on their task. Despite being given a chance to collaborate it seemed that they were more concentrated on idle chat.

"As I move towards the third group, I see that they are not concentrating on the given task but are chatting on other matters. I try to focus their attention towards their work. I sit with them and discuss the story they are going to present. They are finding it difficult to come up with a proper story. I try to brainstorm with them but find it difficult to make them focus. I have been with them for a long time and have to move to the other groups. I tell them to focus hard as I move to the third group. They assure me that they will prepare their role-play on time."

(Teacher's reflective journal/field notes 10-06-10)

However, it seemed that the group did not perform its responsibilities properly as their role play lacked cohesion and organisation. The above example reflected an important aspect of the active learning approach: by merely putting students to work in groups does not necessarily result in collaboration. There are many reasons and distractions which may stop students from collaborating with each other and it is imperative that this should be carefully considered while introducing an active learning culture in the classroom.

This group's role-play showed one of the protagonists breaking the rules and getting away with it by bribing the police. This resulted in a strong reaction from other students as instead of providing a solution, the group had only depicted the issue. This ensued in a heated debate. The said group was adamant with their argument being that if he had not done it, he would have lost his job. The other students responded with:

*Alvi: Does that mean we should accept these things the way they are?
Anisa: They have given a very wrong message. (We) have to fight against the injustices, not accept them silently.*

(Teacher's reflective journal/field notes, 09-06-10)

This incident showed students' deep engagement with the issue and their reactions were evidence of their personal commitment towards fighting against a vice that exists in the society. The activity helped them in relating the matter to their lives.

- *Along with the government, the citizens should also understand their responsibilities. Today, if a person has gone unpunished for his/her wrongdoing, tomorrow someone else will do something wrong with him/her and will be left unpunished.*
- *If there is rule of law in the country and everyone fulfils their responsibility, then only can Pakistan progress.*

(Students' quotes, teacher's reflective journal/field notes, 09-06-10)

This collaboration among students also provided them with the opportunity to develop a problem-solving approach instead of just identifying the problem.

*"We can realise our responsibility and be self responsible and do what ever can make Pakistan a better place and a better country for living."
(Pupils' diaries, 10-06-10)*

*"As being a student we can gain a better quality of education and provide others same.
We can write the newsletter on behalf of citizens to improve the quality of life."
(Pupils' diaries, 10-06-10)*

Students' reflections also demonstrated that while helping them use and develop various cognitive skills, the activity had managed to convey the message of justice and equity which was a part of the *Ahd* document.

*"...improving life style of poor
...giving equal rites to womens...
by don't differentiate between rich and poor...
by listening to everyone's problems."
(Pupils' diaries, 09-06-10)*

*"By many means Pakistan can be a better place starting with ourselves, if pakistanis self discipline themselves, remind themselves of their duty and stay united everything will go perfectly and Pakistan would be able to get through the tough times she has created for herself easily. All she needs is a little good citizens."
(Pupils' diaries, 09-06-10)*

Knowledge Construction through debate

Bringing their understandings, collaborating with each other, and creating something new out of this process of sharing is at the heart of active learning. This section will discuss and analyse the results of a debating session to observe how students build their understanding as they engage in a process of discussing, deliberating, arguing and examining with their peers.

The debate was conducted with the backdrop of 'a story about the animals and humans, included in one of the 9th- 10th century epistles of *Ikhwan al-Safa*. The fable questions the notion; whether humans are the masters of animals. Boys and girls represented animals and humans respectively. After 15 minutes of brainstorming and preparing their arguments, the debate started and continued for 30 minutes with both 'animals' and 'humans' arguing and counter-arguing their cases. Thereafter, the class reconvened as a whole to further explore the issue.

The session resulted in higher level of engagement by the students. Students were not only engaged but also showed enthusiasm and excitement on being provided with the opportunity to debate with each other.

*"Unlike the previous occasions, I don't have to ask them to discuss and write down their arguments on a paper. This time they are doing it themselves.'
'Boys and girls are very charged up. They seem to love the chance to debate with each other.'
(Teacher's field notes/field notes, 10-06-10)*

Activities attract/grab the student's attention and a student who is not

confident feels like participating, thinking that yes I can participate too.
(Student response, FG 1, 29-05-10)

Moreover, my observations during the brainstorming session showed that the students had started the collaborative thinking as they discussed and shared different attributes/qualities of both humans and animals, human achievements, how animals assist humans etc. (Teacher's field notes/observation, 10-06-10). The study also showed that students were able to share information/knowledge with their peers which seemed to help them increase their understanding of the issue.

"One of the boys is sharing information about animals he's got from National Geographic. Others join in and share the things that they have also seen on Discovery and National Geographic."
(Teacher's reflective journal/field notes, 10-06-10)

Some of the arguments they came up with were:

- Humans can differentiate between right and wrong.
- Everybody is equal in the eyes of Allah

Moreover, this thought process was not limited to their own arguments as they also discussed the arguments that the other team could be presenting.

'Boys are not only thinking about their own arguments but also the opposing side's points.'
'One girl says to others: Think what replies would be coming from the opposing team.'
(Teacher's reflective journal/field notes, 10-06-10)

Therefore, the student talk and collaboration encouraged the students to turn their thoughts into arguments using their prior knowledge. Thus, through articulations students were able to realise the concrete nature of an abstract concept. Moreover, the session seemed to indicate that the students were able to further explore the matter by also examining the opposing views thus expanding their pool of knowledge.

What happened during the debates was that such 'new new points' were raised that it would be like yes this could be a point too so we got to learn a lot in them.
(Student response, FG 2, 14-06-10)

The arguments presented during the debate also suggest a high level of understanding of the issue under discussion;

Humans have intellect	Animals have intellect too e.g. honeybee
Humans have made many scientific discoveries and invented so many things which serve the world	Humans eat meat and use wool etc to protect them from cold
The Qur'an has declared humans as 'the best of all creations of Allah'	Humans have destroyed many things. One of the most recent examples is of the ozone layer.
Many animals have killed innocent people	Humans go into the jungle to hunt innocent animals and when the animals defend themselves the humans call them man-killers/eaters

I always thought that animals' rights were started by the Western countries but now I know how Muslims started thinking about human rights much before the people of the West did.

(Student quote, teacher's reflective journal/field notes, 10-06-10)

Our confusions were solved (cleared) because of the debates. Sometimes there were some misunderstanding also but still we really enjoyed the debates.

(Student response, FG 2, 14-05-10)

The process of creating knowledge through collaboration was consolidated with individual reflections:

"If the humans will have more pets they would attain the responsibility to take care of the pets... When a human would do all these things he would be likely to understand the animals nature, his attitude towards different things and he would indirectly be able to communicate with him."

(Pupils' diaries, 10-06-10)

One of the most interesting things noticed during this session was the way in which students regularly presented their arguments towards me and not their peers. Despite my continuous efforts to remind student that they should look to each other, as it was a debate between their teams, the practice continued. It seemed as if they wanted validity from me (Teacher's reflection journal, 10-06-10). One could conclude that despite being empowered for their own learning, the students still viewed the teacher as the source of knowledge and for them it was important that whatever they said should be validated by the teacher. The limited time available for the study was not sufficient to develop the skill where students are aware of their learning and could take maximum advantage from it. However, it could be an interesting area for a future research that would aim for exploring the issue further in a Pakistani Ismaili REC context.

Students' reflections of the class revealed that the matters discussed through this debate were clearly understood by the students.

"... We know animals cannot speak so we should take care of them because Holy Prophet has said:

'Be wary of Allah in matters of these mute animals (translation)'

(Pupils' diaries, 10-06-10)

"... humans should not treat animals cruelly and should not overburden them with lots of work... There are also many Ahadith (sayings) of Holy Prophet (PBUH) regarding kind treatment towards animals."

(Pupils' diaries, 10-06-10)

These reflections also revealed that the activity had helped students connect well with the objective of the debate which is to 'lead us to think more deeply about human accountability towards Allah'.

Chapter Six

Discussion

The results discussed and analysed in the previous chapter have shown that there were many aspects that came forth during the course of this study and needed further investigation as a crucial part of this research. In this chapter, I will discuss some of the challenges that arose while conducting this research. Furthermore, I will discuss some of the important elements associated with active learning that, I believe, need further investigation.

Challenges and limitations

One of the challenges I faced was the limited time available for this research. I believe the allocated time for this research was not sufficient to examine in detail how my students viewed the active learning approach being implemented in the class. Moreover, though I was able to see the impact of the active learning upon my class as a whole, it would have been highly beneficial to have the opportunity to gauge how my students had benefitted individually. This meant that I could not examine in depth, some of the important aspects associated with active learning.

One of the most important challenges during the study was to maintain the balance between performing my duties as a teacher and fulfilling the responsibilities of a researcher, simultaneously. Cochran-Smith & Lytle (cited in Roth, 2007) rightly describe that it becomes extremely difficult to understand an event when one is a participant in them. Therefore, as a teacher researcher it became extremely crucial for me to look at my reflections objectively while interpreting the events that occurred in my class, continuously triangulating the data with my students' responses.

It is important to realise that the observation made during the class were made by me. They were my interpretations of the incidents that occurred in the class. Therefore, the presence of an observer could have been useful for my study as it provides the teacher researcher a valuable insight into the classroom activities from a different perspective. Moreover, it would have also assisted considerably in triangulating my data by giving me an alternative view/description of the events.

The focus group interview conducted with the class seemed to be successful in providing rich data both at the beginning and at the end of the research. The semi-structured format of these interviews enabled the students with the opportunity to develop their ideas and speak more widely on the issues raised during these sessions (Denscombe, 2007). This format also provided me with open-ended answers from the students as they had the opportunity to elaborate their points of interest (ibid). This method proved to be the most valuable source of information and reflection on different facets of this research. However, there is a possibility of certain students restraining from voicing their opinion as it may have gone against the prevailing opinion in the group (ibid). Thus, the presence of an alternative data collection method such as an adequate questionnaire or an observer would have made the collected data richer and more reliable.

The data analysed in the previous chapter also bring forth some very important issues related to active learning in a Pakistani context that need to be discussed in detail.

Teacher as facilitator

One of the most interesting elements to come out of this study was the role of teacher as a facilitator. As mentioned earlier, the social norms of the society give immense authority and power to the teacher in the system of education in Pakistan. The advocates of active learning approach, on the other hand, consider the students as being the centre of the learning process. However, this does not mean that the teachers have fewer responsibilities now. Kauchak and Eggen (cited in Podsen and Denmark, 2000) emphasise that the role of a teacher has now shifted considerably from an information provider to a facilitator of information. Therefore, they believe it is essential for the teachers 'to provide the necessary structures for pupils to progress through the learning cycle:

setting up the initial tasks, structuring the review, promoting the learning and encouraging application (Watkins, 2000 p.8). Teachers need to actively involve their students in thinking about their learning, and finding ways that make their classrooms comfortable and stimulating places to learn' (Kauchak & Eggen 1998 p.11; Danileson 1996 cited in Podsen & Denmark 2000). Furthermore, it was also revealed that there is a great need to foster among students problem-solving and higher order thinking skills. Therefore, the role of the teacher becomes that of a facilitator who coaches and guides the students, empowering them to become responsible for their own learning (ibid).

It is important that our teachers are able to create a place where students feel themselves to be part of a "community of learners" (Kauchak & Eggen, cited in Podsen & Denmark, 2000 p. 21). However, in a traditional society like Pakistan it is extremely difficult for the teachers to relinquish the absolute authority in the classroom within the existing education system. Most of the teachers after being seeing their own teachers as a source of absolute power and authority in the class often find it difficult to adjust to the shifting paradigms of the teacher-student relationship. However, it is now imperative that these teachers realise that as the students begin to take more responsibility of their learning, the teachers have to consider it as sharing of their control and not relinquishing it (Macgregor, 1992). As teachers begin to provide their students with the opportunities to be active in the class, they begin to understand how it helps their students in becoming confident and competent learners which, in turn, encourages the teachers to re-evaluate their own practice (ibid). This also means that as the students are engaged in different activities in the class, the teacher has more time to interact with them, guide them and help them whenever necessary (Udvari-Solner & Kluth, 2008).

Student talk

Active learning approach relies heavily on student-student talk as it helps in sharing and accumulating new knowledge. As students engage in working with their peers, they create new meanings out of these interactions. During this research, this fact was clearly visible when students engaged in meaningful talks as they collaborated on different tasks. This interaction with their peers provided them with the opportunity to "explore their ideas, clarify to themselves and to one another, expand and modify them and finally make them their own" (Sharan & Sharan, 1992 p.22). Drawing on the findings of this research and the review of literature, it is evident that this dialogue plays an important part in how students reflect on issues, critically investigate and analyse them (Carnell & Lodge, 2002). Whether brain-storming for the role-play or debate students were constantly interpreting and re-organising the knowledge they constructed through this collaboration (ibid).

The process of discussion and deliberation stimulates the students to think innovatively because they are challenging and testing each other's ideas and responding to these challenges requires thought (Bligh 2000). This becomes more important in a society like Pakistan where talking with your peers in the classroom and talking openly with your elders –in this case the teacher- is not encouraged. The very thought of talking openly in front of your teacher is something which not many students would want to do. Therefore, it becomes difficult for the teacher to engage the students into a conversation.

This happened a few times during my study when it became difficult for me to make my students realise that they were engaging themselves into the process of learning by sharing their thoughts with others in the class. Alexander et. al, (2004) consider dialogic teaching to be a powerful tool of empowering an individual. Therefore, it is important that students have the opportunities to learn through discussing and elaborating their ideas with their peers (Vygotsky cited in Moore 2000). Student talk is essential to understanding and cognitive development of children (ibid).

Reflecting upon your learning: a skill

Choosing students' journals as a data collection method was aimed at achieving the purpose of not only encouraging them to reflect upon what they had learned in the class but also to internalise how they learned it. Watkins (2000) believes learning and reflection to be closely linked. According to him reflection supports the learners to enhance their learning and helps them to learn from what they do (ibid). However, during the course of the study I noticed that most of my students were not used to this practice. They had a very limited or no idea of the value of reflection. Considering this, it was no surprise that most of the students were quite apprehensive about writing their reflections at the end of every class. Therefore, I had to limit the number of questions for the reflection to make my students more comfortable. This decision proved successful as students seemed more excited and started sharing their thoughts on what they had learned during the class. This change helped in providing me with a window to view how my students had understood the issues/topics being discussed in the class.

This experience brought to light an important fact that the process of reflecting upon one's learning is a skill that needs to be developed over a period of time. Gibbs (cited in Watkins, 2000) posits that 'it is not sufficient to have an experience in order to learn. Without reflecting upon this experience, it may quickly be forgotten or its learning potential lost' (p.6). Anderson (1999) believes that dialogue with others and using reflective diaries can help in developing students to observe and reflect on the process of learning. In a context where the educational system provides very little opportunities for student reflection, it was difficult to expect them to learn this practice during the one-and-a-half weeks of this research.

However, in view of the positive responses shown by the students mentioned earlier, one would suggest that as the students should be encouraged and provided with more opportunities to reflect upon their learning which, in turn, makes them more confident in articulating their experiences from the class. Silberman (1996) states, that writing about the learning experiences encourages students "to become conscious, through language, of what is happening to them" (p.129). It also helps the students to become aware of the processes in which this learning is taking place. While an active learning approach in the classroom aims at ensuring students' participation, it should empower them by making them aware of their learning.

The study was able to identify many instances when students benefitted individually as well as collectively from their engagement with various pedagogies used in the class. The findings also appeared to suggest that different activities in the class were successful in generating, what seemed to be meaningful student talk. This interactive environment also allowed the students to collaborate, share responsibility to achieve common goals, and take the responsibility for their own learning.

Chapter Seven

Conclusion

This study was planned with the aim to investigate how a more interactive environment can benefit the secondary level students with the Ismaili RECs in Karachi, Pakistan. During the course of this research, many valuable lessons were learned by me as a teacher/researcher which I will discuss in this chapter. Furthermore, I will also try to make some recommendations in light of my experiences that I hope would be helpful for any future research. The research also made me realise that going into a classroom with preconceived notions can lead a teacher researcher to make assumptions that may prove to be very difficult to discard. As a teacher, it is imperative that one does not enter into a classroom with set assumptions about students' level of understanding and knowledge.

Similarly, the findings in the previous chapter revealed that my ideas about the use of active learning methods in Pakistan needed re-evaluation. It was evident from the students' responses that they were already exposed to this approach to some extent. However, it also appeared that these approaches were limited to a handful of pedagogical tools and still relied heavily on the notion of a teacher being the repository of knowledge. This became apparent on many instances during the research when students would look for my approval, in matters as simple as presenting an argument. The results of the study seem to indicate that introducing a more active learning approach in the classroom does not necessarily mean that students will develop the skills that are required to become 'independent learners'. Moreover, the notion of teacher as a facilitator instead of a 'knowledge provider' also needs time to develop in our RECs.

Furthermore, I also learned that only introducing or implementing an active approach in the class is not sufficient by itself to ensure that the students benefit from all the advantages associated with it. It is important to understand that to gain from this approach; teachers need to provide the opportunities to equip the students with the skills that are integral to active learning. It is also crucial to realise that these skills cannot be developed overnight or in a short span of time. This is a long and arduous process and all the concerned parties i.e. the decision-makers and the people responsible for implementing them – i.e. the teachers - will have to carefully

Moreover, it is also important that as a teacher one should always reflect closely upon one's practice in the class by not only examining what happened in the class but, most importantly, also realise why it happened and how it can be improved upon. Furthermore, the enthusiasm shown and the responses provided by the students involved in this research were a proof enough of their willingness to become an active part of the learning process. Therefore, this study also made me realise the importance of understanding students as the most crucial stake-holders in the learning process whose voices need to be made a part of the learning process and given the necessary recognition while making any decisions regarding their future.

Finally, in view of the issues discussed above, I believe that this study did manage to bring forth some of the important elements connected with implementing the active learning environment in a Pakistani Ismaili REC context. It helped in providing a glimpse that seemed to illustrate how an active learning environment can be used to ensure students' engagement as well as development of their various cognitive and social skills in a Pakistani, Ismaili REC context. Therefore, on the basis of 'fuzzy generalisation', I would assert that the findings of this research can be applied in a different context (Basse, 1998 cited in Hammersley, 2001). However, it is also evident that there are many issues regarding active learning that remain unsolved and therefore need further examination and exploration from other individuals.

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Paper Title	Epistemological and Paradigmatic Ecumenism in "Pasteur's Quadrant": Tales from Doctoral Research
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Abstract

It has been argued that a frank articulation of the conceptual framework of a research study, defined as "...the system of concepts, assumptions, expectations, beliefs, and theories that supports and informs research..." (Maxwell, 2005, p. 33) is often missing in doctoral dissertations and that this is inherently problematic given that it is nigh impossible for any research to be a-theoretical. Referring specifically to doctoral work, Lester (2005) observes that very often there is "...a lack of attention to clarifying and justifying why a particular question is proposed to be studied in a particular way and why certain factors (e.g., concepts, behaviors, attitudes, societal forces) are more important than others" (p. 460). As a consequence, the reader has to infer, amongst other things, the rationale for the research design and choice of methods.

Taking cognisance of these views, this paper describes the conceptual framework adopted, and the attendant methodological approaches employed, in creating a research design for a mixed methods doctoral study. In the context of increasing globalization, and the cross-pollination of ideas and practices which this assumes, it is argued that the potential for university-based research collaboration, and indeed research in general, is increased significantly by the degree to which researchers are frank and transparent about the research paradigms and premises underpinning their work. This paper offers one example of negotiating this challenge.

The paper is in three parts. It opens with a short statement in relation to the study itself, and the research problem and hypotheses it investigated, by way of introduction to the conceptual framework. This is followed by a presentation of the mixed methods, quasi-experimental design employed and explanation of how this was informed by three dominant research paradigms and their ontological, epistemological and methodological assumptions. The final section seeks to draw the previous elements together by mapping the steps taken to investigate the research hypotheses and measure input, process and output variables. The paper is grounded in contemporary dialogues on the merits and demerits of mixed methods research, in a post-modern, post-positivist tradition.

Research Context

When the doctoral project on which this paper is based was conceived, the Irish education system at primary level was witnessing a fundamental shift in focus from an emphasis on curriculum revision, professional development and policy implementation to one of review, with the concomitant effect that issues of evaluation and assessment were increasingly high on the agenda. This was evidenced by the publication of a series of evaluation reports which, in addition to identifying successes

achieved, had highlighted a number of related iterative weaknesses in the system that continued to thwart progress (Department of Education and Science (DES), 1999). One was the apparent lack of assessment literacy (DES, 2005; National Council for Curriculum and Assessment (NCCA), 2005) which had been attributed mainly, but not exclusively, to teachers (Hall, 2000). Another was the growing body of international evidence suggesting that pedagogical practices in schools serving disadvantaged children were qualitatively different to those found in more advantaged settings (Oakes & Lipton, 1999; Shiel, Forde, & Morgan, 1996). Finally, there was evidence that low levels of literacy was persisting in Ireland, despite significant investment and innovation (Eivers, Shiel, & Shortt, 2005).

The Problem Investigated

In responding to these challenges, the Author conducted a study that examined the potential of a teacher learning community (TLC) as a vehicle of professional development, to bring about changes in teachers' understanding and use of Assessment *for* Learning (AfL), in order to improve the reading competency of a cohort of children attending a designated disadvantaged, junior school, in the Republic of Ireland. Employing a partially mixed, concurrent, equal status, quantitative/qualitative design, the study tested three research hypotheses pertaining to (1) children's reading achievement, (2) their motivation to read/employment of AfL strategies when reading and (3) teachers' knowledge, skills and attitudes of/to AfL. Specifically, the study investigated if:

1. A nine-month, school-based intervention, employing Assessment *for* Learning (AfL) principles and practice, would make a quantitative difference (i.e. effect size) to the reading achievement of a target group of children when compared to a similar cohort not involved in the intervention;
2. There would be a discernible, positive impact on children's attitudes, motivation and approaches to reading;
3. Using the medium of a site-based, teacher learning community (TLC) to provide a professional development programme on Assessment *for* Learning would have a positive impact on teachers' knowledge, skills and attitudes of/to AfL and, in turn, how they taught reading.

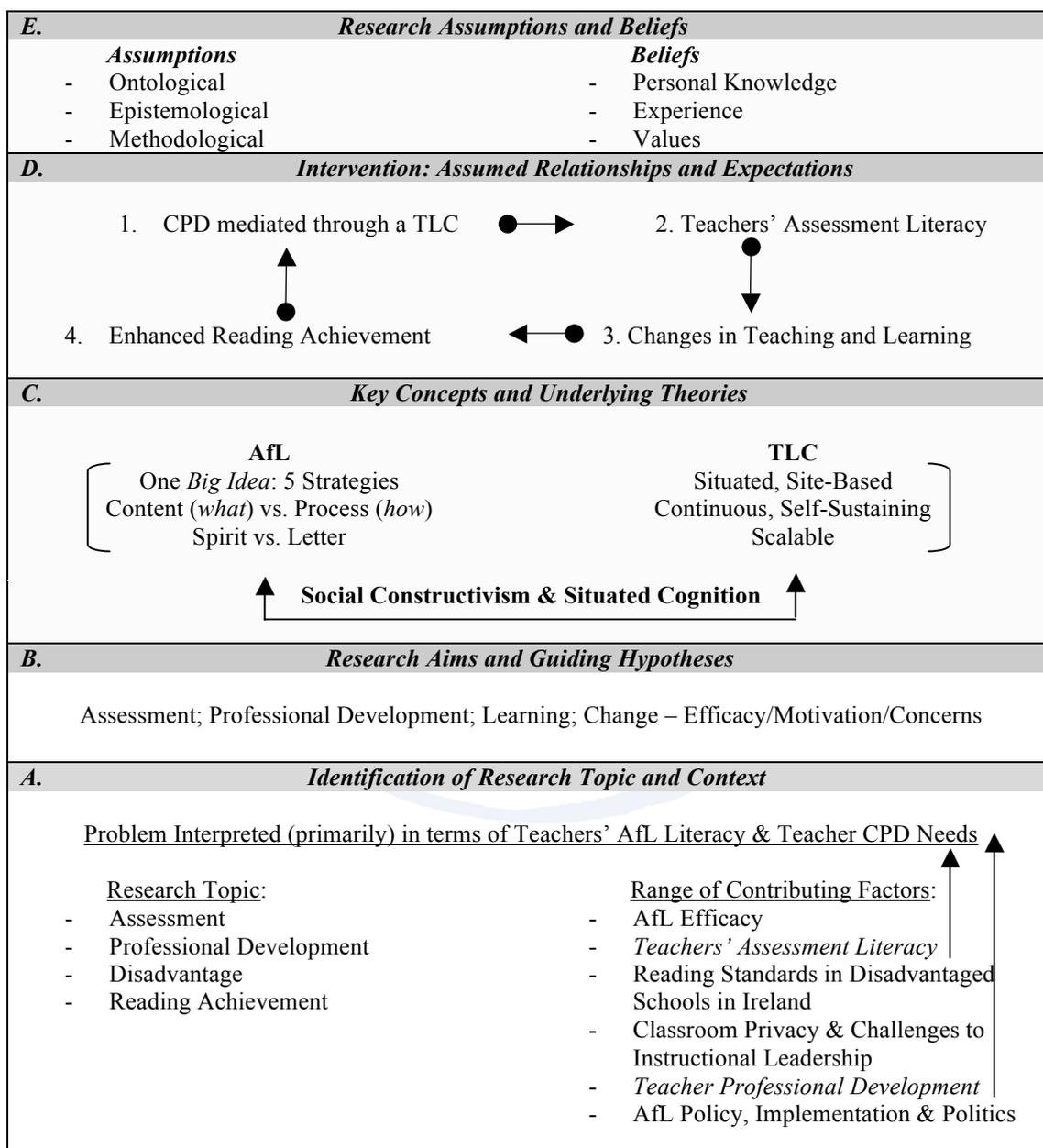
The terms Assessment *for* Learning and formative assessment were used interchangeably in the study and referred to "...any assessment for which the first priority in its design and practice is to serve the purpose of promoting pupils' learning" (Black, Harrison, Lee, Marshall, & Wiliam, 2002, p. 1). A teacher learning community referred to a small, site-based, group of practitioners who met regularly to share, critically review and reflect on their teaching practice and pedagogical knowledge and then use this learning to actively improve their practice for the benefit of children's learning.

The Conceptual Framework

In keeping with the intention to be explicit in relation to how the research problem was conceived, the opening chapter of the thesis introduced the conceptual framework for the study. According to Eisenhart (1991), the primary function of a conceptual

framework is to justify “...the concepts chosen for investigation/interpretation, and any anticipated relationships between them... given the research problem under investigation” (p. 209). Hence, a conceptual framework (Table 1) was prepared with the objective of supporting the reader’s understanding of how the Author interpreted and conceptualised the research problem. As such, it sought to bridge the research questions identified in the opening chapter of the thesis, with the literature review conducted subsequently, and the research approach adopted in the methodology chapter.

Table 1. Conceptual Framework for the Study



Adapted from Lysaght (2009).

Progressing upwards, Table 1 sought to draw attention to the research topic and the range of factors that contributed to the issue (Section A), by way of indicating that the research problem to be investigated was interpreted as stemming, primarily, from an absence of teachers’ AfL literacy, coupled with a lack of opportunity for professional

development in the area. In turn, Sections B through D sought to signal the other key elements of the framework, including: the research aims and guiding hypotheses and the key concepts and underlying theories associated with them (Sections B and C) and the assumed relationships between them (Section D). Finally, Section E was included to acknowledge that the interpretation of the problem under investigation was one of a number of alternative explanations and, as such, reflected the Author’s philosophical perspectives and her experiences, values and beliefs (Section E).

From Conceptual Framework to Mixed Methods Design

Having delineated the study and the lens through which the research problem was framed, attention turned to the design of the study. In this context, cognizance was taken of the ongoing international debate on what constitutes good research and evidence in education (Cochran-Smith & Lytle, 1999; Eisenhart, 2005; Johnson & Onwuegbuzie, 2004; Leech & Onwuegbuzie, 2007). Careful consideration was given, also, to the role of research paradigms, the contrasting ontological, epistemological and methodological assumptions on which they are premised, and the import of these perspectives for research in the social sciences. As explained (Lysaght, 2009), these ideas and themes impacted significantly on the design of the study, given the contrasting but complementary nature of the hypotheses under investigation: the first two requiring a quantitative response, the third a qualitative one. As a consequence, a mixed methods approach was employed, in keeping with an interpretive/constructivist paradigm (Figure 1).

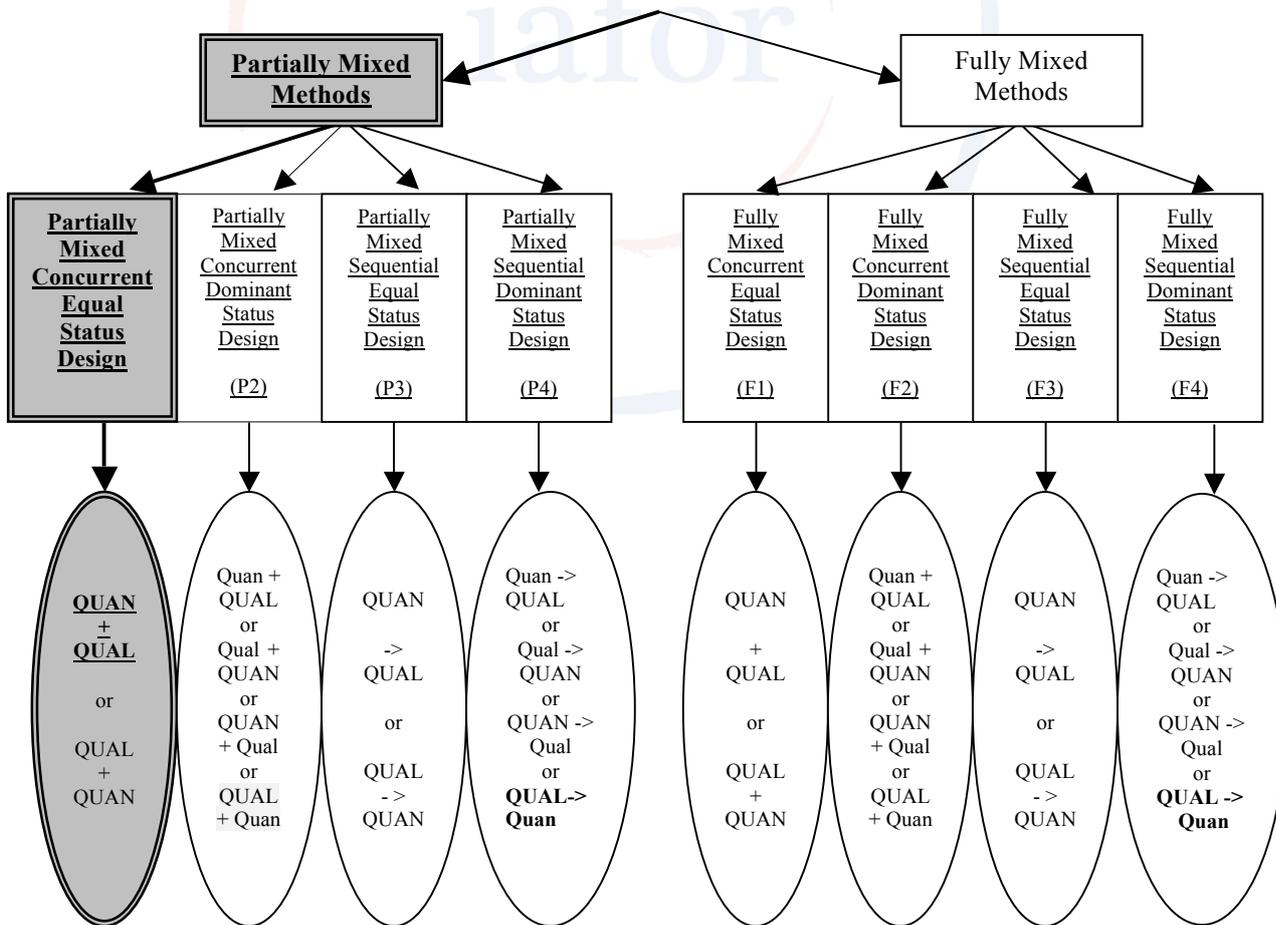


Figure 1: Research Design (Adapted from Leech & Onwuegbuzie, 2007)

As detailed in the thesis (Lysaght, 2009), a mixed methods approach, based on the classificatory system developed by Leech and Onwuegbuzie (2007), was used to avoid any inadvertent simplification of the processes of learning experienced by either adult or child participant groups in the study. Specifically, a partially mixed, concurrent, equal status design (P1), in which the qualitative data assumed equal status with the quantitative data (QUAN + QUAL) was employed, as shown in Figure 1. Explaining the choice of design, reference was made to the paradigm wars (Kuhn, 1970), the incompatibility thesis (Johnson & Onwuegbuzie, 2004) and, specifically the case for a rapprochement between the two sides and a third research paradigm. As argued, the adoption of a "...needs-based or contingency approach..." to research of this kind frees researchers to "...create designs that effectively answer their research questions..." instead of following "...completely... either the qualitative or quantitative paradigm" (Johnson & Onwuegbuzie, 2004, p. 20).

In attempting to capture the import of the debates on paradigms, and specifically the implications of choosing one research paradigm over another, Table 2 was also prepared. Building on the work of Lather (1992), Sparkes (1992) and Eisenhart (1991), Table 2 was intended to serve a dual purpose. First, it sought to illuminate the distinctions in philosophical approaches exemplified by the three paradigms regarding the nature of knowledge (epistemology), the relationship between the researcher and knowledge (ontology), and the implications of adopting particular epistemological and ontological perspectives for researchers' methodological approaches. Second, it aimed to link the three paradigms - and their underlying concepts and approaches - to three kinds of research frameworks, thereby emphasising further that a researcher's choice of framework is not arbitrary but reflects important personal beliefs and understandings about the nature of knowledge, how it exists (in the metaphysical sense) in relation to the observer, and the possible roles to be adopted, and tools to be employed consequently, by the researcher in his/her work. As such, Table 2 sought to make transparent Section E of the Conceptual Framework for the thesis (as outlined in Table 1).

Table 2. *Research Paradigms and Theoretical Frameworks*

Paradigms		
<i>Empirical/Positivist</i>	<i>Interpretive/Constructivist</i>	<i>Critical/Emancipatory</i>
<u>Associated Terms/Terms Used Interchangeably</u> (Adapted from Lather, 1992)		
Experimental Quasi-experimental Correlational Causal comparative Quantitative	Naturalistic Phenomenological Hermeneutic Symbolic Interaction Ethnographic Qualitative	Neo-Marxist Feminist Race specific Freirean Participatory Transformative
<u>Paradigms: Ontological, Epistemological and Methodological Assumptions</u> (Adapted from Sparkes, 1992)		
<i>1. Ontological Assumptions</i>		
External-Realist	Internal-Idealist, Relativist	External-Realist or Internal Idealist
<i>2. Epistemological Assumptions</i>		
Objectivist, Dualist	Subjectivist; Interactive	Subjectivist; Interactive
<i>3. Methodological Assumptions</i>		
Nomothetic Experimental Manipulative	Ideographic Hermeneutical Dialectical	Ideographic Participatory Transformative
<u>A Summary of Three Kinds of Research Frameworks</u> (Adapted from Eisenhart, 1991)		
<p>1. <u>Theoretical</u>: <i>A skeletal structure of explanation</i></p> <ul style="list-style-type: none"> - Relies on formal theory, i.e. it is "...constructed by using an established, coherent explanation of certain phenomena and relationships..." (Eisenhart, 1991, p. 205); - <i>Signing up</i> to an established theory means the researcher is bound by the conventions of argument and experimentation associated with the theory. 	<p>2. <u>Conceptual</u>: <i>A skeletal structure of justification</i></p> <ul style="list-style-type: none"> - "...An argument that the concepts chosen for investigation/interpretation, and any anticipated relationships among them, will be appropriate and useful, given the research problem under investigation..." (Eisenhart, 1991, p. 209); - In common with Theoretical frameworks, the framework may be "...based on different theories and various aspects of practitioner knowledge, depending on exactly what the researcher thinks (and can argue) will be relevant and important to address about a research problem, at a given point in time and given the state-of-the-art regarding the research question (Eisenhart, 1991, p. 209); - Unlike either theoretical or practical frameworks, these frameworks "...are not constructed of steel girders made of theoretical propositions or practical experiences; instead they are like scaffoldings of wooden planks that take the form of arguments about what is relevant to study and why..." (Eisenhart, 1991, pp. 210 – 211). 	<p>3. <u>Practical</u>: <i>A skeletal structure of accumulated knowledge</i></p> <ul style="list-style-type: none"> - Research problems that focus on "...problems that really pay off for practitioners" (Eisenhart, 1991, p. 207); - Not informed by formal theory but by the accumulated practical knowledge (ideas) of practitioners and administrators, the findings of previous research and often the viewpoints of politicians and public opinion; - Research hypotheses and questions derived from this knowledge base - Research results used to support, extend and revise the practice.

As argued in the thesis (Lysaght, 2009), linkages made between the three research paradigms and the three research frameworks in Table 2 were intended to be loosely interpreted; they did not (nor do not) represent a *direct fit*. Rather, it was intended that they would indicate, broadly, how theoretical and conceptual frameworks may differ and how these differences typically reflect contrasting philosophical and methodological persuasions. Moreover, they sought to signal the link between current calls for some sort of rapprochement between these paradigms and the early work of Eisenhart (1991) who highlighted the implications of adopting particular paradigmatic approaches for the design of research studies. It was argued that these issues have particular currency for research studies of the kind undertaken by the Author given the relentless demand from policy-makers for evidence-based research, premised on the belief that the success of education policies depends on the availability of warranted, scientific knowledge about how to improve instruction. As explained, with reference to Raudenbush (2005):

...Causal effects of instructional interventions belong at the heart of the current policy research agenda in education and... randomized experiments are the best way to warrant these effects.... However,... such experiments are insufficient to achieve the aims of this agenda.... A knowledge gap needs to be addressed so that educators can act on incentives and use resources in ways that will supply students with coherent and effective instruction. It follows that identifying, testing, and warranting the effectiveness of strategies for instruction is currently the central task of applied research in education. (pp. 26-27)

Equally, it was acknowledged that the search for warranted interventions and/or evidence-based teaching and learning strategies presents education researchers with formidable design challenges that pivot around the issue of how evidence is to be constructed and understood. Quoting Cochran-Smith (2006), it was emphasised that:

...The danger is a too narrow version of evidence grounded in “scientific research” as causal studies only... (*when, what is required is*) ...a perspective on evidence that includes but is not limited to clinical trials and a broad and inclusive view of science that includes but is not limited to the investigation of causal questions.... Perhaps this could be along the lines of... a “postpositivist” perspective on science that incorporates experimental research as well as qualitative research, with the latter accepted on its own terms rather than forced into an overarching framework governed by the assumptions of the former. (p. 11)

As argued (Lysaght, 2009), this argument complements the call by Eisenhart (2005) for a “science plus” approach to education research, based on the rationale that “...qualitative studies are likely to offer more, not less, than quantitative studies to scientific research in education” (p. 55). Moreover, attention was drawn again to Cochran-Smith (2006) and her introduction of the term “evidence plus” to highlight the need for teacher education to be informed “...by a wealth of critical and theoretical enquiry... in particular, ...the large bodies of work that now exist about teacher learning in communities....” (p. 11).

Towards an Interpretive/Constructivist, Mixed Methods Framework

Drawing together the ideas of Leech and Onwuegbuzie (2007) on typologies of mixed methods research, with the concepts of “science-plus” and “evidence-plus” conceived by Eisenhart (2005) and Cochran-Smith (2006), the Author developed a research framework for the study shown in Table 3. Justification for this approach was derived from Eisenhart’s (2005) advice that:

In education, research must be practically relevant as well as scientifically proficient. The most elegant, sophisticated research designs can easily lead to naught if the results cannot be understood by practitioners, are not relevant to practice, or cannot be put into practice. (p. 57)

Table 3 sought to map the research undertaken, including the paradigms that framed each hypothesis, the variables considered prior to, and during, the intervention period and, finally, the outputs and insights gained. Closer examination of these elements, with respect to the hypotheses, was intended to show that the input and output variables used in Hypotheses 1 and 2 were readily quantifiable (in keeping with the quantitative approach employed) and yielded evidence associated with a scientific approach to research. In contrast, Hypothesis 3 focused on the process elements of the work that demanded a less *scientific* but equally rigorous set of instruments to provide complementary data (science/evidence plus).

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Table 3. *An Interpretive, Mixed Methods, Research Framework*

Hypotheses 1 and 2: Changes in children's Reading Ability, Motivation and AfL Practices Science/Evidence: Quantitative, Pre-Test/Post-Test Quasi-Experimental Design			
Theoretical Frame	Input	Process	Output
<p><u>A Skeletal structure of explanation</u></p> <p>Relies on formal theory, i.e. it is "...constructed by using an established explanation of certain phenomena and relationships..." (Eisenhart, 1991, p. 205). <i>Signing up</i> to an established theory means the researcher is bound by the conventions of argument and experimentation associated with the theory.</p>	<p><u>Pre-Intervention</u></p> <p>Children's reading achievement;</p> <ul style="list-style-type: none"> ✓ Standardised reading tests (MICRA-T; DPRT); <p>Children's motivation to read:</p> <ul style="list-style-type: none"> ✓ ERAS; <p>Children's AfL practices:</p> <ul style="list-style-type: none"> ✓ SAfLQ <p>Children's characteristics:</p> <ul style="list-style-type: none"> ✓ SEN ✓ Age ✓ Gender 	<p><u>Not Evaluated</u></p> <p>Children's classroom engagement with AfL strategies and techniques (video data)</p>	<p><u>Post-Intervention</u></p> <p>Children's reading achievement:</p> <ul style="list-style-type: none"> ✓ Standardised reading tests (MICRA-T; DPRT); <p>Children's motivation to read:</p> <ul style="list-style-type: none"> ✓ ERAS; <p>Children's AfL practices:</p> <ul style="list-style-type: none"> ✓ SAfLQ
Hypothesis 3: Impact of TLC-mediated, CPD on Teachers' AfL Knowledge, Skills & Attitudes Science/Evidence Plus: Qualitative, Situated Exploration and Evaluation			
Conceptual Frame	Context	Process	Insights
<p><u>A Skeletal structure of justification</u></p> <p>"...An argument that the concepts chosen for investigation/interpretation, and any anticipated relationships among them, will be appropriate and useful, given the research problem under investigation...". Unlike either theoretical or practical frameworks, these frameworks "...are not constructed of steel girders made of theoretical propositions or practical experiences; instead they are like scaffoldings of wooden planks that take the form of arguments about what is relevant to study and why..." (Eisenhart, 1991, pp. 209 – 211).</p>	<p>Micro:</p> <p>School Culture</p> <ul style="list-style-type: none"> ✓ Leadership ✓ Innovation <p>Challenges</p> <ul style="list-style-type: none"> ✓ Reading Achievement ✓ AfL Competence <p>Teachers' characteristics:</p> <ul style="list-style-type: none"> ✓ Teachers' assessment knowledge, skills & attitudes ✓ Age profile ✓ Teaching Experience ✓ Qualifications ✓ Efficacy ✓ Motivation ✓ Concerns 	<p>TLC-mediated CPD:</p> <ul style="list-style-type: none"> ✓ Knowledge <i>in practice</i> (rather than <i>for/of</i>) ✓ Situative Perspective ✓ Dual focus: Group = TLC; Individual = Adapted CBAM <p>Group focus:</p> <ul style="list-style-type: none"> ✓ 'Closing the gap' reviews of practice; videos <p>Individual Focus:</p> <ul style="list-style-type: none"> ✓ Teacher monthly reviews – Learning Logs 	<p>Dual Focus of Analysis:</p> <p>1. Group:</p> <p>Teachers' independent review of CPD</p> <ul style="list-style-type: none"> ✓ Content ✓ Process ✓ Context (including facilitator) <p>2. Individual:</p> <ul style="list-style-type: none"> ✓ Completion of & Reflection on personal learning logs - Efficacy ✓ Completion of & Reflection on personal SAfLAI

Guide to Acronyms Used:

- AfLAI: Assessment *for* Learning Audit Instrument
 CBAM: Concerns Based Adoption Model
 DPRT: Drumcondra Primary Reading Test
 ERAS: Elementary Reading Attitude Survey
 MICRA-T: Mary Immaculate College Reading Attainment Test
 SAfLQ: Scaled Assessment *for* Learning Questionnaire
 TLL: Teacher's Learning Log
 TVRS: Teachers' Video Review Sheets

Conclusion

Three imperatives guided the creation of the conceptual framework and research design employed in this work:

1. The belief that a researcher's choice of framework is not arbitrary but reflects important personal beliefs and understandings about the nature of knowledge, how it exists (in the metaphysical sense) in relation to the observer, and the possible roles to be adopted, and tools to be employed consequently, by the researcher in his/her work – all of which need to be made explicit;
2. Subscription to the view that "...epistemological and paradigmatic ecumenicalism is within reach" (Johnson & Onwuegbuzie, 2001, p. 15) and that mixed methods designs facilitate "science-plus" (Eisenhart, 2005) and "evidence plus" (Cochran-Smith, 2006) approaches to education in the social sciences;
3. The perceived need to meet Stokes' (1997) challenge of marrying the quest for basic understanding (rigor) - in this case an understanding of how learning in a TLC involves the recruitment and assimilation of diverse perspectives - with the need to inform and influence classroom practice (relevance) –in this case the formative use of assessment. Approaches adopted in response to this challenge were informed, in turn, by the on-going international debate on what constitutes good research and evidence in education (Cochran-Smith & Lytle, 1999; Eisenhart, 2005; Johnson & Onwuegbuzie, 2004; Leech & Onwuegbuzie, 2007) and, specifically, the need for warranted interventions and/or evidence-based teaching and learning strategies (Cochran-Smith, 2006; Raudenbush, 2005).

It presenting this paper, no claims are made about the appropriateness or value of the conceptual framework created or the research design employed. Rather, the paper is offered as a think-piece, or 'boundary object' to borrow a phrase from activity systems theory (Tsui & Law, 2007), to be discussed and critiqued by fellow researchers engaged in similar tasks.

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RELATIONSHIP BETWEEN THE EMOTIONAL INTELLIGENCE AND THE ACADEMIC ACHIEVEMENT OF THE PROSPECTIVE TEACHERS

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ABSTRACT

There has been a lot of research on the relationship between emotional intelligence and academic achievement. However, an important area that has evaded the attention of researchers is the relationship between the emotional intelligence with the academic achievement of the student teachers. The present study aims to fill that gap. To achieve the desired end, Wong & Law Emotional Intelligence Scale (WLIS) was used after some amendments according to the culture and environment. The scale was pilot tested and the reliability of the scale was 0.774 (Cronbach's Alpha). The sample for the study comprised of 200 student teachers enrolled in B.Ed. program at Government College for Elementary Teachers Gujrat. The scale was divided into five dimensions: self awareness, self management, social awareness, relationship management and over all. Data was coded, tabulated and analyzed using (SPSS-XV) in terms of mean, independent sample t-test and ANOVA. The analysis of data revealed that for the age group 20-23, there is a correlation between academic achievements on the one hand and social awareness and relationship management on the other while for the other age groups there is no correlation between the age groups and the different dimensions of Emotional Intelligence. There is no difference on WLIS in terms of age, gender or qualification. Among the students who have a BA or MA degrees, there is a correlation between academic achievement and relationship management. The study recommends that there is a need for more research in the area of emotional intelligence and teacher education.

Keywords: *Emotional Intelligence, Academic Achievement, Prospective Teachers, Gender, Qualification*

INTRODUCTION

Emotions are very well defined by James (1884). According to him emotions hoisted when the acuity of an exhilarating happening causes to some bodily changes, and whatever we feel about that change is called the Emotions. One of the latest concept associated with Emotional interpretation is the Emotional Intelligence that is defined by various experts and researchers in various ways according to their own perception, experience observation and insight. The term of Intelligence Quotient (IQ) is now go back to the screen and one of the most upcoming concept of Emotional Quotient (EQ) that may be called as the degree of Emotional Intelligence is making a powerful influence on the disciplines of psychology and education as well.

By exploring the history of the term of emotional Intelligence we can discover that It was for the first time in 1990 when Salovey and Mayer have used the term of emotional intelligence in their paper by defining the term as an ability to understand the emotions of a person's own self and the people around (Mayer and Salovey, 1990). Goleman was the person who gave an unlimited fame to this concept by a publication titled "Emotional Intelligence". He explained the term of Emotional Intelligence by defining it as: An ability of being motivated; Ability to face the state of frustration; mood regulation; control on the inner self and feelings; and to make the person an optimistic one. In 1995, Goleman have titled the phenomenon of Emotional Intelligence as the most powerful indicator subsequent to Intelligence Quotient for a person's success in performing some task (Goleman, 1995). Goleman (1998) has proposed a model for Emotional Intelligence. He has presented four domains of Emotional Intelligence: Self Awareness; Self Management; Social Awareness and Relationship Management.

- Self Awareness is such an aspect or state of mind in which a person clearly knows what he/she is going from or feeling. Mayer and Salovey (1994) used the term meta-mood for this state of mind. Many researcher has described that the sense of Self Awareness leads towards Self-Confidence and the level of the phenomenon of Self-Confidence one of the stronger and powerful predictor of a person's performance as compared to the skills and training previously acquired (Saks, 1995). Another Study made by the Holahan and Sears in 1995 have concluded that the worker possessing self-confidence during their early years of job experience it till their retirement (Holahan & Sear, 1995).
- Self Management is the ability of a person to regulate him/herself during the feelings of anxiety, frustration, anger etc., which may lead towards the negative thinking (Davidson, Jackson and Kalin, 2000).
- Social Awareness is the third domains in the model presented by Goleman (1998). This component of emotional intelligence covers the proficiency, competency and capability of Empathy.
- Relationship Management may be called as social skill which has presented the most complex picture. Damasio (1994) concluded that Empathy and Self-management collectively provide the base or foundation to the Relationship Management aspects of human training.

Goleman (1998) has presented a framework of Emotional Competencies. He has related four domains of Emotional Intelligence (Self Awareness; Self Management; Social Awareness and Relationship Management) with a person's Personal and social competence. He has concluded that the first two domains of Emotional Intelligence, Self Awareness; Self Management are related to a person's Personal competence whereas the third and fourth domain of Emotional intelligence are closely related to a person's social aptitude.

The concept of Emotional Intelligence is the latest one in the field of social sciences and education. Emotional intelligence is related to a number of factors in education such as job satisfaction, psychological well-being, academic performance as well as job performance (Baron, 1997 & 2005; Adeyemi & Adeleye, 2008; Salovey & Mayer, 1990). The concept of Emotional Intelligence is closely related to students' academic achievements (Salami &

Ogundokun, 2009; Salami, 2004; Salami, 2010; Wong, Wong & Chau, 2001). Mayer & Salovey (1997), Nasir & Masrur (2010) and Naoreen and Gujjar (2009) have highlighted that emotional intelligence is significantly correlated with the academic achievement of the students as well as of the perspective teachers. Ramazan, Gujjar & Ahmad (2011) have concluded that there is no significance relationship between Emotional Intelligence and Academic Achievements of the students so have presented the findings that Emotional Intelligence is not a predictor for students Academic Achievements.

The present study was based on the model proposed by Goleman (1998). His model has presented four domains of Emotional Intelligence, Self Awareness; Self Management; Social Awareness and Relationship Management. An overall dimension of Emotional Intelligence was also added. The aim focus of the study was to investigation the relationship between Emotional Intelligence and academic achievement of the perspective teachers.

METHODOLOGY

Following methodology was adopted for the study.

Population and Sampling

200 student teachers enrolled in B.Ed. program at Government College for Elementary Teachers Gujrat was randomly selected for the purpose of data collection.

Tool and Pilot Study

Wong & Law Emotional Intelligence Scale (WLIS) was used after making some amendments according to the local culture and environment. For the purpose of the tool validation, experts in the field of Psychology and Education were contacted to give their valuable suggestions for improvement purposes. For ensuring the reliability of the tool pilot study was done. The degree of reliability of the amended scale was 0.774, checked through Cronbach's Alpha on SPSS.

DATA ANALYSIS

Data was analyzed by using SPSS-XV.

Table 1: Academic Achievement and Different Dimensions of Emotional Intelligence of Prospective Teachers

Academic Achievement and Dimensions of Emotional Intelligence	N	Pearson Correlation	p-value
Academic Achievement and Self-awareness	200	.058	.745
Academic Achievement and Self Management	200	.056	.259
Academic Achievement and Social Awareness	200	.023	.543
Academic Achievement and Relationship Management	200	.059	.234

Academic Achievement and Overall Emotional Intelligence Score	200	.045	.756
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N= Number of Respondents

Table 1 shows that there is no significant relationship between Academic Achievement and different dimensions of Emotional Intelligence (Self Awareness, Self Management, Social Awareness, Relationship Management and overall) of Prospective Teachers.

Table 1: Correlation Statistics among Academic Achievement, Age of the Respondents and Different Dimensions of Emotional Intelligence

Pairs	Age	N	Pearson Correlation	p-value
Academic Achievement vs. Self-awareness	20-23 Years	125	.152	.234
	24-27 Years	40	-.156	.195
	28 and Above Years	35	-.182	.372
Academic Achievement vs. Self Management	20-23 Years	125	-.175	.467
	24-27 Years	40	-.125	.579
	28 and Above Years	35	-.110	.571
Academic Achievement vs. Social Awareness	20-23 Years	125	.198	.021*
	24-27 Years	40	-.061	.431
	28 and Above Years	35	-.398	.215
Academic Achievement vs. Relationship Management	20-23 Years	125	.199	.012*
	24-27 Years	40	.079	.689
	28 and Above Years	35	-.285	.295
Academic Achievement vs. Overall Emotional Intelligence Score	20-23 Years	125	.192	.313
	24-27 Years	40	-.155	.616
	28 and Above Years	35	-.280	.179

*p<.05, N = Total number of Respondents

Table 1 shows that there is a significant correlation between Academic Achievement and two dimensions of Emotional Intelligence, Social Awareness and Relationship management in terms of age group 20-23 of the prospective teachers. Rest of all the age groups of Prospective Teachers has no significant correlation with Academic Achievement and different dimensions of Emotional Intelligence.

Table 2: ANOVA Statistics of Age of the Respondents and Different Dimensions of Emotional Intelligence

		Sum of Squares	df	Mean Square	F	Sig.
Self Awareness	Between Groups	86.118	2	28.706	1.093	0.353
	Within Groups	5145.702	197	26.254		
	Total	5231.820	199			
Self Management	Between Groups	15.904	2	5.301	0.345	0.792

Self Management	Between Groups	15.904	2	5.301		
	Within Groups	3007.651	197	15.345		
	Total	3023.555	199			
Social Awareness	Between Groups	27.957	2	9.319	0.472	0.702
	Within Groups	3871.163	197	19.751		
	Total	3899.120	199			
Relationship Management	Between Groups	40.450	2	13.483	1.312	0.272
	Within Groups	2013.550	197	10.273		
	Total	2054.000	199			
Over All	Between Groups	138.526	2	46.175	0.279	.840
	Within Groups	32405.349	197	165.333		
	Total	32543.875	199			

df = Degree of Freedom

Table 2 shows that there is no significant correlation between age of the respondents (20-23, 24-27, 28 and above years) and different dimensions of Emotional Intelligence (Self Awareness, Self Management, Social Awareness, Relationship Management and overall).

Table 3: Group Statistics of Gender and Different Dimensions of Emotional Intelligence

	Gender of Respondents	N	Mean	S.D	SEM	df	t-value	p-value
Self Awareness	Male	45	19.4375	5.04623	.56419	198	0.073	0.942
	Female	155	19.4917	5.20180	.47486			
Self Management	Male	45	17.3750	4.07019	.45506	198	1.366	0.174
	Female	155	18.1417	3.76471	.34367			
Social Awareness	Male	45	21.4625	3.97442	.44435	198	0.410	0.682
	Female	155	21.7250	4.71715	.43061			
Relationship Management	Male	45	14.8125	3.34926	.37446	198	.763	0.446
	Female	155	14.4583	3.12457	.28523			
Over All	Male	45	73.0875	11.75724	1.31450	198	0.394	0.694
	Female	155	73.8167	13.47203	1.22982			

N = Total number of Respondents, S.D = Standard Deviation

SEM = Standard Error of Mean, df = Degree of freedom

Table 3 shows that there is no significant correlation between the Gender of the respondents and different dimensions of Emotional Intelligence (Self Awareness, Self Management, Social Awareness, Relationship Management and overall).

Table 4: Correlation Statistics among Academic Achievement, Gender of the Respondents and Different Dimensions of Emotional Intelligence

Pairs	Gender	N	Pearson Correlation	p-value
Academic Achievement vs. Self-Awareness	Male	45	-.186	.099
	Female	155	.091	.321
Academic Achievement vs. Self Management	Male	45	-.160	.157
	Female	155	-.040	.668
Academic Achievement vs. Social Awareness	Male	45	.049	.666
	Female	155	.061	.509
Academic Achievement vs. Relationship Management	Male	45	.072	.528
	Female	155	.073	.431
Academic Achievement vs. Overall Emotional Intelligence Score	Male	45	-.098	.387
	Female	155	.062	.499

N = Total number of Respondents

Table 4 shows that there is no significant correlation between Academic Achievement and different dimensions of Emotional Intelligence (Self Awareness, Self Management, Social Awareness, Relationship Management and overall) in terms of Gender of the respondent.

Table 5: Group Statistics of Qualification of the Respondents and Different Dimensions of Emotional Intelligence

		Sum of Squares	Df	Mean Square	F	Sig.
Self Awareness	Between Groups	13.216	3	4.405	0.165	0.920
	Within Groups	5218.604	196	26.626		
	Total	5231.820	199			
Self Management	Between Groups	23.406	3	7.802	0.510	0.676
	Within Groups	3000.149	196	15.307		
	Total	3023.555	199			
Social Awareness	Between Groups	114.788	3	38.263	1.982	0.118
	Within Groups	3784.332	196	19.308		
	Total	3899.120	199			
Relationship Management	Between Groups	29.435	3	9.812	0.950	0.418
	Within Groups	2024.565	196	10.329		
	Total	2054.000	199			
Over All	Between Groups	138.670	3	46.223	0.280	0.840

Within Groups	32405.205	196	165.333
Total	32543.875	199	

df = Degree of Freedom

Table 5 shows that there is no significant correlation between the Qualification of the Prospective Teachers (B.A, B.Sc, M.A and M.Sc) and different dimensions of Emotional Intelligence (Self Awareness, Self Management, Social Awareness, Relationship Management and overall).

Table 6: Correlation Statistics among Academic Achievement, Qualification of the Respondents and Different Dimensions of Emotional Intelligence

Dimention	Qualification	N	Pearson Correlation	p-value
Academic Achievement vs. Self-Awareness	B.A	155	.015	.245
	B.Sc	15	-.145	.467
	M.A	25	.081	.234
	M.Sc	5	.147	.764
Academic Achievement vs. Self Management	B.A	155	-.222	.123
	B.Sc	15	-.049	.764
	M.A	25	.111	.567
	M.Sc	5	-.142	.943
Academic Achievement vs. Social Awareness	B.A	155	.234	.234
	B.Sc	15	-.156	.654
	M.A	25	-.160	.267
	M.Sc	5	.125	.876
Academic Achievement vs. Relationship Management	B.A	155	.296	.032*
	B.Sc	15	-.237	.718
	M.A	25	.148	.004**
	M.Sc	5	.165	.643
Academic Achievement vs. Overall Emotional Intelligence Score	B.A	155	.159	.765
	B.Sc	15	-.156	.122
	M.A	25	-.265	.884
	M.Sc	5	.128	.456

*p<.05, **p<.01, N = Total number of Respondents

Table 6 shows that there is no significant correlation between Academic Achievement and different dimensions of Emotional Intelligence (Self Awareness, Self Management, Social Awareness, Relationship Management and overall) in terms of the Qualification of the Prospective Teachers. Except the degree of correlation sorted out from the Prospective teaches with the qualification of B.A and M.A was significantly correlated with the fourth dimension of Emotional Intelligence that is Relationship Management.

DISCUSSION

The research has covered an important area by finding out the relationship between Emotional Intelligence and Academic Achievement of the Prospective Teachers. There is no significant

relationship was found between Academic Achievement and different dimensions of Emotional Intelligence (Self Awareness, Self Management, Social Awareness, Relationship Management and overall) of Prospective Teachers. These findings are in line with the findings of the previous researches done by Mayer & Salovey (1997); Nasir & Masrur (2010); Naoreen and Gujjar (2009) and Ramazan, Gujjar, & Ahmad (2011) and are in contrast with Salami & Ogundokun (2009); Salami (2004); Salami (2010); Wong, Wong & Chau (2001).

This relationship was also sorted out in terms of Age (20-23 Years, 24-27 Years, 28 and above years), Gender (Male, Female) and Qualification (B.A, B.Sc, M.A, and M.Sc). The findings of the study divulged that there is no significant relationship between Academic Achievement and different dimensions of Emotional Intelligence (Self Awareness, Self Management, Social Awareness, Relationship Management and Overall) in terms of age of the prospective teachers. These findings are in line with the research findings explored by Mayer & Salovey (1997); Nasir & Masrur (2010) and Naoreen and Gujjar (2009). Whereas the age group 20-23 showed significant correlation between academic achievements and two dimensions of Emotional Intelligence, social Awareness and Relationship Management. These findings are supported by the research findings investigated by Ramazan, Gujjar, & Ahmad (2011).

Gender was the second variable that was tested in contrast of Academic Achievement and different dimensions of Emotional Intelligence (Self Awareness, Self Management, Social Awareness, Relationship Management and Overall) of the Prospective teachers and no significant relationship was traced out. These findings are in line with the research findings presented by Nasir & Masrur (2010). They have also explored that Gender is not among the influential variables of Academic Achievement and Emotional Intelligence.

The Third variable that was tested in terms of Academic Achievement and Emotional Intelligence of Prospective Teachers was the previous Qualification of the Prospective teachers. The findings of the present study revealed that there is a significant correlation between Academic achievement and Relationship Management (fourth dimension of Emotional Intelligence) in terms of the Prospective Teachers holding the degrees of B.A and M.A as their previous qualification. These findings are supported by the research findings presented in a previous research done by Ramazan, Gujjar, & Ahmad (2011). On the other hand no significant relationship found between the other dimensions of Emotional Intelligence and Academic Achievement of the prospective teachers as far as their previous qualification is concerned.

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Witches in the Young Adult Fiction:
Between Cautionary Tale and the Historical Truth

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Witches in the Young Adult Fiction:
Between Cautionary Tale and the Historical Truth

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I am Tituba, you may not know anything about me but I can tell you I am probably the most famous witch in history – because I was one of the first to be accused as a witch in Salem village in 1692. I was put on trial, together with two other unfortunate women, but I was smart enough to confess! I confessed that I was a witch, whatever that meant in those days, and I survived!

My home was Bridgetown, Barbados, but later I was sold by Susanna Endicott to Samuel Parris, although she referred to me and my husband John Indian as her “jewels” and her “dearest friends” (Petry, 1964, p.5). We packed quickly and join the Reverend Parris on the Blessing bound for Boston in the Bay Colony. Later we discovered that Parris’ dream of becoming a minister in Boston did not materialize and we had to settle for the small village of Salem. My main duty was to take care of the sickly mistress, and two girls, their daughter Betsy and an orphaned cousin Abigail. Life was difficult enough in the harsh weather conditions, but not long after we settled down, the outbreak of some girls’ unknown illness escalated into a whirlwind, bringing out the deepest of man’s fears and the worst in our nature. The situation stormed completely out of control and people started to suffer – some sacrificed their lives, some their family, and some their names. I, being an outsider twice over, was inevitably caught up in it, and it took me the last drop of effort to get out of the mess relatively unharmed. Believe me when I say that I was not proud to have the need to lie, but the public confession gave me what I needed, and the foolish people in charge of the trials did not seem to care too much whether I was telling the truth or not. So I did my best to give them what they wanted, and I saved my own life!

By now you should have recognized what I am talking about. Yes, the unfortunate incident was The Salem Witch Trials (1692-1693), which happened more than 300 years ago. And I, Tituba, confessed witch, am talking to you now. Does it mean that their accusation and my confession were both right? That I am genuinely a witch and my power allows me to move beyond the constraints of time and space? Well, I am not going to discuss the fine distinctions between names such as witch,

healer, medium, barefoot doctor, or even the devil's servant now. The simple answer to why I am here still is simply that you won't let me die. Yes, you people, won't let me, or my fellow sisters, die. We live in your hearts – the historical event at Salem had come to an end long ago, and there had not been any more witch trials in the world after this event, but somehow you refuse to let us go. On the one hand you people made every effort to seek us out, condemned our existence in the name of God and banished us from any decent society, but deep in your hearts you are secretly fascinated by me and my kind because you don't have the same wisdom and power as we do. We can read nature like a book, and communicate with the smallest elements in nature. We know the sentiments of the flowers, the work of the insects, the will of the winds, and the emotions of the water. And we are not afraid to celebrate life lived in the midst of these natural elements. But you people insisted on a grim picture of living, as if you were afraid that once you celebrate life, it would be taken away from you. I can assure you that the life that you think you were living was no temptation to me, and I would not trade anything in the world for your life. You could have it all to yourself.

In fact, you are so fascinated by people of our kind that almost every year some books, verses, play scripts, or pictures will come out talking about us, about the terrible mistake that you called The Salem Witch trials. Don't you know that I can read you like a book? You know very well that the outbreak in 1692-1693 was only an inevitable release of the fears and anxiety repressed for too long, and you had no idea how to handle it. The trials, and the so-called witch tests (i.e. the pin test, the touch test, the specter test, the devil's mark, and the test of saying the lord's prayer) were laughable attempts to instill some semblance of discipline and authority in the court when the accusing girls put themselves on exhibition shouting and wriggling on the floor as if that was their performance stage. And meanwhile you were hoping that the girls' thirst for drama and attention would expire soon, and the accusation would stop at some point before everybody was dragged to the court to make false confessions.

You think that because I was a woman, a slave, and I confessed, that I really felt guilty of the crimes those wicked little girls accused me of? I told them stories about life in Barbados, I taught them to look into water, and I read cards for them because I pitied them. Poor things, to live in such harsh weather, not to be allowed any fun at all in their lives, and all cooped up in this small place working like slaves, and taught to hate the sinner in themselves, was too much for them. So I gave them some entertainment, something to look forward to and something to dream about at night.

I was only trying to maintain their sanity and basic human dignity – otherwise they would soon have forgotten that they were human!

But I don't really need to tell you this, right? You know very well that it is the same human need for meaning, the need to make sense not only of the world we live in but also ourselves, that spurs writers and historians from all around the world to keep our story alive these three hundred years. The new books still coming out every decade either offer a learned explanation of the cause of the whole event or to use the same historical setting to tell some rewritten human tales of love and hatred, life and death, and the past and present are the best proofs that we know The Salem Witch trials embody some fundamental human drama. Although the people involved in the incident were just ordinary people, their situations, their dilemmas echo across time and space and finds identification in peoples hundreds of years away. Even when times change, when social and cultural situations are different, human beings are still haunted by the same problems and found themselves landed in the same collective fear. Arthur Miller, for example, was perceptive enough to see that although witches like us are no longer part of the 20th century American society, the hunt for witches has in fact never stopped. *The Crucible* (1952) and its subsequent dramatic productions and filmic adaptations show us very clearly that modern society is still haunted by problems that are hundreds of years old.

Yet admitting the continual existence of old problems does not have to mean giving up or proclaiming defeat. Maryse Conde's novel *I, Tituba, Black Witch of Salem* (1986) was a breath of fresh air, not only because it was the rare novel featuring me as the protagonist but also because of its liberating ideas. While I was usually the most marginal character in stories of this puritan colony, in Conde's novel I was allowed to open my mouth and speak for myself. Oh, how refreshing it was to be able to speak! To be able to tell what I see and what I hear, sometimes things so obvious that I wonder if you people are quite blind and deaf, makes my life much more tolerable because I feel alive. I speak of our fears, I speak of our desires, and I speak of the many ways of fulfilling our desires beyond the permitted channels. I was imprisoned but I felt liberated, with Hester by my side. Because of my liberating words, free souls composed songs in my honour and the lyrics kept me and my spirit alive even when my mortal life came to an end.

So this is how come I am still here talking to you. While my supposed witch power does not make me immortal, your continual fascination with us whom you label as witches, and our wisdom, grant us immortality in your efforts to keep us current in

your cultural products. Every known personality in the original trials, be they accusers or accused, young or old, were given a new life many times over in the novels written of the incident. The accusations, the attempted defense, the drama of conflict inside and outside the court, and the judges' hopelessness in the face of these indefensible yet dubious crimes were all rewritten, refocused and re-sequenced in the fictional stories written in these three hundred years. Into the 21st century, novels about The Salem Witch trials have a new common trend, which is a historical and personal consciousness of being linked to the incident that took place more than three hundred years ago. Contemporary fiction fully recognizes the time-gap between our age and that of Salem Village, but it also consciously extends a hand to the past and tries to find a narrative from a different angle, or about a different personality, that can mean something to us as individuals or a collective now. Thus we see novels published in the recent decade feature a young person, usually a woman, who through deliberate or accidental encounter, stumbles into some (secret) records by people related to the witch-hunt, and after some investigations, comes to claim a nearly hereditary/maternal connection between herself and the foremother whose record she has discovered and studied. It is interesting that despite the many progresses in almost all aspects of life, the 21st century literary outputs still exhibit a sentiment of being lost and needs to claim an identity in relation to a past. The historical events become points of orientation for the wandering present, just as the young protagonists in the novels seek to find themselves in the mothers who were engraved in history and who left, in their secret diaries and hidden writing, a pool of thoughts and feelings which the younger generations seek to follow and to identify with. This literature written in the aftermath of The Salem Witch trials discloses a yearning for the wisdom as exhibited by the women who had been accused to be witches three hundred years ago. It is like daughters trying to find strength in the mother's stories, although the mothers had been condemned as having violated the permissible code of behavior and being the impermissible beings.

While the adult book market shows a favour for the historical elements of the witch trials, and then recently a tracking down of the historical mothers and her sense of self in the face of mortal danger, the teenage book market similarly shows a shift in the focus of attention in fictional texts produced at different times. The "magical" approach of the current 21st century young adult literature using The Salem Witch trials setting can be easily explained as responses to the magic following created by the Harry Potter stories where teenagers with the power of magic are the main characters in the stories. But even before the Harry Potter phenomenon, the Salem Witch Hunt lent itself pretty readily to adaptations as teenage fiction because many of

the major players in the incident were teenagers. Although I quite frequently found myself featuring in adult's fiction set in 17th century Salem, very often as the marginalized servant of the house, sometimes as the simpleton who was only fit to be a companion to the stupid giggling girls, and usually just a token black character who had been a natural choice to blame when witchcraft was suspected; I did not see myself so much in the teenage fiction. In teenage fiction the main focus is on the teenage characters – whether the rewritten Salem story is a serious attempt to render the historical moment of Salem on fire in the 17th century or whether the contemporary writer is only interested in borrowing the setting and the complex network of human relationship for dramatic or didactic purposes. In other words, the teenage fiction in the aftermath of The Salem Witch trials gives a very different feeling from those of the adult fictions. It is a world inhabited by teenagers, and adults are either the cause of their problems, or are there to stop them from finding solutions to their problems.

But there is one particular young adult story which I like very much because I was there, not only in the plot development, but moreover in the title! Ann Petry's *Tituba of Salem Village* (1964) gives me a description the depth of which unsurpassed by any other teenage fiction of the same subject matter. Although it does not give me the first person control of the narrative as in Conde's *I, Tituba, Black Witch of Salem* (1986), I was gratified by not only the amount of attention Petry has given me, but also her effort in making me a rounded person and not just a slave woman who falls as an early victim in this chaotic human drama of fear and accusation. Besides this kind of attentive rendition of the historical event, there are also tales of teenage growth and development loosely referring to The Salem Witch trials as the background to facilitate the unfolding of the bildungsroman. *The Witch of Blackbird Pond* (1958) by Elizabeth George Speare is such a tale. The story is set in "the cold, bleak shores of Connecticut Colony" (Speare, 1958, backcover), with the main protagonist a teenage girl escaping from an arranged marriage in the "shimmering Caribbean Islands" to go seek her aunt in the puritan town of Wethersfield. Her visit, itself shocking enough as she was alone and the trip unannounced, found the town in a moment of outcry of witchcraft accusations. Kit the girl found her independence and free spirit painfully challenged by the narrow-mindedness and the puritanical practices of the town. Although Kit's story happens away from the limelight of the main actions of The Salem Witch trials, her experience touches on exactly the same issues as present in the trials. In the following I will discuss these two mid-20th century teenage novels from my position as an actual participant in the Salem Crisis, to try to analyze the uses that posterity has

made of the historical event after so many years.

Although I call it a teenage novel freely, Petry's work is more than a teenage fiction showcasing common problems felt by teenagers of different times. Trudier Harris raises the issue of its classification in "Before the stigma of race: Authority and witchcraft in Ann Petry's *Tituba of Salem Village*,"

"Is it an historical novel, an adolescent biography, or simply a novel that evolved from a historical tidbit, . . . Even Ann Petry has at times seemed to waver in the classification. In autobiographical statements, as well as in critical commentary on her works, she has referred to the book as an "historical novel." She has also called it a "researched biography" and discussed it in several places as a children's book". (Harris, 1997, p.106)

Although finally it was marketed as a children's book, Petry's attempt to make the story as much historically accurate as possible within the framework of the tale has been noted by many readers and critics.

My story, however, cannot be told as a straight-forward narrative as usually done in the case of a historical figure whose life is well-known, for although I was one of the first to be accused, not much about my life was recorded in the copious records of the trials. Petry's daughter recalled that,

"*Tituba of Salem Village* came about by another sort of "accident." The story of the woman from Barbados, who was blamed for starting the hysteria that led to the Salem witchcraft trials, began when mother's editor at Thomas Y Crowell asked her to write about Samuel Sewall, one of the judges who convicted and condemned to death a number of witches, then recanted". (Petry, 2009, p.87)

But when Ann Petry started doing research about the Salem hysteria, her attention was drawn to me the slave woman, she recorded in an undated draft of speech that "I knew then that I was not interested in writing a book about judge Sewall that I had to write a book about Tituba, one of the people caught up in the Salem witchcraft trials, unlike the others in that she was a slave". (Petry, 2009, p.88)

Ann Petry had a special perception about slaves, as she wrote in a draft of a speech that,

"If there is an underlying idea behind the books that I wrote about slaves its origin lies back all those years ago when I was in high school. . . .both of these books present slaves as people of courage, integrity, determination, committed to the idea of freedom – human beings". (Petry, 2009, p.29)

I am more than happy that the writer Petry took this approach, for it was time to take a

break from all those stereotypical brief mention of me as the silent and cowardly slave who did just about everything I was told to. Petry's approach inevitably contains her own agenda of presenting the thoughts and feelings of a slave woman who was almost heroic in a certain situation, and to a certain extent it compromises the factual accuracy of my origin. Morsberger in *The New England Quarterly* commented on my transformation in the hands of different writers:

“Chadwick Hansen documents the process by which Tituba and her husband John Indian, ... were metamorphosed from Carib Indians to half-Indian and half-black to voodoo-practicing negroes, with increasing defamatory characterizations which, he says, justify some black militants' accusations of racism. The next logical step in historical revisionism is for Blacks to adopt Titbua and turn her into a heroine of their race”. (Mosberger, 1974, p.456)

And my story, as told in Petry's *Tituba of Salem Village*, is doing exactly this, according to Mosberger.

While there were critics not entirely happy with these transformations of myself, some did congratulate Petry on her rendition of me as:

“a sturdy, indestructible, and wonderful part of America, woven into its heart and into its soul. ... and in the process she gives the African-American novel its first realistic rendering of Caribbean consciousness”. (Rahming, 2003, p.25)

As Petry (and some other writers) had never claimed that the stories they wrote were my biography, I did not think too much about the accuracy of details in that respect. What is more important to me, as someone being repeatedly mentioned and described, is to get out of the two-dimensional descriptions, and to be able to show people a richer picture of who I am. Petry had chosen to present me as an overwhelmingly down to earth and sensible woman who was intelligent and capable enough to be a good house-servant and a responsible wife. Instead of focusing on the acts of witchery that I allegedly had performed, Petry allowed me to explain in various situations that what seemed to be results of witchcraft could have very common sense explanation. Those who could not see these explanations were either too foolish to recognize their validity, or too prejudiced to allow these opportunities of accusation and revenge to go away.

It was the same with the girls and the other accusers. Anyone with eyes could see that the first to make accusations were bound girls and boys, those who inhabited the lower rungs of the social ladder, and those who had no way of relieving their accumulated grievances. Later other accusers who joined all had an interest in seeing the accused being hurt and stripped of their usual privilege. I thought it was

crystal clear that the accusations were too convenient, but no one seemed to care before more people, and more “ordinary” people who had no idea what witchcraft was, were sent to be hanged because they were accused of practicing it. As for the trials at court and the tests that supposedly would expose the witches, I really could not find anything more absurd. Of course I did confess that I was a witch at the end, but it was only because Samuel Parris was beating me hard, and I said those words to stop his actions. When the girls were allowed to point their fingers at anyone they wanted and made all sorts of baseless accusations, how much weight was there left in words? I could confess and I could take back the words if I like, as long as I know what I am doing. Petry had chosen the witch hunt as the setting, but there was no magic, no witchcraft, and no devil – instead the teenage novel celebrates good sense, integrity, understanding, and a sense of personal identity.

The Witch of Blackbird Pond (1958) was a very different kind of story from Petry’s, for not only was it not set in Salem, the “witch” in the title was not an important player in the story, and the business of accusation and confession regarding witchcraft was no match to the aggression seen in Petry’s story.

Young Kit Tyler took the ship *Dolphin* from the Caribbean to the small town Wethersfield, of the Connecticut colony area all by herself, to seek her aunt Rachel. Her visit was unannounced, for she was escaping from an arranged marriage after her grandfather, who was her guardian, failed his business. While her sudden appearance at the door of her puritan uncle Matthew was shocking, Kit herself was also in for a terrible shock when she came into the experience of life at the puritan household. Even on board of the *Dolphin*, Kit had begun a journey of personal maturity and understanding that was to gain momentum at her aunt’s place, which was in the midst of a puritan community quite the opposite of the sunshine and freedom she had enjoyed in the Caribbean.

It was a bildungsroman with a 17th century setting, where witches and witchcraft were at the periphery. The titular “hero”, the witch living beside the Blackbird Pond with her cats, was an old widow called Hannah Tupper, who kept to herself, and who was half-conscious most of the time because she was in deep mourning for her dead husband. We did not see any witchery from Hannah, and in fact she had to rely on Kit’s help when the people decided to burn her house and chase her out of the community. Kit Tyler the young heroine was also accused of being a witch, but the ferocity of the accusation was no match to that of the wicked girls in Salem Village in Petry’s novel. She was accused of being a witch mainly because she demonstrated

that she could swim, she was willful, and she “captured the heart” of young men – by her bewitching charm, if you like. Although she had to defend herself in court, the evidence supporting the accusation was much more benign and people’s attitude to it much more lenient. Because the people in Wethersfield did not like strangers, Kit really had to earn her acceptance into the community, which she did not try hard enough at the beginning. People complained of strange behavior from Kit, and one mother accused Kit for bewitching her daughter, because of the young girl’s slowness in learning and simple-mindedness. Luckily, the magistrate and in general the public were sensible enough to distinguish what was witchcraft and what was not. When the girl demonstrated in front of all that she had learned how to read and write from Kit Tyler, the cynical mother was the only person to shout, “The child is bewitched!”. The proud father stopped her senseless exclamations and addressed the court:

“All my life I’ve wished I could read. If I’d had a son, I’d of seen to it he learned his letters. Well, this is a new country over here, and who says it may not be just as needful for a woman to read as a man? Might give her summat to think about besides witches and foolishness. Any rate, I got someone now to read the Good Book to me of an evening and if that’s the work of the devil, then I say ‘tis a mighty queer thing for the devil to go working against himself”!
(Speare, 1958, p.221-2)

It was a very commonsensical way to look at and accept the incident. In fact, most of the “problems” in the story were resolved with the same common sense, good grace, and practical intelligence. Mercy the sickly cousin of Kit learned to be honest with her feelings and finally accepted John’s proposal of marriage, Judith the pretty cousin learned that she was not the centre of the universe and finally she won William Ashby’s attention (William was the son of the richest family in Wethersfield), and Kit had learned through hard work and persistence the really important things in life, when Nat the free-spirited sailor came to ask for her hand. She was completely different from the willful, self-centred and naïve girl who brought all her fineries from her grand house to puritan Wethersfield. At the end of the story, all was well and common sense ruled. In fact, the only “witchcraft” that had been performed in this story was human understanding, determination, and a belief that a good future was created by hardwork and persistence. All the major characters who believed in hardwork and common sense came to a good end at the closure of the story. It is a story very close to my heart for I share the same belief.

Ladies and gentlemen, I believe I have said what I wanted to say. The unfortunate Salem Witch Hunt had caused a lot of damage to people living at the time and even to

posterity. But we also have the good sense not to forget and keep reminding ourselves our own weaknesses through repeated revisiting of this historical incident. Some seek to understand the human psychology which led us into such trouble by imagining ourselves in the shoes of the people involved. Others invent “hidden diaries” victims of the trials to remind us of the resilience and dignity of human life. For teenagers, this historical event has been re-created into narratives offering a good opportunity for reflection because of the part played by young people – how they responded to their immediate environment, how they sought relief for their discontents, how their actions had an impact on other people’s lives, and finally whether there were alternative ways to resolve their problems. The two books I shared with you had made different stories from the rather unfortunate Salem event (and one does not even feature me!), but finally in both cases, good sense and understanding triumph. Perhaps that is the most important guide to young readers after so many years.

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The Modern Kikokusei:
Connotations of Returnee English Maintenance and Usage in Modern Japan

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Abstract

The English language holds a dichotomous position within the Japanese education system and national psyche. As an academic subject it is an objectively measurable component of the education-examination system. As a language, English is seen as a tool to increase Japan's international standing in our ever shrinking, globalised world and a vessel for intangible notions of cosmopolitanism and global citizenship.

Returnees/Kikokusei have been the focus of numerous studies, and divided perceptions of these individuals as being less/more Japanese or more/less 'westernised' are giving way to more rounded interpretations of their status at trans-cultural or Third Culture Kids. However, have these lessons in learners' socio-cultural identity been learnt by educators and should these be applied more broadly to all English language learning settings?

Language is more than a communicative tool, it is part of a culture but that culture does not need to be drawn along national lines. In ascribing a nationally determined social identity to language learning and ability, many foreign and indigenous English language teachers emotionalise language. These perceptions weaken teachers' ability to objectively recognise applications of English apposite to the learner. We do not need to dicotomise learners' L2 selves as national or foreign, they can be 'a citizen of the world'. In embracing a more cosmopolitan interpretation of English as a global culture a socio-cultural negotiation of learners' L2 selves can occur. Learners are empowered to set their own language learning goals and determine their place in the global community, not only that of their language educators

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The Modern Kikokusei: Connotations of Returnee English Maintenance and Usage in Modern Japan

The English language holds a dichotomous position within the Japanese education system and national psyche. As an academic subject, English is a fundamental component of university entrance exams. The omnipresence of these exams permeate all aspects of middle and secondary education, creating an “educatio-examination system” (Mc Veigh 2002: 41) dependent on objective and measurable linguistic ability to ferry the brightest into and beyond tertiary education. As a communicative language, English is seen as a tool to increase Japan’s international standing in our ever shrinking, globalised world. Although homogeneously minded, with a foreign population of less than 2%¹ (Tsuneyoshi. 2004: 61), Japan has still experienced globalisation in the forms of business and what has been termed an “internal internationalisation” (Tsuneyoshi. 2004: 54). English embodies quixotic ideals of self-cultivation, edification, cosmopolitan lifestyle (Mc Veigh 2002: 41) and the problematic concept of internationalism that promises greater global acceptance whilst agitating nationalistic sentiment that English may be a vessel for the diluting of a proud culture.

For those who accompany family members transferred to English-speaking countries, English becomes a means of surviving in a new environment; what was a sterile communicative code becomes a living language, imbued with its own cultural identity. When these nomads return to Japan the language’s purpose becomes less obvious. The complex nature of Japan’s relationship with the wider world means that English, as representative of the world beyond Japanese borders, and an overt proficiency in the language provokes immoderate opinions and reactions. Those who experience these most acutely are *kikokusei* or returnees, who are Japanese that have acquired both language competency and frequently an alternative sociocultural perspective during their family’s sojourn. Caught between contrasting societies, *kikokusei* become representative of the Japanese dilemma of nationalism confronting internationalisation. They are victims of their linguistic success, perceived to be denouncing their heritage through their proficiency in and continued use of English.

Kikokusei/Returnees have been the focus of numerous studies, most concerning the problems they encounter during re-entry. *Kikokusei* occupy an ambivalent position in Japanese society. In one sense, they are ‘the nail that sticks out’². (Kanno 2000a: 4). “Most complaints center on difficulties of language and social attitudes upon return.” (Ching Lin Pang. 2000: 167) from both returnees, non-returnees and their teachers. The “*kikokushijo mondai*”³ [or] the returnee children problem” (Goodman 1993: 1) came to prominence in the 1980s. Returnees became seen as a social issue. The question for educators is what to do with these adolescents, handicapped by their sojourn, lacking in Japanese-ness and perceived as non-Japanese (Ching Lin Pang. 2000: 167). They contracted a negative image as “undisciplined, stuck-up [and] argumentative,” assertive in their opinions (Nakabayashi in Ching Lin Pang. 2000: 169). With their perceived mastery of English, returnees also garnered accusations that they were part of “[a]n ‘emerging class of elite children’” (Goodman 1993: 4). No longer casualties of Japanese internationalisation, they can also be seen as privileged

¹ “In 2002, there were 1,851,758 registered foreigners, constituting 1.45% of the total population of Japan, small by international standards, but a 44.5% increase compared to a decade ago.” (Tsuneyoshi. 2004: 61)

² A Japanese axiom, ‘the nail that sticks out gets hammered’ denoting the need to conform to the group.

³ The kanji used to form *shijo* in *kikokushijo* is also representative of female. As such some researchers and returnees prefer to use the more neutral *kikokusei*. (Kanno 2002: 17)

and exempted from the hardship of university entrance exams by virtue of their discerned ease of linguistic competency and the *tokubetsu waku* or special quota system.

It would, however, be imprudent to identify all returnees as proficient English users. It would be further ill-considered to see them all as ‘westernised’; gregarious and opinionated. Although such polarization of any ethnolinguistic group can never be more than stereotyping, human nature and the emotive connotations English and English proficiency have in Japan mean that such conclusions are frequently drawn. Japanese educators might feel that in rejecting cultural norms, returnees are disadvantaging themselves, reducing their employability. For many foreign teachers in Japan, there is a strong temptation to tie English proficiency with subscription to a western culture. Many become vehement, ascribing a social identity to language ability, many native and Japanese English language teachers emotionalise language learning and retention. These perceptions weaken teachers’ ability to objectively recognise applications of English apposite to the returnee.

Goodman’s (1993) chapter on who *kikokushijo/kikokusei* are, shows that although the term has become accepted as proper Japanese (1993: 10), classification of *kikokusei* can vary amongst government agencies, educational institutions and between individuals. The one consistent criteria is that the decision to be overseas was not made by the individual. He or she must have accompanied their expatriate parents on an overseas placement. While overseas their children are exposed to different societies, cultures, languages and school systems (Ching Lin Pang, 2000: 35). Families located overseas for a period greater than three months qualify for *kikokusei* status under Japanese government guidelines although time-determined status within individual returnee programmes is dependent on the educational institution or company concerned (Goodman, 1993:13). Although the average stay of temporary transient professional families in Britain is between three and five years, they are often likely to spend further time abroad in additional countries, mainly in North America, Europe and the Middle East, making their total time away from Japan much longer and variable (Aizawa in Yamada-Yamamoto, Richards, 1998: 27).

Perhaps trying to reflect the multinational construct of *kikokusei*’s international experience, the term Third Culture Kid, or TCK was coined by Useems in 1963 (Fail, Thompson, Walker, 2004: 320) capturing the international element of the returnee experience. Other multinational epithets contained in Fail, Thompson and Walker (2004: 320) include ‘global nomad’ and ‘transculturals’, with each emphasising the profusion of cultures *kikokusei* experience. Whichever term is preferred and indeed whichever country or countries the *kikokusei* has sojourned in, all will experience some degree of divergence from their non-returnee peers upon returning to Japan. As we have seen in the previous chapter Japanese society finds conflict in difference while wanting to encourage a more international perspective. *Kikokusei*, therefore, inhabit a contradictory position in Japanese society (Kanno, 2000a: 4); their different perspectives and behaviour can be a cause of conflict and weaken important societal relations. The different socialisation process experienced and subsequently internalised by *kikokusei* in their host country means that they are often at odds with the cultural, social and communicative norms of Japan (Kanno, 2000b: 363. Takeuchi, Imahori and Matsumoto, 2001. 316, Uehara, 1986:56). Those who have sojourned in Western countries can be more assertive and individualistic than their peers (Yoshida et al. 2003: 642). At the same time they are internationalised Japanese embodying a valuable business resource of bilingual, bicultural ambassadors, not to be squandered.

Each returnee experiences repatriation differently, but all confess to feeling different (Yoshida et al 2003: 642, 2002: 430), some not only during the reentry process but throughout their lives (Oikawa, Yoshida 2007: 642). Those who have sojourned to other countries and returned with an affinity for them may find themselves branded as no longer Japanese (Ching Lin Pang 2000, Goodman 1993, Kanno, 2000a, 2000b, 2002). Since the economic boom of the 1980s the image of *kikokusei* has endured undulations of approval and condemnation. The importance of university entrance exams

within the Japanese education system has played no small part in this, with the Japanese media painting *kikokusei* first as disadvantaged victims of Japan's quest for international economic power, then as privileged elite before penultimately branding them as unfairly advantaged; exempted from the 'exam hell' by virtue of an easily won language ability (Mori 2002: 27).

Although modern *kikokusei* encounter less discrimination than in the past (Yoshida et al 2002, 2003, 2009. Kanno 2000a. Mitchell 2005) they can still feel socioculturally isolated and alienated from their former host country and Japan (Kanno 2000a, 2000b, 2002. Yoshida et al. 2009). Their bilingual ability and international perspective can afford returnees preferential treatment in terms of work and education, but some establishments are reluctant to admit *kikokusei*, fearing that they will be unable to conform to a Japanese work environment. They are potentially handicapped (Yoshida et al 2003: 642). With so many returnees experiencing similar reintegration difficulties these issues have become wider social problems that fall under the umbrella term the Returnee Problem (Ching Lin Pang. 2000: 169).

Japanese communication is thought to be predominately non-verbal, incorporating many society-dependent discourse features, which must be attested to allow successful discourse to occur. Aside from the fundamentals of the host country's language (grammar, vocabulary and pronunciation), many returnees also internalise the communicative norms of the host nation (Takeuchi, Imahori and Matsumoto. 2001: 316). The stereotypical image of *kikokusei* as more outspoken and opinionated than their non-sojourned peers suggests that they keep their host nation's communication styles even when they are using the Japanese language (Takeuchi, Imahori and Matsumoto. 2001: 317). Yamada-Yamamoto (1998: 59) observed increased eye-contact between Japanese sojourners in Britain, a behaviour at odds with the traditional Japanese custom of minimal eye contact. As another example, while Americans prefer direct communication styles, the Japanese tend to reach decisions through group consensus and indirect communication styles. In such cases communication adjustment and readjustment needs to occur or *kikokusei* using direct forms of communication might be interpreted as confrontational, face-threatening (Takeuchi, Imahori and Matsumoto. 2001: 316) and ignorant (Kanno 2002) by those around them. Ching Lin Pang (2000) gives numerous other points of conflict between *kikokusei* and non-returnee peers and teachers, including a lack of team spirit (*shuudankunren no ketsujo*) and an overdeveloped self-consciousness (*jikoshuchoo ga tsuyosugiru*) (Ching Lin Pang. 2000:167). She also highlights the unease many *kikokusei* have when interacting with other non-returnees and the bullying that can occur.

Feelings of belonging and difference present themselves differently in each individual and are unpredictable emotional responses to external occurrences, and as such they cannot be mediated through generalised educational programmes (Fail, Thompson, Walker. 2004: 322). Simplistic representations of Japan as bad and backward, and the host country as good and progressive are easily adopted when *kikokusei* experience disillusionment either through bullying or simply being disabused of an idealised image of Japan. Kanno (2000a, 2000b, 2002) determined there to be two methods of readjustment. In the first there is a differentiated pattern of reintegration in which the *kikokusei* refuses to assimilate to Japanese norms and disassociates themselves from mainstream Japanese society. In the second pattern of readjustment, the *kikokusei* would minimise the cultural gap between himself or herself and his or her peers, assimilating or trying to reintegrate with Japanese societal norms.

Nurturing the cultural knowledge of bilinguals has a positive effect on language development, and for those *kikokusei* who have built their identity around this ability, maintenance of their L2 must be supported (Kanno 2000a: 14). However the issue of linguistic identity is a complex one. Studies (Ervin-Tripp 1968) have shown personality differences in the ways bilingual and multilingual subjects completed the same sentences in their L1s and L2s; with respondents giving contradictory endings to the same sentence. In her 2006 study, Pavlenko observed that while respondents

appeared to exhibit different selves in each of their languages, some indicated that they felt more real or natural in their L1s than in their L2s (2006:18). Other studies (Grosjean 1982) have concluded that it is the environment and culture surrounding the discourse that is more likely to alter the bilingual's response. Both observations seem to support Pavlenko's (2006: 18) assertion that the Jungian psychoanalytical principle of the inner self, the *hara* of the Japanese ideology, and the persona, a mask used in social interactions, is at play in the minds of bilinguals and multilinguals.

Edwards (in Kanno 2000a: 2) reminds us that language is more than a communicative tool, it is part of a culture (be that local or global) and can serve as an emblem of groupness. *Kikokusei* themselves exhibit a proclivity for dichotomised interpretations of identity, believing that they must identify with either Japan or their host country (Yoshida 1999: 6). Oikawa and Yoshida (2007) argue that biethnic individuals in Japan forge their sense of identity through their difference and exclusion from the dominant social group. If we take identity to be one's own interpretation of self, created from our interactions with others (Looking-glass Self Theory) and our own internal discourses, this notion of identity through difference can also be applied to *kikokusei*. If their peers indicate that they should identify themselves only on lines of nationality, then rigid views of ethnic identity will persist. If however *kikokusei* are exposed to more fluid and unique interpretations of self, perhaps a less dogmatic sense of identity will emerge. Kanno (2002) notes that it is in adolescence that *kikokusei* experience the greatest number of identity issues, but once at university age or in college, surrounded by a more socially (if not ethnically) diverse circle of interaction, *kikokusei* become more accepting of their transcultural identity.

There is evidence to suggest that returnees have more developed concepts of public civility and tolerance than non-returnees. Ching Lin Pang (2000: 172) has suggested that due to the constant chameleon-like nature of *kikokusei*'s persona switching and identity formation and their international experiences, they are more critically self-aware and are better equipped to objectively evaluate Japanese or even Western culture. Mok and Morris (2010) discovered that individuals with low BII (Bicultural Identity Integration) are more likely to question untruths than those who were more assimilated into the dominant socioculture. Hood (2001:64) has suggested that *kikokusei* are important instruments for the reform of Japan's relatively insular mentality stating that by changing Japanese attitude towards those with international experience a change in Japan's international outlook will be brought about. Non-returnees also benefit linguistically and culturally from interaction with *kikokusei* (Lincicome 1993: 142). Here again we see the notion of *kikokusei* being "valuable assets for Japan' who [will] lead Japan into the next century" (Fry 2007: 133-4).

Many of *kikokusei*'s identity issues do not originate from internal conflicts, but rather external expectations and demands for them to define themselves as Japanese or non-Japanese (Yoshida, K. 1999: 5). Returnees' cosmopolitanism is evident with 27% of Third Culture Kids in Sharp's 1987 study proclaiming "it was better to be a citizen of the world than of one particular country" (Fail, Thompson, Walker. 2004: 321). Disputation occurs when *kikokusei* are asked to identify themselves as Japanese or not, or believe that they must behave in particular way in order to gain group acceptance. Regardless of linguistic ability, in 1988, Pollock indicated that individuals who are exposed to and develop a relationship with two or more cultures will incorporate elements of both/all of the cultures without taking complete ownership of any (Fail, Thompson, Walker 2004: 320). They are more than the simple depictions of the past; they should be thought of as Third Culture Kids (TCK), transculturals or global nomads (Fail, Thompson, Walker 2004: 320) to better capture the essence of bilingual and bicultural individuals' identity. Such individuals develop their identity and sense of belonging with others of similar backgrounds. In situations where TCKs have had to manage their identities and shake off their sojourn experiences and communicative or social norms, these dormant traits reemerge in interactions with those of similar backgrounds, including

foreign students and staff (Fail, Thompson, Walker 2004: 323).

Code-switching and code-mixing are constant elements of a bilingual space. As monolinguals adjust their register and language use relative to the status of the interlocutors, so too do bilinguals with shared linguistic knowledge. Furthermore, while there is sometimes semantic convergence between languages, certain concepts cannot be as clearly expressed in particular languages as they can in others. The Japanese word *genki* for example represents the English notions (amongst others) of vitality, wellness and enthusiasm, but is not fully expressed by any direct translation. Bilinguals focus less on language prejudices than monolinguals do (Hamers, Blanc. 1989: 133). In environments where bilinguals are present we find a compound bilingual space in which code-switching is likely to be employed (Van der Meiji, Zhao. 2010: 397). Equally, those who have learnt their languages in distinct environments internalise many sociocultural aspects of specific discourse tasks (story-telling, self-disclosure, negotiation), meaning that bilinguals will respond differently to each task, performatively and linguistically when compared to monolinguals (Pavlenko 2006:17). Code-switching and code-mixing allows shared discourse to happen more effectively and efficiently. It is therefore better to view the bilingual space, such as the Japanese *Kikokusei* English language classroom, not as a space with two distinct languages but as a space with one intertwined language that can support both the linguistic goals and transcultural identities of those within it. Utilizing all the linguistic and cultural resources of the bilingual class is desirable and serves a functional purpose (Van der Meiji, Zhao. 2010: Abstract.)

As has been discussed previously, the subjective and emotional qualities of the returnee experience and *Kikokusei Mondai* amongst educational establishments precludes a universal, one-size-fits-all, remedy or support system. As with any good application of pedagogic methodology teachers and school officials must tailor their approach to the needs and wants of their *kikokusei*. The school plays an important socialisation role. It is a "cultural transmission apparatus" that can impart the dominant systems of the society (Nakaga. 2003: 82); it reflects the wants of the society but also has direct access to the needs of the internal stakeholders. Therefore, it can serve as a place of sociocultural negotiation at a local level, where the fundamental cultural norms of Japanese society, those needed for a harmonious integration of *kikokusei*'s bicultural identity and Japanese conventions, can be consolidated with the internationalised qualities and experiences of returnees. Teaching aspects of a country's culture has become a much lauded component of modern ELT practice (Duff, Uchida 1997: 454-5) and should therefore sit comfortably with ELT professionals. By involving all those with interests in *kikokusei* education - parents, Japanese and expatriate teachers, educational administrators and government (educational guidelines) - we are empowering the decision-makers to become collaborators and are encouraging the appreciation of cultural diversity (Nakaga. 2003: 89). "The most important, but most difficult part of multicultural education is changing teachers' attitudes" (Nakaga 2003: 91).

With the majority of ELT methodology emanating from the Western, so-called individualist, cultures any classroom practice that professed to be learner-centred would surely have to be subjected to some adaptation to the culture of the learners. However, in learning environments where teachers do not have a well-defined image of themselves within the expatriate setting they will find difficulty when negotiating their role in the Japanese English education dynamic⁴. In educational contexts where the students and teachers share sociocultural commonality, a shared set of assumptions will scaffold their interactions; however, where there is no or little common ground - such as an expatriate Western teacher or Westernised *kikokusei* in the Japanese education system - culture clashes are apt to occur (Flowerdew Miller 1995: 345-346). Furthermore, it is tempting for Western-educated teachers to affirm and even participate in the chorus of dissonance about the

⁴ Duff, Uchida 1997: 474, state that the negotiation of the teachers role in general would be undermined by a lack of confident identification. I have used my own experiences and reading to make this assumption within the Japanese ELT environment.

failings of Japan and Japanese cultural norms, but it is ultimately the responsibility of the teacher to encourage students to explore such tribalised assumptions (Kanno 2002) thereby empowering students to forge their own opinions and identity. Montero-Seibruth say that perhaps the greatest priority of the bilingual teacher is “to raise the students’ morale and strengthen their sense of worth and identity, in the context of their own culture” (Montero-Sieburth, Perez. 1987: 185).

The interests of this study were to determine the role(s) of *Kikokusei*-English relevant to the individual and identify any commonalities among respondents. Two questionnaires, in both English and Japanese, were used to collect the data. The first was based on Yashiro’s (1992) research framework of L2 maintenance and the Yoshida et al. (2009) seventy-four point questionnaire on returnee experiences. The first questionnaire contained twenty-four points including sentence completion tasks, multiple choice closed-ended questions and open-ended questions. The secondary questionnaire, although presented in a questionnaire format, was designed to be answered through any chosen medium, and contained three short answer, open-ended questions. The data collected is complementary to that of the previous studies and work conducted in the area of *kikokusei* issues. Themes of identity, internationalism, utility and pride arose and paint a complex image of what *Kikokusei* English represents to its users and how they employ this linguistic ability in their lives.

For me, English is...

“was, and still is a large part of my life.” 20, Female.

“ part of who I am. “ 20, Female.

“ a way of life.” 18, Unknown.

“ the language that lets me easily express my feelings.” 18, Female.

Kikokusei English is a part of respondents’ lives both as an emblem of their difference and marginalisation from mainstream Japanese society, but also as a symbol of their unique attributes and perspectives. The use of the word “part” in the above quotes indicates that through their language abilities and interactions with others of similar backgrounds and or linguistic abilities, these *kikokusei* forge their own identities which are differentiated from those of monocultural individuals. The response from a participant on the second questionnaire accentuates this notion and highlights the emblematic nature of *Kikokusei* English.

What is English for kikokusei in Japan today?

“a necessity one key factor that sets us apart from other students.” 20, Male.

Another respondent saw English as medium to express sentiments that were not communicable in Japanese. In Ervin-Tripp’s 1964 study, where participants were given the same sentence completion tasks in both English and Japanese, the findings showed that the respondent’s answers varied between the language options. Her respondents demonstrated different viewpoints and priorities in each language. Respondents on the second questionnaire supported these dualistic notions of self with the indication was that aspects of the *kikokusei* self were simply not expressible in Japanese:

For me, English is...

“it is part of who I am. English helps me express the other part of me that I cannot express in Japanese.” 19, Female.

For me, English is...

“a language tool and something which keeps me international than being national. Whenever I speak English, it is a great chance to express my ideas which could not be expressed in my mother-tongue (Japanese)” 21, M, JLR.

Internationalism has been the driving theory behind English Language Teaching and returnee L2 maintenance in Japan. It is not surprising then to find this theme within this study's data. This sentiment could have its genesis within the Japanese educational ethos or could again illustrate the transcultural nature of *kikokusei* as international rather than national. Replies contained reference to Internationalism, including straightforward statements attaining to links between cultures and peoples:

For me, English is...

"...a thing that connects me with other cultures." 18, Female.

"...a tool to communicate with people from around the world" 20, Female.

And more complex assertions that English had changed the respondent's way of thinking and altered their future:

For me, English is...

"...what changed my views about the world, and what changes my future." 19, Female.

"...a secondary language, and my life's change" 18, Female.

"...a language that completely changed my life by letting me see the whole wide world." 18, Female.

As none of the respondents explicitly identified their English ability as a means of working or living abroad we could draw the conclusion that *Kikokusei* English shares many traits with the 'healthy internationalism' set down in the *Mombushu, Kutogakku Gakushu Shidoyory* (Lincicome 1993: 123). This would be salient for those administering returnee programmes as they would need to reflect the cosmopolitan and Westernised socioculture of *Kikokusei* English. Were this conclusion accurate, it would also mean that the mindset of *kikokusei* was less oppositional to the progressive Japanese cultural ideology of individualism within a framework of mutual obligation and cooperation (Fukuzawa, LeTendre. 2001:38) and notions of *kokusaijin* who are part of both the Japanese and the international community.

"For me, English is a capital to surpass my competitors in different occasions of the society. Ability to speak English is highly valued in Japanese society, but not all English learners can obtain that. " Unknown age, Male.

When reviewing the qualitative data, the theme of *Kikokusei* English as a tool emerged and could be seen either in explicit reference to it as such, through mention of English as a second language or in very detailed descriptions of the advantages it affords.

For me, English is...

"... the most important ability I have" unknown, Female

"...a great advantage while living in Japan, but a basic necessity to survive in the international community." 19, Male.

The data here indicates that there is an instrumental motivation for the maintenance of *Kikokusei* English, perhaps with complex interconnected orientations (Gardner, MacIntyre. 1991:58) of integrative reasons - desire to be international, connected to their previous experiences or part of the *kikokusei* community - and practical instrumental needs. The majority of responses to the second questionnaire questions (in which gender and age was not asked for), *Should returnees maintain their English when they return to Japan?* and *What is English for kikokusei in Japan today?* yielded indications of the instrumental value of L2 maintenance.

"English is an advantage for returnees in Japan. Whether it is for getting good grades in

school by being able to devote time to other subjects, acing college entrance exams, or getting a job, English acts in favor of returnees...”

One respondent seemed particularly unambiguous in his or her sentiment, suggesting that *Kikokusei* English was only a means of entering university. The tone is also perplexing as it seems to carry undertones of what might be jealousy or disappointment. His or her repeated use of the pronoun “they” suggests an emotional detachment and that perhaps he or she has adopted a very critical position when answering this question. Without knowing the respondent’s English knowledge (as this would determine the validity of his or her utterance), personal background and character better, it is hard to draw any conclusions from his or her contribution, beyond the simple Utility thematic nature of it:

“In my opinion, English is just a tool to pass entrance exams for universities for *kikokusei*. Because of being *kikokusei*, they can take exams much easier than exams which normal high school students have to take. After *kikokusei* have passed the exam they do not have to elaborate their English skills unless they belong to English literature department or other language departments.”

The respondent took a less scathing approach when asked, “*What is English to you?*” While still concluding that English was a tool he or she stated that there was a sense of pride in his or her language competence:

“English is a tool to communicate. Being an English speaker does not mean that I am better than other Japanese people. It just makes me to be able to communicate with more people. However, I am proud of myself for being English speaker.”

When answering the same question, another respondent demonstrated that *Kikokusei* English was also a tool for international understanding, a salient premise of the *Mombushu, Kutogakku Gakushu Shidojory* (Lincicome 1993: 123). The juxtaposition of these themes again supports more complex frameworks of motivation involving both integrative and instrumental processes (Dornyei 1994: 520) and a need for achievement (Warden, Lin 2000: 537).

“English is a tool that is necessary to communicate with people around the world. I believe that what is important is not just having the ability to read and write, but to be able to say your opinions clearly and understand other people’s views.”

As we have seen, English has a complex and fluctuating relationship with mainstream Japanese culture and *kikokusei* are the vanguard of the debate over the place of English in Japan and English language education. The cultural identity of *kikokusei* cannot be measured with polarised nationalistic dimensions of former host and home countries. Studies have concluded that returnees have a unique identity as *kikokusei* (Sasagawa, Toyoda and Sakano. 2006: 334) and thus dichotomised socio-educational objectives of making them more or less national or foreign are misplaced and detrimental. The same could be argued of English language education for non-returnees. The instruction of English should embrace more of the principles of English as an International Language - an international perspective underlined with local needs - than the survival and integrative objectives of English as a Second Language. With this shift in emphasis, there will be a greater focus on the local needs of students: the instruction of practical skills, and less significance placed on the adoption of ‘Western’ communicative norms or specific lexical items. A shift in pedagogic focus towards a transcultural, compound bilingual environment could perhaps foster more acceptance of code-switching and mixing, which would again strengthen students’ sense of ownership of English.

Much of the literature written on Japan by expatriate educators contains and elucidates the negative connotations of Japan and Japanese society as closed and regressive (McVeigh 2002: 29, 3). Prejudiced views, from both Japanese and foreign educators, only serve to emotionalise the debate on educational reform and hinder the development of effective language programmes for returnees and non-returnees. Teachers and students bring their own sociocultural identities to the language classroom. As both expatriate teachers and Japanese educators play vital roles in the English education, more harmony among educators is needed if students are to develop the confidence and skills to succeed in their future goals, whatever and wherever they may be. The principles of internationalism and cosmopolitanism invoked through the 1980s also have a place in English education. However, expatriate educators need to acknowledge that most of the prominent theories and methods of ELT were formulated in the West (Warden, Lin 2000: Abstract) and thus need to be better tailored to an Asian environment. Most Asian learners are Second Language learners, who will have little or no need for English proficiency and limited contact with native English users, therefore integrative motivational factors and the teaching methods founded upon them will be largely irrelevant to this context.

The learning objectives of English language education needs to be merged with local needs, and techniques adapted to suit the pedagogy of the local classroom environment. This means that the content of courses needs to mirror the requirements of the students and that the methods used must encompass an international rather than Western sociocultural viewpoint. As such the language programmes could become more inclusive, empowering teachers and learners to exchange language knowledge and cultural perspectives. Moreover, Japanese and expatriate teachers should work collaboratively to create an effective language programme that encourages L2 maintenance and the development of Japan-specific English needs. By promoting critical thinking and facilitating an unbiased exchange of cultures, educators can empower students to question the world(s) around them. A more tangible sense of language ownership - with a focus of English as an International Language - and a critical academic framework, students could evaluate their own learning needs and determine practical learning goals, facilitated by native and non-native educators.

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Whither Affective Domain in Lifelong Learning (0274)

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Whither Affective Domain in Lifelong Learning

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Introduction

Lifelong learning has become a global issue. The twentieth century has recorded many social transformations that brought along changes in the work place, work ethics and values (Drucker, 2003; Gratham, 2000). The phenomenon of change in technology, social and cultural aspects has led to rapid transition to a knowledge-based society (Gratham, 2000) and made it imperative the promotion of lifelong learning in the context of human capital development. The concept of lifelong learning though, is very broad, and is regarded as “the development of human potential through a continuously and supportive process which stimulates and empowers individuals to acquire knowledge, they will require throughout their lifetimes” Longworth and Davies (1996, cited in Ministry of Higher Education Malaysia, 2011). The European Commission has defined lifelong learning as “all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective” (ESAE, 2007).

In the field of higher education there have been two important developments, one is the emphasis upon generic skills, especially learning to learn, and secondly, the change of focus from teaching to learning (Light and Cox, 2001; Ministry of Higher Education, Malaysia, 2006). It has been assumed that by the time students enter higher education they have learned how to learn. However, research on approaches to teaching and learning in higher education has shown that quality learning experience is attained when there is congruence between the stated aims of teaching and the means by which student progress is evaluated towards those outcomes (Biggs, 1999; Ramsden, 1993; Trigwell, 2010). The focus on developing abilities for learning, how to learn, for internalizing a lifelong learning, requires that students take on more responsibility for their own learning (Light and Cox, 2001). However, the shift to outcome-based learning lends toward a more meaningful learning experience on the part of students. It is within this framework of lifelong learning and of developments in higher education that the implementation of affective domain in healthcare curricula is discussed. This paper presents the process taken by a medical university college to implement the affective domain, particularly in the socialization of appropriate professional behaviour and values in the university curricula, and the issues faced.

Growing awareness of the affective domain

The importance of affect in human and animal life is reflected in the extensive body of theory and research related to emotion and motivation (Oatley, 1992; Lewis and Haviland, 1993). Indication of the increasing attention paid to affective skills is the work of Lopez and Synder (2003) relating to the measurement options for positive psychology. Earlier, Goleman (1995) stated that western civilization has overemphasized the importance of the rational functions of the mind to the detriment of the non-rational functions like intuitions, emotions and feelings. In fact, he popularized that “emotional intelligence” is often a better predictor of individual success than intellectual ability as measured by most IQ tests. The founder of humanistic psychology of 1960’s, Carl Rogers pointed out that “focusing so extremely on the cognitive side, we are limiting ourselves” (Roger, 1983).

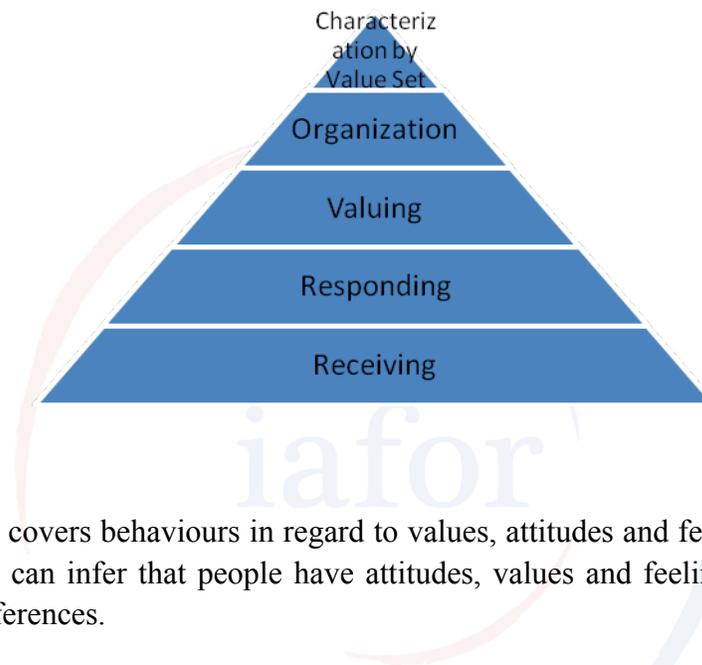
Emotions do play an important role in our lives, for individuals who learn to recognize and engage their emotions, are ready to ‘grow’ affectively so that they can respond to challenges appropriately and explore their values. At higher levels in the affective domain, which Maslow (1970) refers to as “self-actualization”, growth involves managing oneself, managing one’s performance, and making commitments. Peter and Seligman (2004) have prepared an important resource of information in the affective domain, based on their comprehensive review of ‘character strengths and virtues’ in the categories of wisdom and knowledge, courage, humanity, justice, temperance, and transcendence.

Educators are familiar with the three domains of learning activities namely cognitive (mental skills: knowledge), psychomotor (manual or physical skills: skills), and affective (growth in feelings or emotional areas: attitude). Of the three domains, Bloom’s taxonomy, produced in 1956 together with other colleagues, is the most familiar, widely used, and influential. The skills in the affective domain are often neglected because it is assumed that students will ‘discover’ them on their own. Hence, an area of concern is the neglect of the affective domain in the curricula, for in reality, much of the learning and assessment emphasizes the cognitive domain, the main reasons being the difficulties, or lack of assessment instruments, in the affective domain (Krathwohl 1971; Leng, 2002) Griffith and Nguyen, 2006, Boyd, et.al, 2006; Lynch, et.al, 2009). Nonetheless, there is the awareness to understand and measure humans holistically, or at least, the affective behaviour of students as evidenced in numerous research studies (e.g. Griffith and Nguyen, 2006; Boyd et.al, 2006; Murphy, Lindner, & Kelsey, 2002, cited in Boyd, 2006). Even Piaget (cited in Clark and Fiske, 1982, p 130) noted, that “at no level, at no state, even in the adult, can we find behaviour or a state which is purely cognitive without affect nor a purely affective state without a cognitive element involved”.

The affective domain according to Krathwohl (1971) is comprised of five affective processes, classified on a continuum that begins with an individual becoming aware of a phenomenon and ends with a pervasive outlook on life that influences all of his / her actions. These processes are sequenced

and identified as being open to experience (receiving), engaging in life (responding), cultivating values (valuing), managing oneself (organizing), and developing oneself (internalization). The processes, which are increasingly more complex and integrative, parallel Maslow's hierarchy of needs, and Mayer and Salovey's conceptualization of emotional intelligence (1997). In Krathwohl's taxonomy, the higher levels of the framework reflect the affective control and performance desired by wise, mature, and integrated persons, as shown in Figure 1.

Figure 1: Krathwohl's Taxonomy



The affective domain covers behaviours in regard to values, attitudes and feelings (Krathwohl, 1971; Tooman, 2010). We can infer that people have attitudes, values and feelings by their words, their actions, and their preferences.

Developing the affective domain in healthcare education.

It can be generally assumed that students enter a healthcare programme anticipating helping others; however their internal container of values pertaining to the healthcare field may need to be filled and nurtured (van Valkenburd and Holden, 2004). A course or programme can explain, promote and inculcate the desired learning outcomes, in effect, filling the container. This paper presents the processes taken by a medical university college to implement the affective domain, particularly in the socialization of appropriate professional behaviour and values in the university curricula, in the context of lifelong learning.

One of the aims of this medical institution, established in 2005, is to embed the affective domain in curriculum, in tandem with its motto of 'Nurturing the passion to care'. The institution consists of four faculties, namely, Medical, Pharmacy, Traditional and Complementary Medicine, and Allied Health Sciences, and a Centre for Foundation in Science Studies, and Centre for Languages and

General Studies, and has a population of just over one thousand students. The process to develop the affective curriculum and to ensure there is constructive alignment of the learning outcomes, activities and assessment involved lengthy discussions and workshops amongst the academic staff, comprising of deans, deputy deans, year coordinators and lecturers. In designing the affective module, it is essential to ensure 'constructive alignment' throughout the process, from the learning outcomes (LOs) and learning activities (LAs), related to the core values (CVs), with the appropriate assessment method (AM), so as to make teaching and learning a quality and meaningful process (Biggs, 1999). Constructive alignment ensures the system is consistent and every component in the curriculum supports each other.

One of the main issues discussed was on the core values and its attributes that would reflect the quality and affective characteristics desired of students in the healthcare disciplines (Table 1). Consensual decisions, particularly on core values and associated attributes, learning outcomes and the range of learning activities, were made in a series of workshops.

Table 1: Core Values and Attributes

No.	Core Values	Attributes
1)	Compassionate	Merciful; kind; caring; empathy; altruistic.
2)	Noble	Humble; respectful; just.
3)	Confident	Self-confidence; self-dignity.
4)	Steadfast	Perseverance; courage, resilience.
5)	Spiritual	Devotional; relating to religion.
6)	Credible	Reliable; sincere.
7)	Insightful	Discerning.
8)	Passionate	Enthusiastic; dedicated; self-motivated.

The content of the affective course evolve around these core values and associated attributes, and relevant learning outcomes (LOs) were formulated. These LOs are explicit statements of what we want students to know, understand or be able to do as a result of a learning activity (Table 2).

Table 2: Core Values, Learning Outcomes and Learning Activities.

No	Core Values	Associated Attributes	Learning Outcomes	Reflection	Reflective Diary	Small group academic session	Anecdotal Report
1	Compassionate	Merciful	LO1				
		Kind	LO2				
		Caring	LO3				
		Empathy	LO4				
		Altruistic	LO5				
2	Noble	Humble	LO1				
		Respectful	LO2				
		Just	LO3				
3	Confident	Self-confidence	LO1				
		Self-dignity	LO2				
4	Steadfast	Perseverance	LO1				
		Courage	LO2				
		Resilience	LO3				
5	Spiritual	Devotional	LO1				
		Relating to religion	LO2				
6	Credible	Reliable	LO1				
		Sincere	LO2				
7	Insightful	Discerning	LO1				
8	Passionate	Enthusiastic	LO1				

		Dedicated	LO2				
		Self-motivated	LO3				

The learning activities, based on the learning outcomes for the affective course, include reflection, reflective diary, small group academic session and anecdotal report. Reflective writing, reflection, for example, are appropriate assessment instruments in measuring changes in attitude (Huba and Freed, 2002; Murphy, Lindner, and Kelsey, 2002, cited in Boyd, 2006). There have been studies done to assess the use of reflective writing to measure gains in the affective domain (Boyd, Dooley and Felton, 2006). According to these researchers, their study was to measure affective learning after viewing an asynchronously delivered simulation, reflecting and writing about the experience. Content analysis of 83 reflective writing samples was used to analyze affective learning at the five levels on Krathwohl's taxonomy. The analysis showed that in the reflective writing all students participated at the first two levels of receiving and responding. However assessing students at the higher levels of the AD domain is more difficult. From the analysis of reflective writing, the researchers summed up that some students expressed affective learning at higher levels of the affective taxonomy and increased their level of reflective writing in the process. Reflection as an activity may include the sharing of feelings, observations, and ideas.

The AD course is compulsory in the medical institution, and carries one credit per semester. All lecturers become mentors and conduct regular AD sessions with their mentees. An on-line assessment system has been developed and used by mentors and students, the latter for peer and self-assessment respectively, for specified learning activities.

Implementation of AD and Assessment

To assess students in the affective domain, Krathwohl's taxonomy is used. According to Krathwohl (1971) affective domain learning is classified on a continuum that begins with an individual becoming aware of a phenomenon and ends with a pervasive outlook on life that influences all of his / her actions. It is assumed there will be changes in the students' behaviour as a result of the socialization that they go through and this could be reflected in their words, actions and preferences. Krathwohl's taxonomy is used to assess the level of changes in affective behaviour (Figure 2).

Figure 2: Levels of Affective Behaviour (Krathwohl)

Level	Description
LEVEL 1 – RECEIVING	Willingness to accept: aware of information
LEVEL 2 – RESPONDING	Active participation
LEVEL 3 – VALUING	Accept/attach a value to the activity
LEVEL 4 – ORGANIZATION	Assimilate a new outlook/value
LEVEL 5 – CHARACTERIZATION BY VALUE	Acts consistently with acquired values

Within the AD course, topics / themes presented within an affective framework become relevant and real in students' lives. Themes are chosen to give opportunity for students to express their values and actions. It is through reflection that encourages students to integrate theory with practice. Reflection is recognized as an affective tool as it has defined as “those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations” (Boud and Walker, 1985, p.19, cited in Boyd et al, 2006). All Faculties and Centres have the autonomy to select appropriate learning activities (LAs) in relation to core values (CVs) and learning outcomes (LOs).

In assessing the level of affective behavior, for every activity in the Learning Outcome (LO), a score is given according to the level that is being attained by the student. For example, if the student shows characteristics of “Responding” for LO1 in Compassionate Core Values, a score of 2 is given for that learning activity. Should there be more than one activity for a LO, the mean score is obtained by adding up the scores for the activities and then divided by the number of those activities. So if there are 2 activities as in LO2 and the total add up to 4, then the mean score for that LO is 2 (Table 3).

Table 3: Rating of Core Values in the Affective Domain with Krathwohl’s Taxonomy

No	Level Core Values	Learning Outcomes	Receiving	Responding	Valuing	Organization	Characterization	Total Score	Mean Score
			(1)	(2)	(3)	(4)	(5)		
1	Compassionate	LO1		2				2	2
		LO2		2,2				4	2
		LO3			3,3			6	3
		LO4		2	3			5	3
		LO5			3			3	3
								3	
2	Noble	LO1		2,2				4	2
		LO2	1	2				3	2
		LO3		2,2				4	2
								2	
3	Confident	LO1		2	3			5	3
		LO2		2	3			5	3
								3	
4	Steadfast	LO1	1	2				3	2
		LO2		2,2	3			7	2
		LO3	1	2,2				5	2
								2	
5	Spiritual	LO1		2				2	2
		LO2		2				2	2
								2	
6	Credible	LO1		2,2,2				6	2
		LO2		2,2,2				6	2
								2	
7	Insightful	LO1		2,2				4	2
								2	
8	Passionate	LO1	1	2				3	2
		LO2		2,2				4	2
		LO3		2,2				4	2
								2	

The affective profile of the student can be observed by tabulating the mean scores of the LO of each core value (Table 4).

Table 4: Mapping of AD Profile of Student

No	Level Core Values	Receiving	Responding	Valuing	Organization	Characterization
		(1)	(2)	(3)	(4)	(5)
1	Compassionate			/		
2	Noble		/			

3	Confident			/		
4	Steadfast		/			
5	Spiritual		/			
6	Credible		/			
7	Insightful		/			
8	Passionate		/			

Issues & challenges

- a) Lecturers' competency and skills in AD
- b) Assessment and interpretation
- c) Reliability & validity
- d) Activities

Lecturers' competency and skills in AD

The academic staff consists of lecturers with medical / pharmaceutical / science background. They require training not only in pedagogical skills but also training and practice to be competent in assessment in the affective domain.

Assessment and interpretation

Using Krathwohl's taxonomy, the assessment of student's attainment is done by using mean scores. The AD curriculum has been implemented for one semester and thus it is too early to discuss the validity of the assessment.

Activities

To ensure some standardization in the contents of the activities, faculties are asked to prepare modules for the various activities. This task requires competency, resourcefulness, and time to gauge their effect on the affective behavior.

Conclusion

The implementation of the Affective Domain course is in its infancy, and there is the awareness and need to continuously monitor its effects, particularly, on the learning outcomes and assessment. Nevertheless, there is optimism and enthusiasm that with its implementation, the purpose of teaching and learning in the affective domain in CUCMS will surely develop characteristics considered desirable by teachers, employers and the profession.

It must be emphasized too that learning in the affective domain is a long-term socialization process that must be nurtured throughout the duration of the study programme. Socialization is a lifelong process and it is through this process that the individual is nurtured with the relevant values and desirable behaviour.

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Developing Higher Order Multicultural Thinking Skills in Philippine Higher Education Institutions: towards individual and institutional transformation

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INTRODUCTION

The rise of student mobility has caused a dramatic change in the Philippine educational demographic landscape. The past two decades witnessed more international students enrolling in the University of the Philippines, De La Salle University, Ateneo de Manila University, and St. Louis University, among others (Commission on Higher Education, 2009). Inevitably, one significant consequence of this global phenomenon is multiculturalism, whereby students of varied nationalities, cultures, religions, and belief systems share the same classrooms, laboratories, and other school facilities while overcoming, language barriers, social stereotypes, and not to mention, while concurrently going through the emotional, psycho-sexual, and physiological transition from adolescence to adulthood. Accordingly, the question of readiness is brought to the fore to critically appraise whether or not Philippine HEIs have put forward policies, programs, and effective monitoring schemes aimed at promoting and ensuring the most conducive multicultural learning environment for both foreign and local students.

In 2009, there were 2.5 million students studying outside their own country and will rise approximately to 7 million by year 2020 (www.unesco.org). In the Philippines, as of August, 2011, out of more than 26,000 foreign students, there are more than 17,000 enrolled in various HEI's wherein South Koreans topped the list, numbering 11,612, followed by 3,961 Chinese and 3,225 Iranians (<http://immigration.gov.ph/>). According to the Commission on Higher Education, there are fifty (50) private HEIs granted autonomous and deregulated status who accept foreign students. Foreign students are also accommodated by 229 private HEIs that offer a total of 1,207 accredited programs and courses. Furthermore, according to Angeles (2009), foreign students in the Philippines usually enroll in the following top 10 higher education programs: business administration, dental medicine, nursing, hotel and restaurant management, medicine, and others.

This paradigm shift in the educational system of different countries brought about by globalization requires a new wave of school leadership. Accordingly, the 'one size fits all' leadership style of the past may no longer be relevant in the global academic village—an academic community of varied cultures whose students recognize that “they will live and work in a world-wide context, and thus seek to master the knowledge and competencies to equip themselves to succeed in this transnational setting” (Collins 2002), of which in this study pertains to multiculturalism.

Given the existing scenario, questions may arise on how school leaders of higher education create a nurturing environment for local and foreign students: Are they [local and foreign students] on equal footing and aligned to the thrust of producing equally promising individuals who can compete globally? How do their institutions respond to the needs of students, faculty and the diverse communities in such a way that each entity has the ability to prosper in the interconnected milieu? These are queries that educators in all school set-ups must seriously consider.

According to James Banks in his book, "An Introduction to Multicultural Education 4th Ed. (2008)," multicultural education schools feature eight foundational elements. These elements played an important role in this role in appraising the sense of awareness on multicultural education in HEI's in the Philippines. To wit:

“Teachers maintain high expectations that empower students to work to their potential and often beyond their own expectations. While these high expectations remain constant for each student, they vary among students and are tailored to individual students. Each student is expected to achieve according to his or her highest potential.

The curriculum of multicultural schools must reflect the diversity of the students attending that school, as well as the variety of cultures more generally. Instead of having specific celebrations of marginalized cultures on holidays, a multicultural school's curriculum will draw from those cultures every day, weaving together expertly a variety of traditions and perspectives from which to teach core subjects.

Teachers align their teaching styles to the needs and learning styles of their students. This means that each student individually is considered by each teacher. In a multicultural school setting, not only do multiple cultural perspectives shape the environment but so do individual learning styles and abilities.

Regardless of the official language spoken in the school, the first language of the student is respected by teachers and administrators and treated as equal and legitimate. While students speaking in a different language in a class may be redirected to the language being spoken by the teacher, students are never expected to give up their original language and are encouraged to embrace it.

Instructional materials within multicultural schools reflect multiple groups and take into account many different cultural, ethnic and racial perspectives. These different perspectives in turn inform and shape the curriculum, which helps support the second goal of multicultural education: to provide a curriculum that recognizes multiple cultural heritages in the school.

Assessments are appropriate and culturally sensitive. This means that the integrity of the assessments is measured by the proportion of ethnically diverse students in gifted classes.

The culture of multicultural schools reflects the cultural and ethnic diversity of the students in attendance. There is no "monoculture" in a multicultural school but rather a rich tapestry of culture woven of all the different cultural and ethnic heritages represented in the school.

Counselors in multicultural schools maintain the same high standards that teachers have for students. Counselors also help students achieve the high standards to which they are held. Both

counselors and teachers within a multicultural school know the individual potential of students and help them actualize that potential.” (Banks, 2008)

In the local scene, the Office of the International Student Program, an adjunct office of the Vice - Chancellor for Student Affairs of the University of the Philippines-Diliman, provides its own International Students Program Handbook. The contents of the handbook include not only immigration requirements but also “Rules and Regulations on Conduct and Discipline” (pp. 20-21). These rules and regulations are similar in every way to those provided for local students.

The exodus of foreign students to the Philippines poses a great challenge to school leaders as globalized-multicultural education inevitably necessitates a revisit of curriculum content, pedagogical modalities, and administrative styles and to identify warranted adjustments thereof to suit the needs of the multicultural academic community.

Multiculturalism in schools, which has become the consequence of the change in the Philippine educational demographic landscape, greatly affects the teaching and learning environment. This poses the same challenge to the teachers, the Filipino or local students, the foreign students and the school administrators, collectively. The readiness of each sector of the academe as regards the presence of foreign students and the policies and guidelines they have to submit themselves to must be logically and objectively addressed by host schools. Furthermore, change in the teaching and learning environment whereby foreign students occupy the same classrooms with Filipino students create multiplicity of characters and personalities in the place.

All these point to the fact that there must be clear - cut policies to help build a school-friendly environment supportive of students’ rights and respectful of students’ culture. In the same vein, understanding the diverse cultural, linguistic, and educational needs of students is essential to creating genuinely inclusive and effective HEI’s where all students can thrive. This includes embracing individuality in diverse learners and their families, as well as understanding the cultural foundations of learning and behavior. Are we providing the foreign students the real comfort zone for learning and the justification of why they deserve to be in the Philippines?

With this contention in mind, this researcher conducted a study to determine the sense of awareness on multicultural education in HEI’s and its implications to institutional transformation. Moreover, the researcher had the humble intention of forwarding suggestions and recommendations towards the development of Higher-Order Multicultural Thinking Skills (Sarino, 2011) with the intent of sublimating and cultivating metacognitive strategies to level up the playing field in a multicultural teaching-learning environment.

METHOD

In this mixed method study, the researcher simultaneously gathered both quantitative and qualitative data, merged them using both quantitative and qualitative analysis method, and then interpreted the results together to provide a better understanding of the phenomena. Therefore,

direct and indirect interviews were conducted by the researcher. In addition, Focus Group Discussions were conducted with concerned participants alongside naturalistic observation.

PARTICIPANTS

The total population or universe of the study came from the school leaders, faculty members, foreign and local students, and academic support staff of five (5) HEI's in the Luzon, Philippines. Selected HEIs refer to five (5) of the top 15 tertiary level schools in the Luzon, Philippines with the most number of foreign students (CHED 2004). These HEIs were St. Louis University in Baguio City (SLU), with 203 foreign students; University of Baguio (UB), with 195 foreign students; University of Perpetual Help system DALTA in Las Piñas City (UPHSD), with 186 foreign students; Adamson University (AU) in Manila with 119 foreign students; and Adventist University of the Philippines in Silang, Cavite (AUP), with 180 foreign students. The choice of the aforesaid HEIs were based on HEIs willingness to participate in the study while taking into account their standing in the CHED database on foreign student population in HEIs located in Luzon (CHED 2004). All respondents from the aforementioned HEIs were chosen using the convenience sampling technique.

MATERIALS AND PROCEDURE

This study made use of two sets of questionnaires: one elicited vital demographic information about the respondents, and the other, a research-designed instrument meant to appraise the sense of awareness on multicultural education of the respondents. To wit,

Section A. HEI Stakeholders' Profile

This part explored the personal data of the five (5) groups of respondents. Characteristics of each category of respondents were asked, such as, age; gender; nationality, academic qualifications; designation; and number of years of school work experience.

Section B. Sense of Awareness on Multicultural Education Inventory (S. A. M. E.)

SAME or Sense of Awareness on Multicultural Education is a concept that the researcher purported to determine whether an individual's depth of consciousness on the nature and tenets of multicultural education falls under cursory, augmented, advocating, active, or metacognitive continua. Specifically, in this study, the researcher intended to appraise, through the analysis of the results of the SAME Inventory, the HEIs and their stakeholders' readiness to participate in a diverse academic community, taking into account the influx of foreign students in the participating institutions.

In conceiving the SAME, the researcher logically assumed that determining the "sense of awareness" went deeper and beyond "level" since in this study, "sense" suggested consciousness, cognizance, perception, metacognitive strategies, and philosophies that an individual possesses

or assumes which serve as determinants of a person's or an HEI's preparedness to deal with adjustments that might be warranted to ensure equity for foreign and local students.

The Sense of Awareness on Multicultural Education Inventory or SAME is a 40-item instrument designed by the researcher and uses a 5-point Likert Scale to ascertain the sense of awareness on the nature and tenets of multicultural education of stakeholders of HEIs. The items that appear in the SAME are 40 statements of beliefs, assumptions, actions, and contemplations regarding multicultural education in HEIs, specifically taking into account the influx of foreign students in the participating campuses. Each of the eight foundational elements is provided with five statements--each corresponding to the depths of the respondent's SAME. Five versions of the instrument were designed to report the sense of awareness on multicultural education of HEI stakeholders, namely, school leaders, faculty members, academic support staff, local students, and foreign students.

The figure below illustrates the continuum within which the 8 Foundational Elements of Multicultural Education operates vis-à-vis the echelon of multicultural thinking skills.

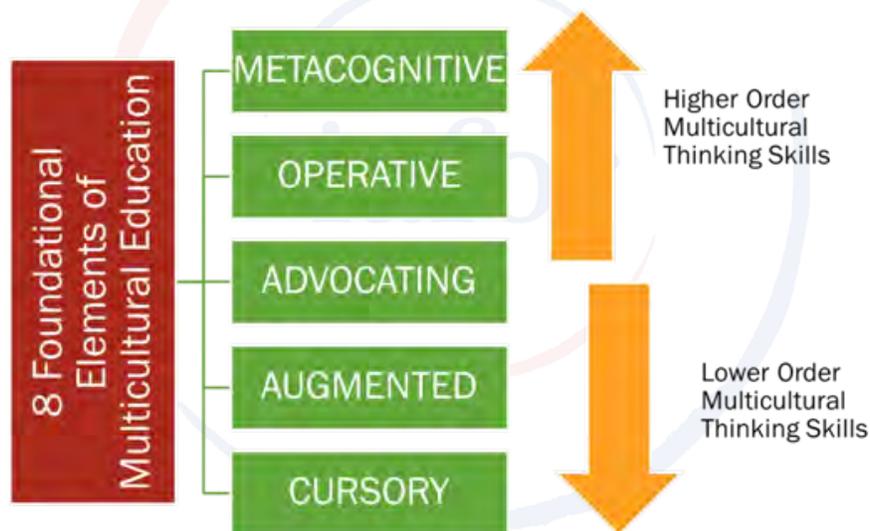


Figure 1. S.A.M.E Continuum (Sarino, 2011)

Sense of Awareness on Multicultural Education Continuum (Researcher Brainchild)

In an attempt to classify the sense of awareness on multicultural education of HEI stakeholders, the researcher put in place the Sense of Awareness on Multicultural Education Continuum (Sarino, 2011) which ranged from cursory, augmented, advocating, active, or metacognitive awareness. These gradients are detailed below:

Cursory Awareness

In this continuum, the HEI stakeholder possesses notions and concepts about multicultural education that do not necessarily correspond with the ideals of multiculturalism. These

potentially erroneous notions, which may have been brought about by lack of adequate information and exposure to various cultures, may therefore be typified as naïve, superficial, or cursory awareness.

Augmented Awareness

Through exposure to the essentials of multiculturalism and multicultural education, whether through media, books, oversea travel, and contact with other cultures, the HEI stakeholder, in this continuum, has developed an augmented awareness of multicultural education. Thus, the HEI stakeholder with an augmented awareness values diversity, synergism, pluralism, and tolerance.

Advocating Awareness

Advocacy is a process that takes one's awareness, beliefs, knowledge, and acknowledgment and transforms them into a plan for effecting change. In a multicultural context, it becomes a set of systemic interventions that promote transformational change toward multiculturalism. The HEI stakeholder who possesses advocacy show a commitment to improving the lives of students by supporting positions and policies that promote the best interests of foreign and local students today, tomorrow, and into the future.

Operative Awareness

Operative awareness is advocacy in action. This is the sense of awareness where the advocacy takes form and is realized in practice. Action is the act and art of doing something in a proactive way to promote multiculturalism. It can be seen as a willingness to speak out on behalf of a cohort of voiceless students, foreign and local alike. Action involves a conscious, intentional, and deliberate act or activity whose outcome benefit both foreign and local students.

Metacognitive Awareness

Metacognitive awareness is the highest sense of awareness. It involves self-monitoring, self-representation, and self-regulation processes that an individual uses in ensuring that he/she lives the ideals of multicultural education and affects or influences other people in the process. In practice these capacities are used to regulate one's own cognition, to maximize one's potential to think, learn and to the evaluation of proper ethical/moral rules that govern multicultural education.

RESULTS

Generally, the respondents agreed with the cursory sense statements. Moreover, it is observable that all stakeholders have almost similar degrees of agreement with the statements under cursory sense of awareness. This agreement presupposes that the respondents have gone beyond cursory awareness.

Largely, the respondents have achieved an augmented sense of awareness. Comparable with the responses under cursory sense of awareness, it is observable that all stakeholders have almost similar degrees of agreement with the statements under augmented sense of awareness. These results suggest that the respondents have overcome cursory sense of awareness and have developed a better grasp of multicultural education.

By and large, the respondents do advocate multicultural education. This suggests that indeed, the five groups of respondents do not only possess an augmented sense of awareness, but also advocates the idea of multicultural education. Furthermore, the respondents, as evidenced by the analogous means of each group, may have committed themselves to supporting positions that uphold multiculturalism in schools.

Most respondents except teachers were uncertain with their responses to statements under operative sense of awareness. This may mean that most respondents may have remained advocates of the cause and may have limited actual involvement in promoting the tenets of multicultural education. On the other hand, it is refreshing to note that the faculty-respondents, in comparison with the other groups of respondents, have had active involvement in matters concerning multicultural education.

All groups of respondents are uncertain or unaware as to whether they have achieved a level of awareness on multicultural education that pushes them to regulate their own thinking and actions that ensure equity and fairness with regards to dealing with foreign and local students in the academic community. Likewise, the results suggest that the respondents have yet to develop what the researcher calls “higher order multicultural thinking skills.”

Respondents by and large agree that stakeholders of HEIs must have high expectations for and positive attitudes toward local and foreign students. Specifically, Local students and foreign students strongly agree that student performance is not always determined by specific environmental exposure and racial characteristics, thus, expectations towards spirit potential must not be based on country of origin and race. Moreover, almost all respondents appear to have been actively involved in organizing and participating in activities that promote equal and positive treatment of foreign and local students like meetings, forums, symposia, and seminars with multicultural themes. Conversely, non-teaching staff respondents seem to have had limited exposure to the aforesaid activities.

The five groups of the respondents agree with the statements that concur with the idea that formulized curriculum should reflect the experiences, cultures, and perspectives of both foreign and local students. School leaders strongly agree that there is a need to constantly adjust the existing curriculum to suit foreign and local students. Alternatively, as to whether the respondents actively organize or participate in efforts to revisit and enhance the existing curriculum to ensure that specific needs of local and foreign students are met, four out of the five groups of respondents responded neither agree nor disagree. It seemed that only the faculty

members have actively organized and participated in the aforesaid efforts. Finally, all respondents were uncertain whether they constantly reflect on whether or not the curriculum considers perspectives of both foreign and local students and that the curriculum respects differences in beliefs, religions, and traditions.

Faculty, Non-Teaching Staff, Local Students and Foreign student respondents alike Strongly Agree that teachers must look into the cultural differences between local and foreign students when adopting teaching styles. School leaders on the other hand Agree with the same statement.

Advocating the idea that the choice of teaching styles must also be based on the variety of the cultures present in the classroom is clearly indicated by the strong agreement of non-teaching staff and foreign student respondents. As to whether the respondents, before employing teaching styles for a class of foreign and local students teachers must research on students cultural and religious backgrounds on the belief that learning styles and motivation are affected by such backgrounds, School leaders, Faculty Members, and Non-Teaching Staff respondents remain uncertain.

School Leaders and Faculty and foreign student respondents Agree that foreign students must not be required to learn to communicate in Filipino and should be allowed to use their first language during conversations. Conversely, Non-Teaching Staff and Local Students Neither Agree nor Disagree with the said idea.

Advocating respect to both foreign and local students by allowing the use of first languages and dialects is agreed upon by non-teaching and foreign students. However, School Leaders and Local Students Neither Agreed nor Disagreed while Faculty respondents disagreed with the statement.

With regards to whether or not the respondents let local and foreign students use first languages and dialects, Faculty, Non-Teaching, Local students, Foreign Students Neither Agreed nor Disagreed. School leaders at the other end of the pole Disagreed with the statement. In effect, the school leader respondents do not allow the use of first languages and dialects.

School Leaders, Faculty, Non-Teaching Staff, and Local Students Strongly Agreed that instructional materials should showcase our cultures present in the classroom. Meanwhile, as to whether the respondents actually use books, films, news clippings, and reference materials that show events, situations, and concepts from the perspectives of both foreign and local students, school leaders, non-teaching staff, and local teacher respondents Neither Agreed nor Disagreed.

Unanimously, the respondents strongly agreed that foreign students like local students should be entitled to be included in the dean's list and other academic privileges. With regards to advocating the aforesaid idea, all five groups Agreed. Similarly, with regards to the idea that results of student evaluation must remain fair for both foreign and local students, the respondents agreed. It is however confusing to know that some respondents may find it a challenge

evaluating the performance of both foreign and local students as indicated by the Neither Agree nor Disagree mean scores garnered by School leaders, Local Students, Foreign Students.

All respondents strongly agree that academic institutions must make certain that religious traditions represented in the school are respected. This also holds through with the assumption that academic institution is a rich tapestry of culture woven of all the different cultural and ethnic heritages represented in the school as indicated by the strong agreement of all five groups.

As to the belief that the respondents must help promote cultural diversity in the academic institution and must combat ethnocentrism and other forms of racism and discrimination, the respondents either strongly agreed or agreed. Meanwhile, some respondents organize or participate in activities that celebrate cultural and religious diversity whenever possible to become familiar with for example, Indias Diwali festivals, Islam's Ramada, Christians Christmas, Koreas Harvestmoon festival, etc. However, it is also evident that non-teaching staff and local students are uncertain whether they have participated on the aforesaid activities.

It was highly observable that all five groups of respondents unanimously and strongly agreed that academic institutions should concern themselves with the career goals of both foreign and local students and that school leaders must know the individual potential of students and help them actualize that potential.

As to advocating the belief that one must promote high expectations for students both local and foreign to help students set and realize positive career goals, the respondents either strongly agreed or agreed.

With regards to whether the respondents actually offer and provide career advises for both foreign and local students, it is observable that only school leaders and faculty members agree while non-teaching staff, local students, and foreign students neither agreed nor disagreed.

Finally, as to whether the respondents contemplate on students' future after college and envision both foreign and local students working side by side in their own fields of expertise and decide on ways to help students reach their goals, school leaders and faculty members Agreed. Meanwhile, non-teaching staff, local students, and foreign students neither agreed nor disagreed on the said assumption.

DISCUSSION

In order to address the issue concerning the lack of multicultural metacognitive skills in HEI's as indicated in the abovementioned results of the S.A.M.E. Inventory, it would be beneficial to first, (1) put forward strategies to develop higher- order multicultural thinking skills (HOMTS) that would be applicable and beneficial to all five groups of respondents and (2) to circumspect the inclusion of multicultural education in HEI policies. To wit:

Higher-Order Multicultural Thinking Skills (HOMTS)

Higher-order multicultural thinking skills include critical, logical, reflective, metacognitive, and creative thinking and promote an environment of respect and equity between and among diverse communities within an academic organization. These skills are activated when stakeholders in the academic community encounter unfamiliar problems, uncertainties, questions, or dilemmas in the multicultural environment. Successful applications of the skills result in explanations, decisions, performances, and products that are valid within the context of available knowledge and experience and that promote continued growth in multicultural skills.

Higher-order multicultural thinking skills are grounded in lower order skills such as discriminations, simple application and analysis, and cognitive strategies and are linked to prior knowledge of diverse communities within and outside the academe. Appropriate teaching strategies and learning environments facilitate their growth as do student persistence, self-monitoring, and open-minded, flexible attitudes. In the case of HOMTS, every stakeholder in the academic community is considered a student of multicultural education.

Developing Higher-Order Multicultural Thinking is the process in which a person develops competencies in multiple ways of perceiving, evaluating, believing, and solving problems related to diversity within and outside the multicultural academic community. The purpose is to focus on understanding and learning to negotiate cultural diversity among stakeholders in HEIs by becoming aware of one's own perspectives as well as becoming conscious of other cultural perspectives as a foundation of informed cross-cultural interaction.

Multicultural Education Guidelines as Basis for Inclusion of Multicultural Education Policies

The presence of young people from such a wealth of backgrounds and experience in the Philippine HEIs presents particular challenges – challenges that are yet to be met by our HEIs.

Accordingly, HEIs must be committed to:

1. assisting all students and staff to become informed, productive, adaptable, motivated and creative citizens, who take full advantage of their economic, social and individual opportunities;
2. building an accepting environment where all staff and students are treated with dignity and respect and where diversity is valued;
3. facilitating intercultural contact through broadening knowledge of the world and promoting the skills needed for cross-cultural cooperation and understanding; and
4. creating a learning environment where stereotypes are questioned and bias, bigotry, ethnocentrism, prejudice or racism are wholeheartedly rejected.

In meeting these commitments, HEIs must recognize the significance of cultural, linguistic and racial differences amongst all stakeholders.

The primary focus of the following multicultural education guidelines must be to assist schools to successfully manage cultural, linguistic and racial diversity. From time to time, racial intolerance and discrimination, evident in speech, conduct and behavior, can threaten social harmony. In addition, workplace policies, procedures and processes can have a differential impact on individuals as a result of their race, culture or language. The guidelines must therefore also support schools in developing processes and procedures for resolving situations of conflict or inequitable treatment on the basis of race, culture or language.

Thus, HEIs must not engage in racial discrimination, harassment or vilification in relation to:

1. a student,
2. an employee,
3. a prospective student or employee,
4. a contract worker or agent,
5. a person carrying out duties in the school such as a work experience student, contract cleaner or consultant, or
6. any other people covered by the legislation.

Discrimination against students

It must be unlawful for HEIs and other educational authorities to discriminate against a person on the ground of race:

1. in deciding who should be admitted as a student,
2. by refusing to accept a person as a student,
3. in the terms on which a person is admitted as a student.,
4. by denying or limiting access to any benefit provided by the school,
5. by expelling a student, or
6. by subjecting a student to any other detriment.

Discrimination against employees

It must be unlawful for an employer to discriminate against an employee on the ground of race:

1. in recruiting and selecting staff,
2. in the terms, conditions and benefits that are offered as part of employment,
3. in determining who receives training and the type of training offered,
4. in determining who is considered and selected for transfer, promotion, retrenchment or dismissal, or
5. by subjecting an employee to any detriment on the ground of their race.

Discrimination in the provision of services

It must also be unlawful for an HEI to discriminate against a person:

1. by refusing to provide goods or services,
2. in the terms in which goods or services are provided, or
3. by subjecting them to any other detriment.

Complaints of Racism and Discrimination

Any grievances or observations by any stakeholder of discriminatory or otherwise inappropriate behavior should be treated seriously, and all complaints should be dealt with according to the most recent local complaints resolution procedures that must be issued by HEIs.

The possible outcomes of a complaint include a formal or informal investigation, apology, referral for mediation or counselling and implementation of appropriate student or staff discipline procedures.

In cases of discrimination or serious misconduct, the ultimate outcome of a complaint could be transfer or even dismissal of the person who committed the unlawful act. In these cases, a Complaints and Investigations Unit should be contacted before any action is taken concerning the complaint.

If a complaint of discrimination is taken to an external agency, after conducting a formal inquiry, an Anti-Discrimination Tribunal could:

1. order that a person refrain from committing any further act of discrimination,
2. order that a respondent pay an amount of compensation,
3. order that a respondent do something to redress any loss, damage or injury suffered by the complainant, or
4. order that the complaint be dismissed.

The aforementioned addenda to existing HEI policies shall prove beneficial to achieving equity and respect towards diverse communities within the multicultural academic environment. Consequently, the researcher puts forward the abovementioned guidelines in response to the implications derived from the findings and conclusions of this study.

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Can Concept Mapping be used to Promote Meaningful Reflective Learning in K-12 Engineering Education? A study of Students' Satisfaction in Robotics STEM Integration curriculum

This study was the third stage of the three-year research project supported by National Science Council of Taiwan, investigating the effectiveness of concept mapping used as a learning strategy for students in Robotic STEM integration curriculum.

Eighty-five secondary-level schoolgirls participated in the study. After 10-week classes in experiment, we interviewed students in depth and collected their evaluation and questionnaires. Through data analysis, the findings showed a statistically significant outcome in their recognition of curriculum, method of instruction, and results of learning. For all five outcome dimensions from the survey of students' satisfaction, the experiment group which implemented concept mapping learning stagey showed significantly greater gains than the control group; and the qualitative data indicated that the concept mapping discussion aroused individual's reflective learning. Thus, the curriculum is proved to be feasible in senior high school, and using concept mapping was powerful to guide the students to understand robotics and therefore inspire their interests in studying engineering.

Keyword: reflective learning, STEM, high school

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1. INTRODUCTION

The down roots in engineering education is one of the key points of the scholars and researchers for educational policy in many countries nowadays, especially in the US and UK. The NAE (National Academy of Engineering) and NRC (National Research Council), in order to enhance and understand the bringing into practice of the Engineering Education in its K-12 phase, they proceeded a research project named “Understanding and Improving K-12 Engineering Education in the United States,” which released part of its closure report in April 2008 titled “Understanding and Improving K-12 Engineering in the United States: Project Summary for Public Comment”(or called the ‘K-12 Engineering Education Summary Report). This report points out the four main purposes of the project (NAE, 2008), among which the most representative aim is to explore the K-12 courses and to adapt the Engineering Education into the K-12 course design for bringing out the interdisciplinary combination of science, technology, and mathematics in education, and finally to infuse the Engineering Education into such combination to formulate the STEM (Science-Technology engineering Mathematics) Curriculum. So far the United States has also started providing academic degree for such curriculum plan, as Virginia State University does it well. In addition, many relevant researches contends that the Robotics is one of the beneficial option for STEM integration (Chao, et al., 2009), for its strong correlation with mathematics, physics, engineering and science-subjects.

This research is to take the robotics curriculum as the core, with progressive course design, carry on a 20-hour experiment course in ten weeks. It is mainly according to the research findings of the second stage of the bottom-up High-scope Program planned by National Science Council of Taiwan to explore the question that “ how to help the students to construct a model for gaining systematic knowledge and sound understanding about the robotics when Robotics is introduced into the high school technology education course design?’ For this, we adopt concept mapping as the learning strategy for the group project work (abbr. PW) in the course so that the students are able to construct a structural knowledge about the robotics through the discussion in illustrating their concept mappings, which on the other hand builds a miniature of the whole curriculum for follow-up references. The main procedures of the course are as followed. 1) Collecting relevant documents and materials for course design 2) Hold the specialists meeting and examine the course content 3) Carrying on a ten-week/20hrs robotics course respectively for control group and baseline group. 4) Using both quantitative and qualitative analysis to evaluate the students’ learning reflections and their learning effectiveness 5) Presenting conclusion and advices.

2. LITERATURE REVIEW

2.1 Concept mapping

The concept mapping is originated from a research proposal of Joseph D Novak and his colleagues in the Cornell University, whose purpose is to understand the developing progress of children’s cognitive structure during their acquisition in nature sciences. It was later developed into learning strategy. The theory of concept mapping is formulated through ‘assimilation theory for cognitive learning’ argued by David Ausubel, which sees a concept as a level structure. The concept of the upper strata is the most general and has generality, called the superordinate concept. The lower floors represent the more specific concept, called subordinate concept (Novak 1995).

Generally speaking, the superordinate concept lasts longer, which resembles the ROM of a computer; on the other hand, the subordinate concept is more of a temporary memory which resembles the RAM of a computer. It is the most suitable for teachers to approach from the general concept in the beginning, and then gradually enter into the explanation of specific concepts. In the teaching process from generalization to differentiation, the learners are able to

understand a new concept and its background knowledge (superordinate concept), and through the progressive differentiation which unites individual knowledge units, it forms a well-organized knowledge structure. This process is called integrative reconciliation, which plays an extraordinary role in meaningful learning.

Research indicates that concept mapping is an effective learning strategy that precipitates meaningful learning in child and adult learners, and in a variety of domains, and used in science education, mathematics education and information engineering and other fields. (Sturm et al., 2002 ; Shawn,2000) In general, the concept mapping experiments can be divided into several treatments including “individual concept maps”, “cooperative concept maps”, “fill in the map”, and “expert-constructed concept maps”. Kwon & Cifuentes (2007) indicated that cooperative-mapping learners do not outperform individual-mapping learners on learning performance, but Kinchin and Hay (2005) had opposite findings that a cooperative-mapping group works most effectively when group members bring different perspectives to the learning. In this study, used concept mapping as learning strategy in EG project work active implementation, hoping through the discussion process can inspire reflection learning. Furthermore, we propose that the benefits of concept mapping may extend beyond achievement gains to include positive effects on other-related variables such as learning attitude, reflective learning, and gains of learning.

2.2 Project work

Project work (PW) derived from the constructivist theory, believe that traditional teaching activities require constructing as an active learning environment, which is to provide learners opportunity to choose exploring topics with real and value. In the process of exploration through the problem, try to find the answer, with others, and use of technology tools to make learning outcomes or work(Giilbahar & Tinmaz, 2006 ; Luehmann, 2001).

Especially aim student to conduct cognitive, skill, emotional learning for interesting or controversial issues of teaching-related topics, explore the key point of problem in depth and bring up cognitive thinking, inquiry skills to achieve high-level problem-solving learning(Gubacs, 2004 ; Grant & Branch, 2005).

The basic steps of project work in general can be summarized as follows: preparation stage, problem solving stage, evaluation and feedback stage. Collaborative learning can arise learner to develop an open-mind and understand that knowledge is co-constructed (Torp and Sage, 1998). Giilbahar & Tinmaz (2006) indicate collaborative learning process of PW popular by majority of students and can be made to enhance project multiple dimensions ability involve acknowledge, skills, affection and creativity.

In other words, PW, as teaching activities guide students try to explore and solve problems and then active learning, can transfer student from acceptor of knowledge to an active knowledge explorer in learning process.

Therefore, the implementation of PW is important teaching activities in science or engineering education. Although many of the study use statistical analysis through the questionnaire indicate the importance of PW, but little research has been to explore “bring engineering education into high school level” in Taiwan, and which pedagogy strategies or method, example as PW activity, problem-solving and concept mapping learning can arise high school student interesting in engineering. It may be due to down roots in engineering education is not taken seriously before, but now is really an important topic. The study focus on using concept mapping learning strategy can influence students’ reflective learning in PW activity for robot curriculum.

2.3 Reflection learning

Boud, Keogh and Walker (1985) who offer a working definition for reflection, stating that

“reflection is an important human activity in which people recapture their experience, think about it, mull it over and evaluate it. It is this working with experience that is important to learning” .

Scanlon and Chernomas's (1997) proposed three-stage model of reflective learning: The first stage of reflection is awareness, the second stage of reflection is critically analyses should involve critical thinking and evaluation and the third stage of reflection is learning which involve the development of a new perspective based on one's critical analysis and new knowledge from reflection. This study used this model as the basis for viewing the students reflective learning, to understand and verified students learning situation from the signs which implicit in semi-structured interview and final report.

3. PURPOSE

This study would try to answer the following research questions based on the analysis from group hands-on project discussion record, semi-structure interviews and survey results:

- (a). Can concept mapping be used to promote meaningful reflection learning in K-12 Engineering education?
- (b). What differences were between experimental group (EG) and control group (CG) in learning satisfaction and experience?

3. METHODOLOGY

3.1. Research design

A case study of action research design was used to provide evidence regarding answers to the questions of this paper. The evaluation of case study designs is often used to assess and explain the results of specific interventions which have been implemented in a real-life context (Yin, 1993). As we aimed to investigate the influence of the integration of concept mapping learning strategy and PW activities to robot curriculum, we adopted an exploratory case study methodology. Students' learning worksheets, self-reflection records, group discussion records, final report of PW and semi-structured interview were analyzed qualitatively to provide insight into the empirical findings. A survey of the learners' degree of learning satisfaction and experience was implemented to the students after the experiment curriculum was finished. Using both quantitative and qualitative methods helps triangulate results from diverse data sources. Within mixed methods the researchers can inspect those different and overlapping facets of phenomenon, discover paradoxes, contradictions, and new perspectives, and expand the scope and breadth of a study (Tashakkori & Teddlie, 2003).

3.2 Participants

3.2.1. Teachers

One teachers carrying out the teaching instructions for this curriculum is from TCGS and has taught computer science and technology course for about 12 years. Besides, we invited another living technology teacher in TCGS and a professor from NCUE, Taiwan, to provide feedback on the course and suggestions on instructional skills.

3.2.2 Students

Participants of this study were the eighty-five 10th graders with all females from two classes in TCGS, Taiwan. Among these students, 41 female students were in the general class 208 and anthers 45 female students were in the general classes 207. These students are tenth graders registered in TCGS in August, 2009, and their average age is 17. They have basic computer skills but had no programming or robot learning experience. Since these students were tested in the admission, their educational experiences were similar. T-tests showed that the academic performance of each class was not different ($p > 0.1$).

3.3 Material

3.3.1 LEGO Mindstorms Education

Because the average high school students do not have the knowledge of basic electronic logical circuit and automatic control theory, LEGO's MindStorms NXT was chosen to be the robotic system for its many benefits (David J. & Igor M. Verner. 2002). Teachers can explain the relative controlling or mechanism theories by demonstrating MindStorms; also, students can easily find resolutions by using LEGO during problem solving activities.

3.3.2 Robot Lab

The Robot Lab is equipped with sixteen computers and eighty five sets of LEGO MINDSTORMS. On an average, three students are distributed to use one computer and each one can use own set of LEGO MINDSTORMS in robotics curriculum.

3.4 Procedure

The experiment was conducted in the TCGS Robot lab for 10-weeks included two steps. At the first four weeks, the experimental group and control group of students implemented robot basic curriculum at the same time. In addition to the students in experimental group in the fifth week attended the extra concept mapping lessons for two hours. During the fifth to the tenth week, each group started to build the sumo robot of their own, while students in the experimental group were asked to discuss the concept mapping, and then reported the results in their final report.

After the Experimental curriculum, all participants were encouraged to answer the questionnaire as honestly as possible, as there were no right or wrong answers. They were informed about the confidential and anonymous treatment of their responses to the survey.

3.5 Data collection and analysis

Qualitative data of this research include learning worksheets, group discussion records, group final reports and semi-structured interview with open ended questions in order to understand student's other comments on this experiment curriculum. We used qualitative analysis tools to analyze the qualitative data. For quantitative data analysis, we adopted descriptive statistics analysis method to analyze assessment of learners' degree of satisfaction & experience, an independent sample t-test was used in this research, test value is 3.5 which is then used in analyzing each question and compare with 3.5 to determine whether it has reached significant level. The significant level was $\alpha=0.01$.; at last, we describe the relation among each variable.

The questionnaire consisted of five dimensions: Teaching strategy, Learning attitude, Learning gains, Reflective learning, and Course cognition of the robot curriculum, and there are 24 items in total. The content of the questionnaire was determined by the discussion of the researchers and checked by holding an expert meeting to enhance its expert validity. Then the questionnaire was administered to a smaller sampling of subjects (Cronbach $\alpha=0.9528$) and revised as "the Assessment for learner satisfaction and experience on robot curriculum."

4.6 Data reliability and validity

In order to promote the quality and credibility of the study, according to Lincoln and Guba (1985) have proposed to increase the reliability indicators: credibility, migration, reliability and verifiability. In-field observation, analysis of participants' group-discussion records, four times semi-structure interviews and final report of each group' project work were employed in the study to achieve a triangulation of qualitative data.

5. RESULT AND DISCUSSION

5.1 Quantitative analysis

5.1.1 The analysis of learning satisfaction and experience (descriptive statistics)

Aiming at the analysis of curriculum satisfaction and experience which proceeded in 10th week for experiment group and control group, we found out that the average score for the satisfaction of entire course in experiment group was 3.93, the average score of each dimension as show in Table1. Teaching strategy was 3.9, learning attitude was 3.7, reflection was 4.14, learning gains was 4.07, and course cognition was 3.85. According to result above, we could know students in experiment group obtained lower scores in learning attitude and course cognition.

Table1
Descriptive statistics for experiment group

dimension	M	S.D.	t ($\mu=3.5$)
Teaching strategy	3.90	0.43	6.17**
Learning attitude	3.70	0.41	3.29**
Learning gains	4.07	0.43	8.85**
Reflective learning	4.14	0.38	11.24**
Course cognition	3.85	0.57	4.11**
Tol.	3.93	0.38	7.54**

N=44, test value=3.5, *P<.05, **P<.01, ***<.001

Students in control group got a lower score in entire curriculum satisfaction (3.8) as show in Table2, especially in the average score of teaching strategy and learning attitude, moreover in the dimension of reflective learning was not significant.

Table2.
Descriptive statistics for control group

dimension	M	S.D.	t ($\mu=3.5$)
Teaching strategy	3.84	0.47	4.68**
Learning attitude	3.62	0.44	1.75**
Learning gains	4.00	0.43	7.38
Reflective learning	3.79	0.45	4.09**
Course cognition	3.73	0.67	2.21*
Tol.	3.80	0.40	4.69**

N=41, N=44, , test value=3.5, *P<.05, **P<.01, ***<.001

5.1.2 Difference between experiment group and control group

Research question two was to investigate whether the effect of the concept maps constructed cooperatively exceeded the effect of those without concept map constructed in PW. Table 8 summarizes the descriptive results of the independent t-test. The mean score for the experiment group was 4.14, while the mean score for the control group was 3.79 in reflective learning dimension. Moreover, the experiment group with concept maps constructed collaboratively were of significantly higher quality than control group without concept map constructed in reflective dimension of number 17-19, specifically number19.(t=3.11, p=.01). Therefore, the research

question was answered affirmatively that the effect of the concept maps constructed collaboratively exceeded that without concept map constructed in PW

Table3.

Differences in each dimension scores between CG and EG by independent t test analysis

dimension	item	Control Group	Exp Group	t-value
		Mean	Mean	
Teaching strategy	1	3.93	3.93	0.00
	2	3.88	3.90	0.14
	3	4.24	4.32	0.77
	4	3.78	3.88	0.60
	5	3.39	3.46	0.48
Learning attitude	6	3.66	3.71	0.47
	7	3.71	3.76	0.47
	8	3.63	3.63	0.00
	9	3.80	3.88	0.45
	10	3.29	3.44	1.36
Learning gains	11	3.90	3.90	0.00
	12	3.83	3.90	0.77
	13	4.05	4.17	0.90
	14	3.98	4.02	0.42
	15	4.00	4.00	0.00
	16	4.22	4.32	0.81
Reflective learning	17	3.73	3.98	2.13*
	18	3.71	4.17	2.82*
	19	3.85	4.24	3.11**
	20	3.85	4.10	1.70
Course cognition	21	3.61	3.80	1.11
	22	3.80	3.90	0.57
	23	3.90	4.00	0.66
	24	3.61	3.63	0.14

5.2 Qualitative analysis

5.2.1 Group discussion facilitates learning

Cooperative learning enables students to polish their critical and creative thinking skills in the caring and supportive learning atmosphere (Downs-Lombardi, 1996). From observation in group discussion, students not only formulated comprehensive solutions, but also thought out of the box. Students' critical thinking skills are also discovered in the following dialogue.

"s12: We should accelerate when approaching the objective. s23: I think that, according to the Law of Inertia, we should retrocede and then accelerate to get the utmost momentum. (EU_G5_W10)

"We should add rod beside the robot to sustain it. Through this, we can solve the problem of the high median point. The solution is also pretty creative. (CU_S34_W10)

5.2.2 Discussion of concept mapping was useful for reflective learning

From the three semi-structure interviews, field observation and final report, we tried to inquiry students about their learning reflection, and we got some universality answer. Student in control

group can discuss and propose problem-solving approach in project work, but not in-depth discussion.

“We try to find a solution to the problem, but unfortunately we did not have a record and no in-depth discussion”. (CU_S37_W8)

“It was just a curriculum to learn something about robot; we tried to debug the program to control our robot.” (CU_S14_W10)

Some students in experiment group were inspired their interests and re-recognized of robotics learning activities because of the intervention of concept mapping learning strategies.

“In the discussion of the concept maps, we noticed many things that we overlooked before. For instance, the light sensors could also be used to determine the color of the objects.” (EU_S22_W8)

“After completing the learning concept maps of the robotics, I discovered that the robotics includes knowledge from many other areas. For example, the communications between computers and machines, or the design of robot constructions, these things require extra understanding and learning.” (EU_S13_W10)

According to the learning reflection of students, we found out through the group discussion and drawing process of concept mapping would make students accept and have an in-depth thinking of a blunt and boring engineering course for schoolgirls. Like that, Moon (2004) has been pointed out that reflection leads to deeper learning, to achievement of more complexes and integrated knowledge structures.

5.2.3 The design of problem solving activity can improve students' learning motivation

For the purpose of seeking the reciprocity if EG and CG in the second stage, we applied problem solving method and designed same PW activities for both two groups. We found out during the problem solving process, in order to achieve PW goal, all members of EG and CG were active to look for the solution for problem solving activities. Therefore, both two groups were strong on problem solving motivation, and it also increased the learning motivation accordingly.

“It was like to order the robot follow the straight line, we spent a lot of time to observe and discussion. The program had no problem, and we found out the problem came from the robot structure. Therefore, every time we learned something new from the problem, something teacher did not teach in the class.”(EU_S40_W10)

“Through problem solving, indeed we were able to make the discuss focus on the key point. We would search the related data, such as programming, how to turnaround by the motor control, and so on. Then, we wrote the program or change the sensor together. Comparing with previous introduction course, we felt it was more “certain” because it truly can solve the problem.” (CU_S18_W8)

6. CONCLUSIONS

1. Apply concept mapping learning strategies into cooperative learning was helpful for meaningful learning.

Cooperative learning was better than individual learning and competitive learning to enhance students' problem-solving ability, and with group brainstorming, individual members can promote higher-order thinking. With the cooperation concept mapping application context, can guide the students in discussion of the concept, organized into a structured knowledge, penetrate the core of problem deeply and then reflect on learning. Therefore, collaborative concept mapping can achieve meaningful learning more than individual learning. [Okebukola & Jegede, 1989]

Follow result of the study applied concept mapping learning strategy in PW activities was found to be statistically significant. In other words, adding the concept mapping leaning strategy into group cooperative learning can stimulate reflection on students' learning. However, what are the actual impact factors on this subject recommend further research can explore in deeply.

2. Conduct engineering education into science, technology, mathematics allows high school students to more specific learning

Abstract theoretical knowledge of the subject often affects the effectiveness of student learning. The experimental program applied LEGO robot operation to let students learn how about the practical application for students to learn physics, mathematics theory ex: Wheelbase and turning radius, the relationship between speed and distance. From the results of this study can be extrapolated Robotics STEM Integration curriculum allows high school students have specific learning thinking and also can inspire student interest in Engineering.(Chris B. R. , Kristen W. and Jacob F., 2010) Proposed future research could follow this model, implement a more extensive integration STEM curriculum studies.

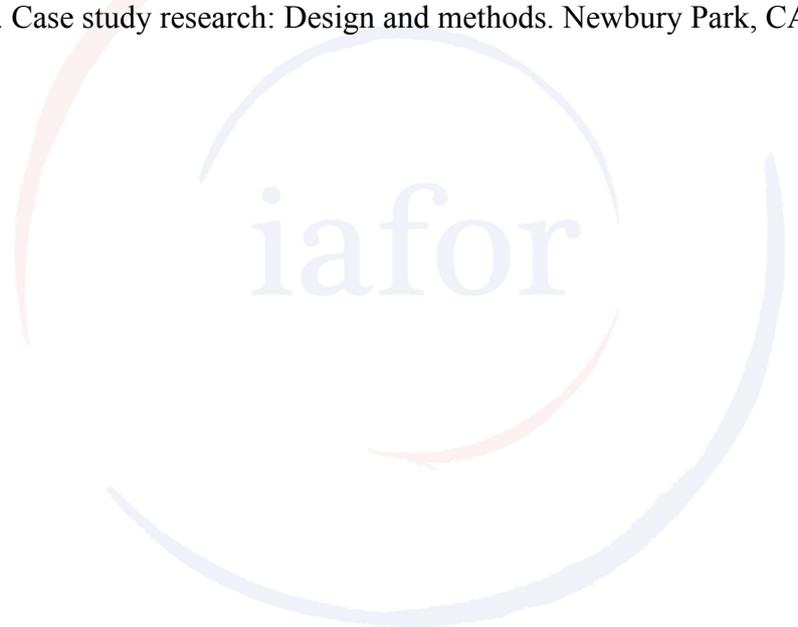
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The logo for 'iafor' is centered on the page. It features the lowercase letters 'iafor' in a light blue, sans-serif font. The text is enclosed within a circular graphic composed of two overlapping, semi-transparent arcs: a light blue one in the foreground and a light red one behind it, creating a sense of depth and movement.

Arise from Compassion: Peace Within, Peace Between

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Abstract

This paper presents seven profiles of non-English majors at a religion-based technology college to highlight the impact of learning motivation from international service learning in Madrid and London, through sign language arts performances and Buddhist food rituals. The students diligently performed a sign language musical to pray for the victims of the massive earthquakes and tsunamis in Japan, and promoted vegetarian diet practices through Buddhist food rituals.

The research method entailed a naturalistic inquiry, involving observations, interviews, and journal entries. Case summaries were presented to document the students' reflections. None of the seven students met the CEF A2 language benchmark for English proficiency, but all deeply reflected on their emotions to overcome their learning difficulties, particularly their fears.

One theme targeted the learning task design and effects of kinesthetic and tactile learning. This service-learning project transformed the role of the less able learner into that of a passionate presenter. Another theme revealed the significance of spirituality-oriented language contents that carry the on-site weight of authentic topics, authentic stimulation for preparation and authentic reactions, particularly students' reflections on their willingness.

This study called for spirituality-oriented content for peace education through arts performances and vegetarian food rituals, in which non-English major students had the holistic mission of spreading messages of love and care in English, and affectively expressed their emotions without fear of vocabulary limitations or linguistic knowledge.

Keywords: willingness, fear of speaking, peace education

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Introduction

The use of the arts in language teaching is not out of the ordinary to language educators, as artistic activities relax learners' anxiety through kinesthetic movements of singing, drawing, and performing, based on the theoretical construct of affective filters (Krashen, 1982), the social learning of the Natural Approach (Krashen and Terrell, 1983), the theory of multiple intelligence (Gardner, 1993), and the neuro-developmental approaches of Levine (2003). Starting in 2008, the Tzu Chi College of Technology launched four international exchange delegations to the US, the UK, and Spain to enhance students' English language development by increasing their motivation and confidence through a special arts presentation of a sign language opera. In March 2011, the delegation to the Ming Ai (London) Institute presented artistic performances of sign language musicals and Buddhist food rituals to promote the "New Healthy Vegetarian Lifestyle". This vegetarian diet campaign was a serial program encompassing vegetarian food, spiritual cultivation, environmental responsibility, and the cultural heritage of art. Therefore, the delegates were recruited not necessarily for their high EFL competency, but because of their willingness to engage in the intensive training of signing, singing, and dancing. The exchange projects were more of a form of spiritual education, as the delegates studied the story of Tzu Chi missions and Tzu Chi volunteers' stories, and most importantly, the spiritual teachings of Dharma Master Cheng Yen, who is the founder of the missions and the college.

The delegates must become vegetarians because Buddhist doctrines insist on the principle of "no killing". In addition, the delegates must learn to show decent manners in sitting, standing, walking, and eating. The popular mnemonic rhyme chanted by Tzu Chi volunteers during meal service reads, "a pearl in a dragon's mouth, a phoenix's lowering the head to drink water," which symbolizes the gesture of holding a bowl and chopsticks very much like the nobility. The dragon and the phoenix carry auspicious messages, in that the middle finger of the left hand touches the end tips of chopsticks as back up to keep chopsticks from slipping, while the middle finger of the right hand lifts up the head tips of the chopsticks. At this time, the right hand is seen as the head of the phoenix and the chopsticks are seen as the peaks of the phoenix. The four fingers, not the thumb, of the left hand are to scoop the bowl, in that the left hand is seen as the dragon's mouth and the bowl is seen as a pearl. The delegates must learn the eating manners that model the dignity of eating as a cultural practice, as well as the art of eating. Additionally, English scripts were prepared regarding a vegetarian campaign news report, which the delegates would act out to promote a vegetarian diet.

The purpose of the study is to explore the affective social support of the performing arts international service learning project, where the delegates demonstrate high willingness to overcome fears of public speaking out of a compassionate sentiment to share blessings for the suffering.

Willingness to Communicate

As the early socioeducational model of second language acquisition by Gardner (1995) stressed the motivational variable supported by affective components of “integrativeness and attitudes toward learning situations” (p. 2), and the later model of willingness to communicate in L2, by MacIntyre et al (1998), acknowledged a vicious cycle of lacking interaction due to a lack of confidence to create opportunities. A study by Hodis et al (2010) found that, significant inter-individual differences in undergraduate student willingness to communicate in public speaking contexts accounted for differences in communication apprehension levels, ages, and class ranks. The issue of class rank, as the researchers suggested, implied an instructional effort to engage students, other than-first year students, in class activities at the beginning of the semester because they tended to show lower levels of willingness to communicate (WTC) in public speaking contexts. This seemed more of an intergroup motivation (Layer IV in WTC model) or intergroup attitude (Layer V in WTC model), rather than linguistic behavior.

Stankov and Lee (2008) examined the relationship between confidence scores and test performances, and indicated a fluctuating variable of intergroup affiliation, as argued by Leger and Storch (2009), that self-confidence, anxiety, and perceptions of learning environments contributed to different levels of willingness to communicate. Peng and Woodrow (2010) identified learner beliefs on motivation and confidence in Chinese EFL university classrooms through a questionnaire survey that concluded the controlling effect of beliefs on confidence, as follows.

if a student believes that frequently speaking up in class may be despised by others or criticized as “show off,” he or she may develop anxiety before or during speaking, especially when others are remaining silent (p. 856).

The CoP (communities of practice) framework, by Lave and Wenger (1991), provided a more flexible path of instruction, that peripheral participation was encouraged by a sense of belonging to a community of practice. A case study of adult students without appropriate formal high school qualifications, as presented in the research by O’Donnell and Tobbell (2011), implied transitional identity development

through engaging in an entry level course in university, in which the quotidian practices carried more meaning than classroom teaching because “adult students are potentially more vulnerable to difficulties in the management of these transitions” (p. 313). They must actively be engaged in class, which includes the stages of rejection and negotiation of meaning.

Fears of Speaking

As globalization calls for cooperative work among nations, English has become a communication tool, like a cell phone, equipped with market-oriented functions and modes, in which global English speaks louder than the standard English of Anglo heritage, and linguistic corrections yield to communicative exchange. Nonetheless, speaking fears continue to haunt language users on occasions of public speaking, and that public speaking fears prompt more research for treatments and related cultural issues.

Bodie (2010) provides a six-way classification table that explains public speaking anxiety (PSA) constructs, as based on Clevenger’s (1984) classification (see Table 1), which is unable to conclude the impact of treatment due to the state-trait distinctions and the response systems of physiology, cognition, and behavior. Fin et al (2009) examined the effect of exposure therapy on public speaking anxiety to highlight the emotional processing theory (Foa & Kozak, 1985), which states that “normal fear reactions are adaptive” if “accurate perceptions of the speaking situation” are made under the two conditions of activating an anxiety response and new incompatible information that decrease anxiety responses. When a speaker has erroneous perceptions of a dreadful situation, speaker anxiety will override.

On the other hand, the study by Zhou, et al. (2005) argued the social cultural perspective, namely, to be familiar with each other’s cultural heritage and be willing to share various forms of knowledge. According to the study, while some Chinese students may improve their English language skills and knowledge of host culture, other students will remain silent in class communication, which echoes the incomplete emotional processing that directly affect the communicative or silent approach in class. Similarly, the design of a brief, self-directed written cognitive exercise, will encouraged students to address catastrophic thinking related to their public speaking (DiBartolo & Molina, 2010). Hodis examined Asker’s study (1998) involving Hong Kong college students’ favoring public speech to dyadic talk (cited in Hodis, et al, 2010) compared to US students’ favoring dyadic talk, and suggested that public speaking fear is attributed to complex contextual factors of culture and environment, in addition to an innate characteristic. Grace and Gilsdorf (2004) designed classroom

strategies to enhance accounting students' oral presentation skills and found that "confidence" but not "brilliance" has critical impact on students' performance. Therefore, the nature of confidence should be incorporated into the educational process. Stankov and Lee (2008) assessed confidence during language proficiency tests, and determined that "confidence is indeed a psychological trait that is related to, but distinct from, both personality and ability traits" (p. 974). With respect to the participants fear of public speaking, Botella, et al (2009), reported no significant differences of efficacy between tele-psychology using an Internet-based self-help treatment and therapist-administered treatment, and the extent of treatment credibility, including satisfaction, utility, and confidence, suggested that the issue of promotion facilitates the dissemination of treatment intervention through the use of media.

Peace Education

Given that English has been used for intercultural communication of "the expanding circle" more than "the inner circle," as proposed by Kachru (cited in Graddol, 2006), content-based instruction would be practiced in a greater variety of forms and contexts, and peace education has been recommended as critical for integration with foreign language teaching. Popovic's enthusiastic speech on peace linguistics (2008) introduced the concept of the "responsible use of language," and that EFL teachers should teach positive language, moral values, and constructively address conflict. Sahin's "common peace language" (2011), also emphasized the importance of developing world conceptions of peace and love through foreign language education from a young age. In terms of intercultural communication, body language and social atmosphere are as important as oral or written language in that intercultural education should be conducted based on the principles of empathy, cooperation, and respect; whereas, national thought or sense of superiority should be avoided (Essinger & Graft, 1987, cited in Sahin, 2011).

A culture of peace was address by UNESCO before the close of the twentieth century, as war, violence, and disease continue to plague the world (Hailu, 1998). A sound learning theory calls for educational processes as "learning to know; learning to do; learning to be; learning to live together" (p.42), involving not only schools, but also health care contexts, work places, mass media, and communities. Gomes de Matos (2008) used the techniques of contraries², alliterations³, and positivizers.⁴

² Communicative contrasts use antonyms to create constructive message. For example, "Don't denigrate; appreciate," "Don't suspect; respect," "Don't manipulate; cooperate."

³ Constructive alliterations are a mnemonic device to repeat the same sound or letter at the beginning of two or more words. For example, DDD stands for "dignify your daily dialogues"; PPP stands for "perceive persons as peace partners."

Pedagogy of positiveness was even applied to the political domain, with the concepts of dignity, harmony, humanity, and the well-being of humankind as reminders in order that diplomats not only learn to be sensitive to the functions of “positivizers,” which enhance constructive actions and attributes, but also learn to read diplomatic texts to identify “positivizers” (Gomes de Matos, 2001).

Presently, in Taiwan, one of the leading NGOs, the Tzu Chi Buddhists Compassion Relief Foundation, has been dedicated to practicing humanitarian relief locally and globally, as well as promoting waste recycling and vegetarianism. Tzu Chi’s efforts have been shown as effective in crossing the boundaries of religions and cultures, with more than 50000 Tzu Chi volunteers and branch offices in over 47 countries, that extend love and care to the needy. In particular, the Indonesian government has been working closely with Tzu Chi volunteers to clean up the Angke River⁵, as well as the outreach community project, the Great Love Village in Cenkarang, which includes 1100 apartment houses, two schools, a polyclinic, a community center, a hawker center, a recycling station, a prayer room, and a special facility for cleaning the bodies of the deceased. The Nurul Iman boarding school of Muslims, though not inside the Great Love Village, began receiving its initial aid of 50 tons of rice every month and a free clinic every six months from Tzu Chi volunteers in 2003, followed by the construction of a two-story building with 24 classrooms and 40 bathrooms paid for by Tzu Chi. Well beyond that, there is a Da Ai Satellite TV Station⁶ in Indonesia that promotes altruistic practices to help the needy across religions and ethnicities. The Angke River project serves the perfect example of peace education, in that compassion is a common value across ethnicities, cultures, languages, and religions. It is a Buddhist doctrine taught by Master Cheng Yen, who firmly feels that a lack of love for others is the root of many problems in the world. “To save the world, we must begin by transforming human hearts” (Tzu Chi Foundation Canada, 2009); meaning the cultivation of spiritual purity. Additionally,

⁴ Positivizers are vocabulary conveying positive meanings. A suggested positivizers list of verbs include “accept, agree, acknowledge, assist, bless, bridge, build, celebrate, commend, construct, converge, cooperate, create, democratize, develop, dignify, educate, emphasize, encourage, enhance, entertain, forgive, foster, help, honor, humanize, improve, instruct, interact, like, love, praise, promote, reconcile, respect, share, support, thank, trust, and unite.”

⁵ Torrential rain assailed Indonesia in January 2002, resulting in serious flooding in Jakarta and the surrounding cities. Master Cheng Yen urged Tzu Chi volunteers to pump out the flood water, clean and decontaminate the disaster areas, and carry out free medical clinics to help the residents living on the Angke River. Later, an outreaching community project was set up in Cenkarang, including 1100 apartment houses, two schools, a polyclinic, a community center, a hawker center, a recycling station, a prayer room, and a special facility for cleaning bodies of the deceased. (Tzu Chi Foundation US Headquarters, 2004)

⁶ The first Da Ai TV Station was set up in Taiwan, with one fourth of the corporate budget coming from Tzu Chi recycling volunteers’ diligent methods of waste recycling.

the ultimate goal of spiritual cultivation is not meant to serve only as individual development, but also as a sincere action to promote compassion in all people, to seek society's progress in peace, and to inspire people to cultivate pure minds so that the world would be free from disasters (Tzu Chi Foundation US Headquarters, 2009).

Methods

This study intends to focus on participants' reflections to change speaking fears through actual experiences during the delegation program to Madrid, Spain, and London, UK. The data was collected through face-to-face sharing and self-reported logs.

The timing happened to coincide with the researchers' poster presentations at the TESOL-Spain 34th Annual Conference in Colegio Ntra. Sra. De las Maravillas, as well as the worldwide Tzu Chi Missions' Vegetarian Campaign, where the college launched this special delegation program to promote a vegetarian diet and spiritual aesthetics through the performing arts of the Buddhist meal service ritual and Tzu Chi sign language musical. The artistic presentation was charming and attracted conference attendants to watch the poster presentations, where the delegates served as living models for interactions. Seven student delegates were recruited, not necessarily due to their high EFL competency, but because of their willingness to engage in the intensive training of signing, singing, and dancing. The delegation program naturally immersed the participants in the spiritual atmosphere of Tzu Chi Missions, with the training contents tailored to Tzu Chi volunteers' stories of love and care extended to the needy. The delegates must become vegetarians, as Buddhist doctrines insist on the principle of "no killing". In addition, the delegates must learn to show decent manners in sitting, standing, walking, and eating. English scripts of vegetarian news casts were prepared for a simulated performance of news cast episodes adapted from the Da Ai TV news program.

The face-to-face sharing served as impromptu interviews to elicit contextualized descriptions of experiences on-site or after the event. The sharing focused on the participants' emotions of excitement and frustration, as well as their touching sentiments. The prompts were initiated by the choreographer of the performance, who would prompt conversation related performance vignettes intended to lead the release of participants' feelings and sentiments.

The intensive training began on February 22nd, and included weekend days, as the delegation would depart for Madrid on March 9th, and London on March 13th. Japan's 311 Earthquake occurred just as the troupe joyfully completed their first-day presentation in TESOL Spain. It was at breakfast the next day that the troupe learned

the news from TV. The delegates were shocked as they thought about their family in Taiwan, as it was predicted that a tsunami would occur in east Taiwan from the aftershocks. Therefore, beginning from the second day, the delegation troupe practiced prayer services at the end of each presentation at the conference. The student delegates would sing a song titled “Love and Care” in English and deliver a paper sculpture artifact of Chinese characters “Ping-An” (meaning calm and safe), and “Chi-Fu” (meaning praying for blessing), to the on-site attendants. Most of the attendants were very attentive to the musical, and offered compliments on the touching message. The delegates repeated this prayer service in London upon ending the performances of the sign language musicals.

The Buddhist Meal Service Ritual was presented in London, where the students of the University College London, Wimbly High Technology College, and Hult International Business School participated in the event, joined the luncheon, or tasted the dessert. The interaction was so warm and enthusiastic that the student delegates naturally blended into conversations with little hesitation, teaching sign language, modeling the way to hold a bowl and chopsticks, explaining the food contents, sharing information about the school and Tzu Chi Missions, and happily posed for pictures.

Three of the sophomore participants (Chi, Hau, and Ling) completed the core course of Tzu Chi Humanities (TCH) in the spring of 2010, while the other four junior participants (Hsin, Ming, Ying, and Wen), from the upper division of a nursing major, completed the TCH course in the fall of 2010, in which they experienced one part of the sign language musical and the Buddhist meal service ritual to fulfill the course requirements. However, with this delegation project, they were required to learn more parts of sign language musical, as well as English news casting on vegetarianism, explaining meal etiquette, and the contents of culinary dishes in English. None of the seven participants passed the CEFA2 benchmark, but were willing to challenge themselves as a mission to promote a vegetarian diet through artistic presentations of the sign language musical and English news casting simulation performances.

Case Summaries

Chi

Chi was a sophomore majoring in accounting information. Prior to the delegation project, Chi signed up for a service learning field trip in the summer of 2010, where she had opportunities to practice in a few sign language musicals. She was more capable at detecting movement errors and enthusiastically reminded the other participants to be alert. Designated as one of the four English news casters, Chi

was not thrilled, as she felt she required more time to perfect her sign language musical performance, “As time progressed, the sense of the mission excites me more, . . .yet I feel exhausted more and more.”

Her nervousness was not resolved until the end of the first-day presentation in Colegio Ntra. Sra. De las Maravillas:

I could see their eyes and smiles. Although I did not really understand their comments, I felt their warmth and support. I see myself as improved a lot in the presentation. I am so happy and feel so confident, and I really feel myself blending into the music. I guess I am more relaxed now because I feel they liked our presentation, and that gives me confidence.

Chi recalled her astonishment when she watched the TV news of Japan’s 311 Earthquake. She felt the urge to do something to help relieve the victims’ suffering, and the delegates paid a visit to a local supermarket in London to raise funds:

We live on the same earth. . . I wanted to sing with my heart to make people [at the supermarket] feel close to the victims. . . I noticed the tears in their eyes when they put the money in the donation box. People truly have kind hearts.

Chi could see herself overcoming the difficult movement from awkwardness to flowing “softness” in her words. Not only had she challenged physical energy, but also spiritual harmony in her heart. During one sharing in London, she released her emotions towards Ming, sobbing:

I kept wondering if I had hurt her [Ming] feelings whenever I reminded her of the turning position and turning movement, because I wanted the audience to see the beautiful performance. . . I never imagined I would develop special bonds to the delegates. One look, one eyebrow uplift, we understand each other. How amazing!

Chi seemed empowered by the experiences of the delegation program, and she wanted to live up to her potential. She recalled her acquaintance with a UCL student, who showed curiosity about the delegation’s motif of promoting vegetarianism, but did not participate in the entertainment activities. In her reflection log, she chose a quote from Master Cheng Yen’s aphorism to conclude her thoughts and feelings, “Don’t look down your potential, because potential has infinite possibilities.”

With respect to the delegation trip that fell on the twelve days of March, each delegate must report a study plan to receive the instructor's acknowledgement on fulfilling their academic requirements. Chi was the first delegate to turn in a study plan upon returning from the trip. She felt she was more ready to encounter difficulties and able to see the silver lining in a grey cloud.

Hau

Hau was also a sophomore majoring in accounting information, but lagged behind on many academic requirements. He was slow and easily distracted, but hoped to change and become more attentive. Since he was the only male in the troupe, he was designated with a responsibility of pulling and carrying heavy luggage, which was a sharp contrast to his normally careless way of getting rid of troublesome errands. He ranked himself as the least capable of the troupe in English competency, but the most optimistic to become acquainted with people. He comments on the sign language musical after Japan's 311 Earthquake were "elegantly graceful," and "awesomely beautiful"

I could feel the power of hands reaching out because I am the last person in line [when performing the piece "Thousand-Handed Bodhisattva"]. Later, when we did the prayer service, I was the one standing in the very front feeling the comforting energy flowing through me. It is so touching.

Hau was proud of the flexibility and adaptability the troupe demonstrated to change the performance format as required by the venue. He was amazed by the wordless communication among the delegates to rehearse by memory when the computer could not play the music, and the performance was pressed for time:

I am so proud of the troupe that we did not need to tell each other in words to do the best but bear in mind to impress the audience with unity and love.

Reflecting on his change, Hau frankly admitted his weakness of oral expression and regretted on his wrong bathroom judgment on March 15, before the troupe left for the UCL. Since there were only two restrooms in the boarding house, Hau generously yielded restroom use to the female delegates, thus, he became the last person to join the troupe.

I learned from the delegation experiences to be more open-minded to opinions, I found myself blurring my speaking. I should practice speaking slowly and clearly. I

need to be more careful with details when handling things. Well prepared, well composed.

Therefore, Hau understood his change must be aided with group support, that he had models to look up to. He did not feel inferior, but rather joyful within the group. The sense of diffidence yielded to his feeling of calmness and security within the troupe.

Ling

Ling was a sophomore majoring in health administration, recruited to the troupe with a culinary background, as her father owned a restaurant and she was very interested in cooking. However, she struggled to familiarize herself with the vegetarian dishes and materials. Her English was limited, and she could not imagine herself talking to foreigners in person. However, she was impressed with her courage to talk to the conference attendants regarding the meaning of the paper sculpture artifact:

I was nervous to approach the audience when we finished singing. I was able to talk to one lady and share the meaning of the Chinese characters on the paper artifact. I told her the artifact was a token of peace and blessing. I could not believe I sounded out the words “peace” and “blessing.” I noticed she nodded her head and smiled. I liked this feeling. I continued talking about our wish to send peace and blessing to the whole world. I was so thrilled that I was able to express my feelings. It was an important step for me.

However, the dinner gathering in the UCL made Ling feel a little depressed, as she could not make the dishes as planned within time frame. Even though she noticed that the students enjoyed the noodles she prepared, she seemed more concerned with her failing to cook the originally planned dish, that her gala of culinary strength seemed weakened, “it looks like I did not make any progress on these days.” Ling’s lament over her mistake was somehow comforted by a Tzu Chi culinary volunteer, and the troupe members’ encouraging words. In her reflection log, she wrote:

I realized that making mistakes indeed is a privilege for students. Master Yin gives me many opportunities to learn by doing. Being a professional means being mindful at every moment, of every person, and with every task. I deeply reflected on the true meaning of being sincere.

Hsin

Hsin was a junior majoring in nursing major. She joined the troupe as an act of mixed motivations. She remembered a moment when performing the musical “Cultivating the Spirit” in class, and being reminded to make more gentle movements, she was very annoyed because she had learned ballet from a young age and she could not believe the degrading comment from the mentor. In addition, she failed English Reading in the spring of 2010, and she truly wanted to prove her language competence as a delegate. Moreover, she considered the visit as fulfilling a promise to “go home to Spain,” as she was a Spanish descendant through her deceased grandmother. Therefore, she was overwhelmingly moved by the sight of Tzu Chi volunteers greeting them at Heathrow Airport, and she felt like she was going home. Describing her excitement when the delegation settled down at a local hotel the first night, she constantly held a pencil, jotting down observations and reflections. After the first-day presentation in Colegio Ntra. Sra. De las Maravillas, she came to the realization that the comment “gentle movements” meant more of a spiritual calmness than “performing”:

I found myself feeling more peaceful as the presentation was about to begin. When I heard the other delegates’ anxiously checking on the socks, I knew my mind was ready to reach the audience . . .

Hsin had been meticulously careful reading the audience’s mind, whether it was in the corridor of the conference venue in Madrid or during fund raising in the supermarket in London:

I noticed a Chinese girl about my age in the shopping isle continuously looking at us singing and holding the donation box. I even caught her eyes and read the change of alienation to recognition, and unbelievably, her hands covered the tears on her face. I was so touched by her emotions, I could not walk into the disaster as a rescuer, but I shared compassion with people on the other side of the globe. We truly are a family on this planet.

Additionally, Hsin resumed the news casting simulation task to promote vegetarianism together with the three female delegates. However, as she could not fluently recite the script, she felt frustrated. Yet, with the sign language musical, she appeared more confident when communicating with the audience, without the worry of fluency, but more of spiritual communing. In her reflection log, she recalled the audience approaching her, applauding the performance and sharing spiritual inspirations, that she had transcended the barrier of English proficiency:

I could sense the audience's doubtful mind before the presentation. However, I knew they would be transformed by the touching message of our performance and reality showed the audience was impressed, through admiring looks, and even passionately shared their emotions through tears, or a sincere tone of voice saying "Thank you."

Hsin concluded her reflection log with a philosophical touch, saying, "I have a different world perception, with a humble mind feeling connected to a world family. I have learned to yield right of way and received a wide angle view."

Ying

Ying, like Hsin, was a junior majoring in nursing. She had been active in extracurricular activities of hosting functions and camps. However, Ying had difficulty catching up with the sign language musical, as well as the culinary skills of chopping and slicing. In contrast to her successful experiences of writing articles and hosting discussions, she felt like a failure in the troupe. Yet she tried very hard to tell herself to be optimistic because she looked up to troupe members as role models. She cried sharing her observation of Hsin's graceful etiquette of dining and Ling's strength in making dishes:

I was afraid of becoming a burden to the troupe. I even stained my uniform during the flight. I had been a more able person, good at student activities, instead of a person that needed reminding to improve.

Ying's pressure became so tense that she eventually her resentment burst out towards Hsin, as she was corrected on the manner of tearing bread; whereas, Hsin was praised during breakfast. She sadly tossed out the words, "I could have behaved as gracefully as you." Hsin was annoyed by Ying's remark, and sobbing, she shared this at the vignette the following day. She wanted to tell Ying that she did not intend to make other people look bad, but simply maintained dining etiquette the way she did at home. They cried and hugged each other as a token of shared understanding. In the later days, they developed a sisterhood, sitting together and chatting frequently. Ying realized her weakness in setting dishes, and she would carefully model Hsin's dish setting skills.

Similarly she gained confidence during the blessing ceremony for Japan's 311 Earthquake, when she gathered the courage to share her feelings about Japan's victims and survivors, and was no longer concerned about grammatical accuracy or

her limited vocabulary.

These people seemed patient and willing to listen to my expression. My English is poor, but I expressed my good intentions with heart. I told them what Tzu Chi has been promoting and the cycle of unselfish love. Now I understand that great love extends without boundaries. With great love and good intentions, I speak English with heart. My English proficiency is not as good as Ming, or Wen, but I keep a mindful attitude to make the best of every moment.

Before she joined the delegation, she was doubtful about the Tzu Chi volunteers' dedication to promote unselfish love. During the delegation program, she witnessed the impact of inspiration on college students signing up as volunteers, either to join the vegetarian diet or fund raising. She began to take to heart the mission to spread good messages, she wanted to continue the vegetarian diet for one more month until April:

I feel pressured to become a vegetarian at this moment because I am touched by the sense of the mission, but my will is not strong enough to make a vow to become a life-long vegetarian. I feel I am walking on the path, step by step, and I'm willing to make the first small step.

Ming

Ming was also a junior majoring in nursing major. She honestly shared her motives for joining the troupe; she admired the Tzu Chi volunteers' actions in humanitarian relief around the globe. Although the delegation program was not a humanitarian relief, she considered it a spiritual relief to commune in love and care. She described her excitement at seeing the Tzu Chi volunteers greeting the troupe at Heathrow International Airport after a 16-hour flight:

I cannot believe they greeted us late at night with big bright smiles. They came to pick us up and take us to our lodging place. I really feel connected to them as a family.

Ming was filled with confidence after the first day's presentation, when she saw the audience's smiles. "I felt more relaxed, not tense, because the audience seemed more a family, instead of viewers," commented Ming.

Watching the news clip of Japan's 311 Earthquake on TV, she felt her heart

ached so much because she thought of her family in Taiwan, who might be struck by a forecasted tsunami the following day:

In contrast to my indifferent feelings for the Sichuan Earthquake in 2008, this time I felt shocked and miserable when I thought about my family in Taiwan, who might be struck by a tsunami forecasted for the following day. I must admit, the food [in Madrid] was terrible to my appetite, especially the cheese, which was hard to swallow. Yet I thought of the victims in Japan, who might suffer from hunger and cold, so that I had no right to complain, but felt more of love and care for them.

With such strong feelings towards the victims in Japan, Ming said she had a different sentiment when performing the sign language musical at the conference in Madrid, feeling peaceful, calm, and serene, more in order to inspire the attendees' love and care for the victims, as well as for Mother Earth.

I felt like a different being, full of compassion when I thought of the victims in Japan. I really wanted to call for more blessings and prayers through my singing and sign language in the musical performance. I had never felt so grateful to be alive, to share touching sentiments through performance, and promote vegetarianism as a token of return love for the planet.

When the delegation arrived in London, and was campaigning for vegetarianism at colleges, she noticed the college students were eager to know about Tzu Chi and wanted to know more about Tzu Chi Missions, she realized the impact of the mind effected those initiated by the delegates' will:

The students told me they would sign up for Tzu Chi Collegiate Youths and they thanked us for the message of love and care. I never realized the impact of my actions to make a difference in changing the thoughts of others. Vegetarianism and repentance are indeed the urgent actions we need to take to heal the planet.

Compared with other delegates, Ming seemed more comfortable using English to interact with conference attendees, as well as the college students attending the vegetarian luncheon:

I felt natural using English, not only because English is in our life, but because the contents are very enlightening. I was impressed by the attendees' probing about the meaning of the movement in the sign language musical. They were amazed by the

peaceful feelings radiating from our signing and movements. I never thought I was capable of using English to teach them to perform a sign language musical.

Ming reflected on the special bond developed among the delegates, particularly the feelings of trust and confidence. Most importantly, she no longer looked down on herself as insignificant or trivial, but rather a spiritual seed to spread a peaceful message from her heart.

Wen

Wen was another junior majoring in nursing. She was the oldest delegate, and the shortest in height, so she took the leading role as the first person standing in the spot light to perform the sign language musical “The Innumerable Dharma Ways“ with a choreography of a Thousand-handed Bodhisattava. She also took part in the flower arrangement musical performance, taking up the role of a student learning the art of flower arrangement from a teacher. The first day presentation in Madrid was an escalated memory for her, as a young female EFL teacher, Cloy from the UK, had been attracted to the musical and hung around for the entire day. Wen said she was touched by this young female teacher’s passion about sign the language musical and the delegates were passionately explaining the movements to Cloy:

I found myself overwhelmed with joy watching her imitating our movements. She seemed to blend into the musical with her body movements.

Wen also commented on her earlier mnemonics for the hand movement of waves and tides’ saying “pause, pause, pause,” whereas, later in Madrid she had the different mnemonics of “fly, fly, fly,” that her hand movement showed more gentleness and softness, resembling her change for a humble heart.

The first day’s joy was soon dissolved into sadness the following day when the delegates learned about Japan’s 311 Earthquake. The researchers quickly adapted the program to a prayer ceremony for the victims in Japan, where the delegates would hold paper sculpture artifacts to share a message of peace and blessing. Wen recalled the scene sharing:

I saw tears in the audience’s eyes. How touching it is to feel the audience having a heart for the victims. It seemed love was in everyone’s heart and the audience received a peaceful message from us, they felt compassionate for the victims.

Indeed, Wen passionately expressed her unbearable sorrow to the conference

attendees, and one female professor from New York was so touched by her expressions that they hugged each other. "I think it had to do with my sincere feelings, that I did not feel shy or discouraged by my limited English competence," Wen recalled.

Among the delegates, Wen had the strongest motivation to perfect her English, as she planned to work as a nurse overseas after graduating from college. She was one of the leading news casters in the news casting simulation performance on vegetarianism, and kept rehearsing the script whenever time was available:

I was so nervous that I kept asking Uncle Cheng⁷ if my pronunciation was correct. I was beyond surprise when he told me to say whatever I wanted to say. His trustful expression calmed my tense emotions. Then I remembered my mission, to spread a message of love. I no longer felt dreadful. What mattered most was sincerity and selflessness.

Results

Two major themes emerged from the case summaries.

Affection for Communication

None of the delegates felt confident in their linguistic competence. The delegation project aimed to present sign language musicals and meal service rituals to demonstrate a peaceful message. The sign language musical, through the movement of limbs and body, including facial expressions, is meant as a message and communication. The delegates felt the sorrow and pains of the victims in Japan, and they expressed their compassion through artistic presentation of the sign language musical, which was equivalent to an affective filter, as proposed by Krashen (1982), it relaxed the delegates' nervousness as they not only felt a bond with the victims, but also with the audience. They felt understood by the audience, mostly through the kinesthetic message, but also through the following linguistic elaboration. Their hand movements and facial expressions spoke louder than their words, and the audience yielded the way to the delegates with palms together, holding the paper sculpture artifacts as a token of prayer and blessing. It was a showcase of mutual understanding, as the delegates (or the speakers) perceived the conference attendees (or the speaking situation) as friendly and encouraging, which enabled them to adapt their normal fears

⁷ Uncle Cheng was the nickname given to one of the Tzu Chi volunteers receiving the delegates.

and decrease their anxiety, a phenomenon suggested by Bodie's conceptualization of public speaking anxiety.

During the meal service, the delegates performed the Buddhist ritual of holding a tray and passing bowls in serenity and grace. The performance impressed the audience, and served as an ice-breaking function that allowed the delegates to feel close to the audience, as well as upgrading their position to a "communicating presenter," rather than a "less able learner," where grammatical accuracy and word usage did not discourage the delegates. At this moment, the delegates were regarded as having more knowledge than the audience, and that the college student audience would inquire about food etiquette, eating utensils, and mannerisms from the delegates, who would be responsible for explanations and modeling. Therefore, the delegates gained confidence and motivation to use English. The cultural heritage of meal manners was applied as a strategy to enhance the delegates' presentation skills, following the rationale of the classroom presentation exercises Grace and Gilsdorf (2004).

Peace to Confidence

Another theme revealed the significance of spirituality-oriented language contents to relieve the delegates' anxiety. The primary task for all the delegates was to share a message of peace, with love and care to humankind and the planet. The incidental disaster of Japan's 311 Earthquake alarmed the delegates to the reality and urgency of the calling to make life style changes. The contents of the sign language musical were based on the stories of Tzu Chi volunteers, which were presented in music and lyrics, transforming the delegates to become the spokespersons of a culture of peace (Hailu, 1998), under the name of the Tzu Chi Missions, crossing ethnicities, languages, cultures, and religions.

The meal service rituals and prayer gatherings were performed to create an atmosphere of serenity, blessing, and gratitude, bearing a mirror image reflecting one's compassion and peacefulness. Where there is peace, there is etiquette. More specifically, the calling for a no meat diet was associated with spirituality and peace with all forms of life. Therefore, the delegates themselves not only practiced vegetarian diets, but also promoted the practice through ritual performances. With each performance, they internalized the feelings of serenity and peace through body language, which resembled the functions of linguistic "positivizers," as proposed by Gomes de Matos (2001). When the delegates were verbally interacting with the audience of college students, their body and facial expressions had become a text of peace for the audience to read and reflect upon. Therefore the graceful movements of

the hands in the sign language musical were associated with the peaceful calling of no meat in the food ritual. When the delegates were inquired about their training and their motives to promote vegetarianism, they felt they were being appraised and complimented, and accordingly, felt confident to share the compassion, and were relieved to receive the positive feedback of love towards the victims in Japan.

Conclusions

Dörnyei 's (2003) review on second language acquisition study notes the integrative aspect as the most researched facet, in which "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), and this integrative disposition has to do more with psychological and emotional identification. However, what seems to be missing in current L2 studies is language behavior, rather than proficiency measures.

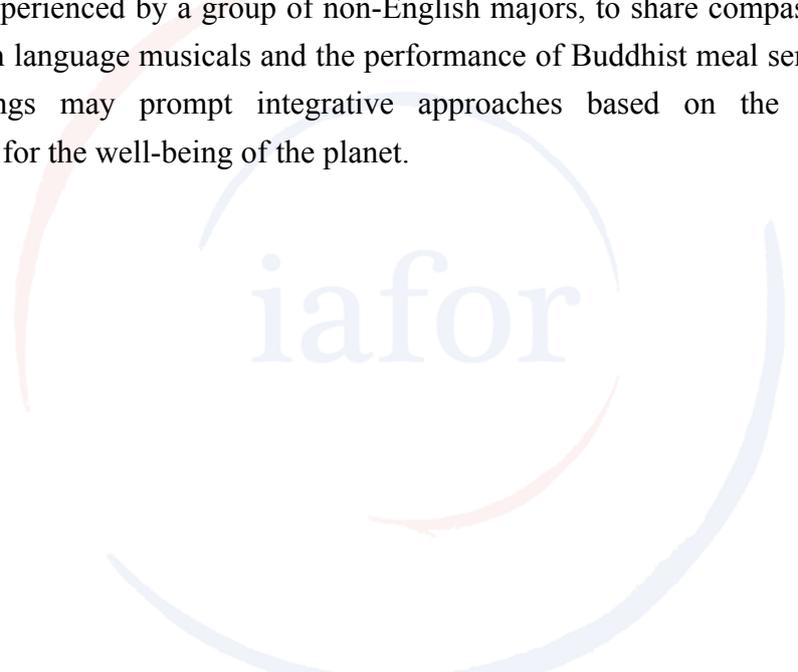
This study presents seven profiles of non-English majors participating in a service learning project, in which the delegates received intensive training to perform sign language musicals and Buddhist meal service rituals that promote vegetarianism. During the program, the delegates gradually developed confidence in communication, both orally and spiritually, and honestly reflected on their changes, which were empowered by their strong feelings for the disaster victims. Wen's natural sharing of her sorrows for the victims in Japan with one of the professors on site proved an integrative example of the linguistic and psychological approaches of teaching based on spiritual-oriented contents of unselfish giving, such as the choreographic image of a thousand-handed bodhisattva's hand stretching out. We argue that spiritual-oriented content has much to offer peace education through arts performances, in which English as a global language needs to be responsible for a culture of peace.

The study also found a connection between communicating and presenting. Prior to Japan's disaster, the audience had been amazed by the delegates' hand movements, body postures, and facial expressions, while the delegates were escalated by their successful presentation. However, on the next day after the broadcast news of Japan's 311 Earthquake, the delegates did not see themselves as presenting a performance, but more of communicating a message of love. Not only was the audience touched by the delegates' praying service, presented through song, and delivered as a complimentary token of blessing for the victims in Japan, the delegates perceived the context as a global family that seemed patient and understanding of their exchange of words and feelings. One Spanish professor was so moved by the performance, she commented on her emotional relief due to the peace and spirituality

embedded in the performers' hand movements, which comforted her chaotic mind.

Although the delegates' linguistic communication seemed limited, their willingness to communicate was not deterred in the promotion of vegetarianism, as they could perform the Buddhist meal service ritual and the news cast simulation to initiate communication on the topics of holding a bowl, using chopsticks, and explaining the contents of a vegetarian meal. It was more like an "inclusive knowledge sharing," as suggested by Zhou et al (2005), of "reciprocal cultural familiarity." To the delegates, their mission was to spread a message of love and care, not only verbally, but also spiritually; that the context would be transformed to a community of peace where language carried spiritual connotations of love and care.

This study did not intend to showcase a treatment that alleviates speaking fears, but was intended as a pilot investigation to increase the understanding of a culture of peace, as experienced by a group of non-English majors, to share compassion beliefs through sign language musicals and the performance of Buddhist meal service rituals. Such findings may prompt integrative approaches based on the mindset of compassion for the well-being of the planet.

The logo for '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 circular graphic composed of two overlapping, curved lines: a light blue outer arc and a light red inner arc, creating a sense of motion or a stylized 'i'.

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Age at school entry, accumulation of human capital and educational guidance: the case of France¹.

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Abstract

The paper proposes an econometric analysis that aims at evaluating the impact of age at primary school entry on human capital accumulation and educational guidance in France.

There is now a large amount of literature on the influence of age at school entry on educational and labour market outcomes. These works provide mixed empirical evidence. Yet, no study deals with *the specific impact of age at school entry* in primary school on some educational outcomes, for the case of France. However, if the legal moment to enter primary school is September of the civil year when a child is 6, there exist many dispensation cases in the French education system, which allows for early or late entry at primary school. In addition, among children who enter regularly at primary school, some are older than others because there may be some substantial differences in birth month. These two features provide a natural experiment which allows for important variations in age at school entry measured in months.

To test the impact of age at school entry on both human capital accumulation and educational guidance for the French case, we use cross-section micro data from the 'Training and Occupational Skills' surveys (*Formation et Qualification Professionnelle*, INSEE, 1993 and 2003). We use instrumental variable approach (2SLS or instrumental variables probit) to take into account possible unobserved individual heterogeneity. For the whole sample, we find no impact on certain educational outcomes: years of schooling, level of diploma. But we find an impact on the probability to repeat at least a year. We also find evidence that the age at school entry has an impact on the type (*i.e.* vocational vs 'general') of pursued education or obtained diploma. These findings suggest that the effective age at school entry has an impact on the educational guidance of an individual. We also conduct separated regression on sub-samples of women and men which qualify these results.

Keywords: Human capital, Age at school entry, Education Systems, Instrumental variables

Classification JEL: I21, J13, J24

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1. Introduction

The paper proposes an empirical analysis that aims at evaluating the impact of age at primary school entry on educational outcomes (proxies for human capital and indicators for educational guidance) in France.

Mixed evidence is found in empirical studies focusing on the impact of age at school entry on both educational and labour market outcomes (e.g. Fredriksson and Öckert, 2005; Kawaguchi, 2009). This mixed evidence probably largely comes from individual heterogeneity not always taken into account, and/or countries-specific effects. We propose in our paper to re-assess this subject for the case of France, by analysing the impact of age at primary school entry on human capital accumulation and educational guidance.

In France, the regular ‘timing’ to enter primary school is the September of the civil *year* when the child gets his 6 years. This entry comes normally (but not mandatory) after 3 years in pre-primary school. Yet, young children may not enter “regularly”: they may obtain dispensation to enter in primary school later, or even earlier. In addition, among children who enter regularly at primary school, some are older than others because there may be some substantial differences in birth month. These two features provide a natural experiment which allows for important variations in age at school entry measured in months.

We use cross-section micro data coming from the ‘Training and Occupational Skills’ surveys (*Formation et Qualification Professionnelle*, 1993 and 2003) provided by the INSEE (French National Institute for Statistics and Economic Studies), which allow us to have a large sample (around 40,000 individuals).

To observe the impact of age at school entry on educational outcomes, different measures of human capital are used in our econometric estimations. First, we successively use as (individual) human capital indicator the number of years of education, the level of diploma after initial education, and an indicator for possible repeated years during scholarship (Fertig and Kluve, 2005). Then, we analyse the impacts of age at school entry on other educational outcomes (vocational *vs* general education or diploma).

We estimate two types of empirical models: (i) first, we estimate “simple” models by OLS or Maximum likelihood (according to the type of considered outcome); (ii) second, we use instrumental variable approaches (2SLS, instrumental variables probit) to take account for a likely endogeneity of the “age at school entry in primary school” variable. Indeed, it is very likely that a large share of the association between age at school entry and educational outcomes comes from unobserved individual heterogeneity corresponding to selection effects (Fredriksson and Öckert, 2005; Fertig and Kluve, 2005).

We test the impact of age at school entry on educational outcomes. This could be a relevant question for at least three reasons: (i) the importance of the legal age of entry in primary school (and the possible seasonality of entry at school); (ii) the age at school entry could have an effect on the type of initial education pursued by an individual; (iii) if there is an impact of the age of entry on some educational outcomes, age at school entry is likely to have some effects on transitions to work. Indeed, the diploma is a good predictor of the individual's socio-professional category.

Our econometric analysis based on French data shows no impact of the age of entry at school on some educational outcomes like the number of years of schooling or the level of diploma. We also show that the age at school entry has an effect: (i) on the probability to repeat at least one year during scholarship; (ii) on the *type* of initial formation pursued (vocational *vs* ‘general’ education). Hence, we find evidence for effects of the age at school entry on

educational guidance. We also conduct separated regressions on sub-samples of women and men which qualify the results found.

Section 2 presents the literature related to the effects of the impact of age at school entry on educational and labour market outcomes, then deals with the age at primary school entry in the French education system. The data used are presented in section 3, as well as some descriptive statistics. Section 4 deals with the econometric strategies. Results are presented and discussed in section 5. Section 6 concludes.

2. The impacts of age at school entry: the literature, and the French case

2.1. The literature

The literature related with the effect of age at school entry provides mixed evidence on both *schooling and labour market outcomes*. In the literature, “absolute age effect” is distinguished from the “relative age effect” (see *e.g.* Stipek, 2002). The “absolute age effect” is the effect, for example, to be 6 years old and not 7 years old when starting at school (maturity coming from the aging). The “relative age effect” is relative to *peers*: children who are young when they start school have the disadvantage of being among the *youngest* in the class. The persistence of disadvantages for the youngest children inside a class (notably, in terms of academic results) is usually perceived as the proof of existence of relative age effects².

First, most of the literature focuses on the impact of age of entry at school on *schooling outcomes* (*i.e.*, academic results and educational attainment).

A strand of this literature shows that older students perform better at school in terms of academic results or performance on test scores. Most of the recent studies use an instrumental variable approach to analyse this link. For example, Bedard and Dhuey (2006) show with “Tests in Sciences” data for OECD countries that age has a positive impact on children’s academic results. Black *et al.* (2008) find on Norwegian data that school starting age has a small positive effect on IQ scores measured at age 18. For France, Grenet (2010) finds that the age has a positive effect on academic results.

Another strand of this literature focuses on the impact of age on educational attainment and provides mixed results. Using US data, Angrist and Krueger (1990) show that older entrants on primary school achieve slightly lesser level of education, because of compulsory attendance school entry. Summarizing US studies, Stipek (2002) insists on the fact that age of entry is not a significant predictor of education attainment, even if some short run effect may exist. Surveying studies on the impacts of age, Fredriksson and Öckert (2005) stressed that children with non-delayed entry at school obtain better schooling outcomes (*e.g.* do better at school and have more education). The authors point out that this may come from an unobserved heterogeneity bias, due to omitted variables that are not measurable, as ability level. On Swedish data and by using an instrumental approach, the authors find that children starting school at an older age have better school outcomes (education attainment, academic results). Using the Young Adult Longitudinal Survey (Germany, 1991-1995), Fertig and Kluge (2005) find a negative relation between age at school entry and schooling outcomes (number of drops out, final level of education). Yet, using an instrumental variable approach to capture potential heterogeneity, they find no impact of age at school entry: this shows likely selection (by

² Note that being ‘younger’ may also be associated with advantages. Indeed, parents may want to help more their children if they are younger, and these children may also take benefit of their younger age if they learn « more than at school » (Black *et al.*, 2008)

ability) effects. Bauer and Riphahn (2006) test with Swiss data whether or not intergenerational educational mobility is affected by the time at which pupils are first streamed in secondary school. Late tracking significantly affects mobility and reduces the relative advantage of children of better educated parents. The same authors also evaluate the effect of age at school entry on educational mobility (Bauer and Riphahn, 2009) and find that early age at school entry reduces the relative advantage of children of better educated parents. Black *et al.* (2008) on Norway data find that school starting age has at best, very small impacts on completed years of education for men or women. Grenet (2010) finds on French data that age has an impact on educational trajectories.

Second, few papers insist on the impact of the age of entry at school *on labour market outcomes*. For example, Angrist and Krueger (1991) focus on the impact of season of birth on schooling and earnings, and find that one extra year of schooling enhances earnings by 9,2%. More recently, Dobkin and Ferreira (2007) show that the youngest among ‘regular’ pupils exhibit lower academic performance, but similar labour market outcomes (wages or the probability of employment). Using data from Japan, Kawaguchi (2009) finds positive effects of being older (but regular-entrant) in a cohort both on educational attainment and earnings. These results indicate “relative age effects”, as recognized in the literature (Thompson, 1971; Lien *et al.*, 2005). Grenet (2010) finds very little gap in earnings for individuals born in the last months of a given year relatively to others.

In conclusion, mixed evidence is found in empirical studies focusing on the impact of age at school entry on both educational and labour market outcomes. This mixed evidence probably largely comes from individual heterogeneity that is not always taken into account, and/or countries-specific effects.

2.2. French education system and age at school entry

In France, the regular ‘timing’ to enter primary school is September of the civil *year* when the child is 6 years old. This entry comes normally (but not mandatory) after 3 years in pre-primary school. Yet, young children may not enter “regularly”: they may obtain dispensation to enter in primary school lately, or even earlier. In addition, among children who enter regularly at primary school, but from different birth month, some specific effects may occur (“relative age effect”). Age may impact educational or labour market outcomes by many channels, including ‘intellectual maturity’ (“absolute age effects”), or selection effects (children with higher abilities may enter earlier at school). Finally, it is important to take into account a possible impact of age at school entry on human capital formation and other educational outcomes through ‘cohort effect’ (influence of a specific year of birth).

Few works have studied the impact of birth month on various outcomes for France, as surveyed in Grenet (2008). Yet, to our knowledge, no study has dealt with the specific impact of age at school entry in primary school. Indeed, Grenet (2010) analyses the effects of the age (in months) in the French education system at different moments of the scholarship of an individual, mainly on her academic performances (test scores) and on her educational trajectories. Hence, Grenet (2010) studies a “test age” effect while we focus on an “age at school entry” effect. Moreover, contrary to our paper, this work doesn’t analyse the impacts on human capital levels (levels of diploma, years of schooling).

In our study, we take into account two important features, which form a natural experiment provided by: (i) non-regular entries in primary school (*i.e.*, early or late entry according to the normal ‘legal’ age) which renders substantial difference of age at primary school entry between students, (ii) differences in birth month. For a theoretical range for age at school entry from 69 to 80 months, the non-regular entries extend the range for this age at school

entry from at least ± 1 year (for a delayed or early entry from one year), so ± 12 months. Hence, this natural experiment provides substantial variations in age at school entry measured in months (from at least 57 to 92 months), and permit us to test for the specific impact of ‘detailed’ age at school entry on various educational outcomes.

To observe the impact of age at primary school entry on educational outcomes, three different measures of human capital are firstly used in our econometric estimations: the number of years of education (after corrections for possible repeated years or breaks during scholarships), the level of diploma after initial education, and a dummy variable to indicate possible repeated years during the scholarship (Fertig and Kluve, 2005). We then focus on the impact of age at school entry on two other educational outcomes which reflect educational guidance: vocational vs general education, and vocational vs general diploma.

3. Data and stylised facts

3.1. Data in use and empirical strategy

The ‘Training and Occupational Skills’ surveys

The ‘Training and Occupational Skills’ surveys, or *Formation et Qualification Professionnelle* (FQP) surveys are conducted by the French National Institute for Statistics and Economic Studies (INSEE). FQP surveys provide cross section data. They contain rich information on the occupational status of a representative sample of the population at the time of the survey and five years prior. They also provide information on the educational formation and social mobility between two generations of individuals. Since 1964, these surveys have been conducted following each Population Census. The last one was carried out in 2003. Since 1993, the FQP survey includes individuals aged 20 to 64 and is built using a sample of about 40,000 households that are randomly selected as part of the “master sample” constructed by the INSEE from the Population Census.

FQP is the only source of data providing information on both individual *and* parental level in terms of socio-professional category *and* education for the French Case. Therefore, it correspond to a pertinent source of data to use it to evaluate the impact of age at school entry on schooling outcomes while controlling for educational and social origin.

The final sample

In FQP surveys, some individuals are still in school at the time the survey is conducted, so have not their completed year of schooling or diploma. We take this fact into account, to avoid to introduce some bias in our estimations of educational outcomes equations. A selection model could be estimated (Heckman, 1979), but such a process implies modelling the probability that the individual will complete her studies. In other words, this requires an estimation of the selection equation: it is necessary to determine instruments that determine this probability without explaining the final education level of the individual. Finding such instruments is often difficult (Cameron and Trivedi, 2005). To address this problem, we choose an alternative solution that consists in dropping from our sample all the individuals who are less than 30 years old. Indeed, by the age of 30, the majority of the population has completed formal education. As this criterion is exogenous, no selection bias arises.

In addition and as suggested by Grenet (2010), attention should be paid to the country of birth for the individuals in our sample. Indeed, for a substantial share of the population born abroad and living in France, only the year of birth is known (*i.e.*, birth day and birth month are unknown). In this case, the French administration attributes ‘January’ as default birth month. Hence, the month of January could be artificially over-represented in our sample for

surveyed individuals born abroad, and a potential bias could apply in our analysis. As a consequence, we limit our sample to individuals who are French born, or born in France. After these two adjustments, our database consists in a compilation of data from two (cross-sectional) surveys, FQP 1993 and FQP 2003.

3.2. Main variables

Dependant variables

We successively consider 5 different educational outcomes for an individual as dependant variables: the number of completed years of schooling³, the level of the highest diploma⁴, an indicator for having repeated at least a year during the scholarship, and an indicator for the type (*i.e.*, vocational or general) of pursued *education* or *diploma*.

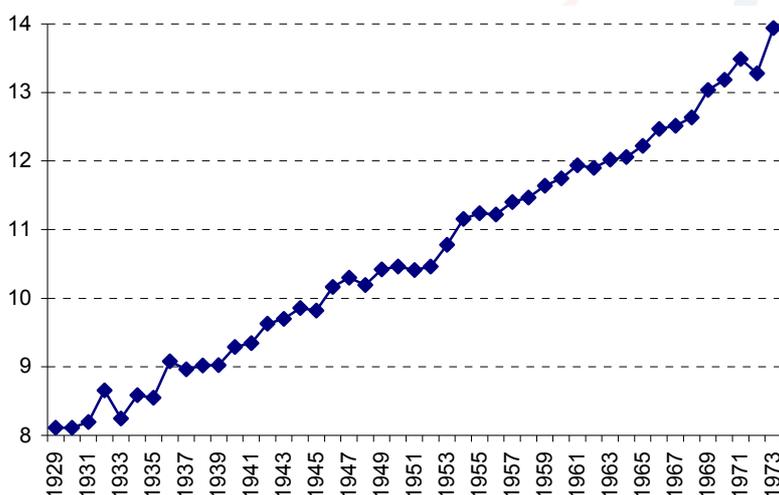
Variables of interest and control variables

Our main variable of interest is the age at school entry, measured in months (see sub-section 2.2.). We also consider some traditional variables used in the human capital literature as control variables in our regressions: the parental human capital, social origin⁵, gender, the number of siblings, the year of birth to control for “cohort effects”.

3.3 Descriptive statistics

Figure 1 displays the average years of schooling by cohort in our sample. The profile of the figure is quite different from that for average years of schooling⁶ by cohort in Angrist and Krueger (1991) which exhibits a slight inverted ‘U’-shape for US data on 1930-1960 period. A continuous rise in average years of schooling is observed on the 1929-1973 period for the French Case. Hence, no specific passed law (school finishing or starting laws) in the French education system seems to clearly have an importance on completed school years.

Figure 1. Average years of schooling by birth cohort in France (1929-1973)



Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author.

³ The number of completed years of schooling is *corrected for repeated years or possible breaks during scholarship*.

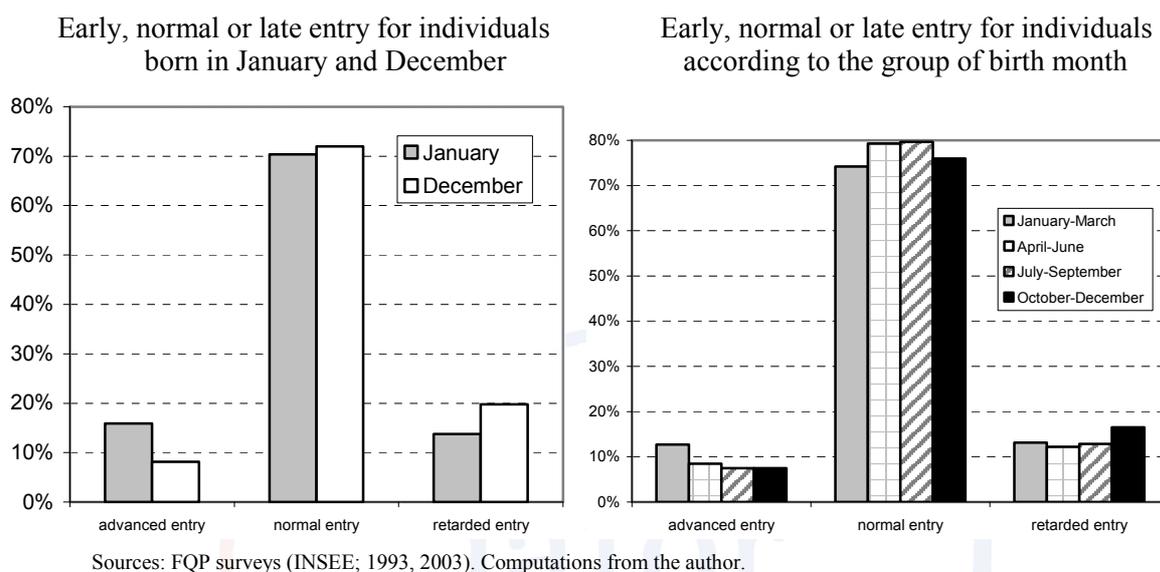
⁴ It is simply noted ‘level of diploma’ in the rest of the document

⁵ We use the father’s socio-professional category. Note that socio-professional category may be used as a relevant proxy for parental income as it is highly correlated with income and very stable in the long run (Nickell, 1982; Ermish et Francesconi, 2002; Johnson, 2002).

⁶ Angrist and Krueger (1991)’s figure has the particularity to show average age of schooling by *quarterly* birth cohort.

Figures 2a and 2b provide descriptive statistics for the whole sample on the distribution of the “type” of entry at primary school, *i.e.* early (before the legal/“normal” year), normal or delayed (after the “normal” year”) entry at school according to the individual’s year of birth. Both figures provide evidence that the more the individual is born “late” on a given year, the lower her/his probability to enter early, and the higher his probability to enter lately. This may be observed by comparing two “extreme” birth months (January and December, see Figure 2a), or for different quarters of birth (Figure 2b).

Figures 2a. and 2b.

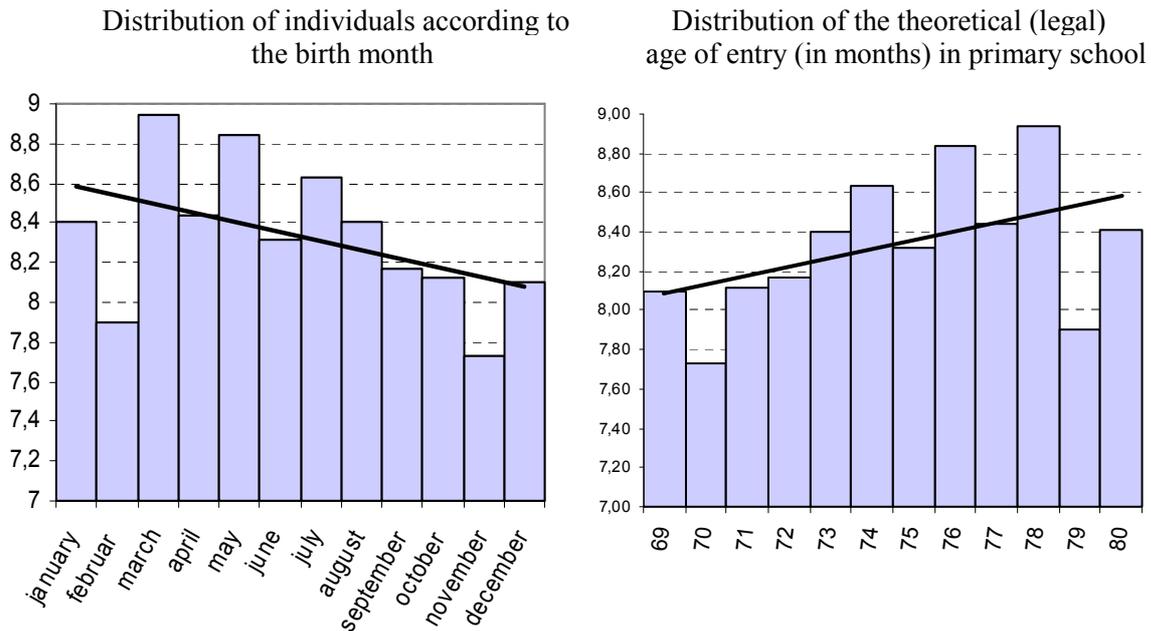


The distribution of the individuals according to the birth month is quite unequal in our sample (Figure 3a), with, basically, a decreasing temporal trend. It reflects the seasonality in the birth month in the French society (Régner-Loilier and Rohrbasser, 2011). Let us now observe the distribution of the theoretical age at school entry according to the birth month (from 69 months to 80 months⁷): a ‘global’ (but not monotonous) inverse trend may be observed⁸ (Figure 3b).

⁷ Entry at primary school takes place in September in France, *the year when the individual gets 6 years old*. Hence, individuals born in September should legally enter at primary school when they are 6 years old (6 complete years, or $6 \times 12 = 72$ months), those who are born in January are 80 months old (6 full years plus 9 months, or $(6 \times 12) + 8 = 80$), those who are born in December are 69 months old (6 full years less three months, or $(6 \times 12) - 3 = 69$, *etc.*).

⁸ The two figures are symmetric, as children who are born in the last months are (theoretically) the youngest students in a given class, and those born in the first months the oldest students.

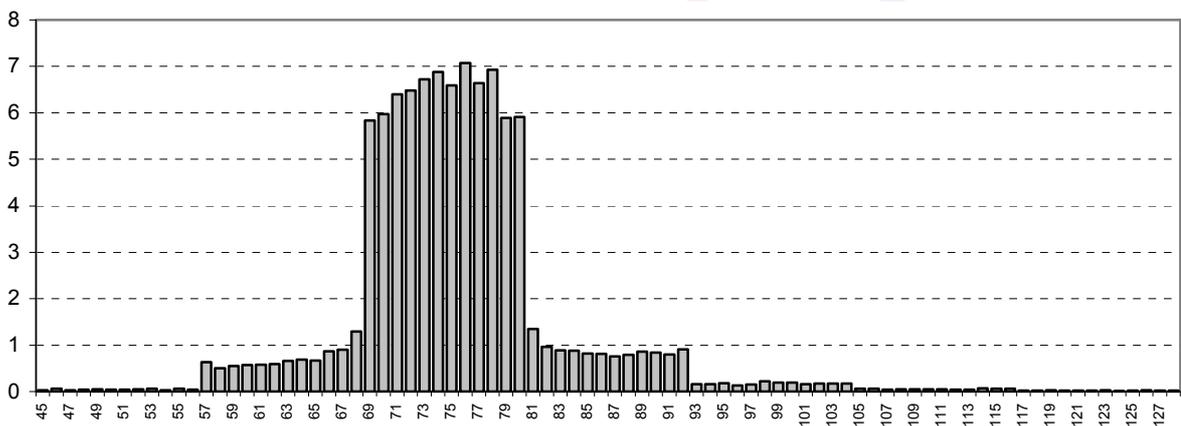
Figures 3a and 3b.



Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author.

Figure 4 displays distribution for effective age at school entry: most of the individuals in our sample actually enter at school between 57 and 92 months. Individuals are quite symmetrically distributed according to their effective age of entry, around a ‘virtual’ axis standing at around an age from 75 months. We also verify that a very large share of the sample has entered primary school regularly⁹ (69 to 80 months old), with a one-year advance (57 to 68 months old), or with a one-year delay (81 to 92 months old).

Figure 4. Distribution of the effective age of entry (in months) in primary school



Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author.

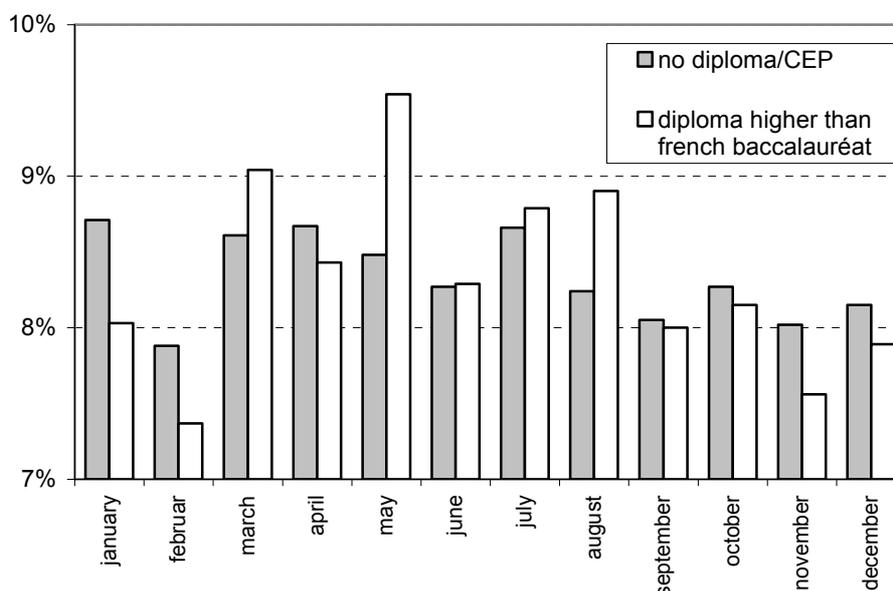
Figure 5 below presents the distribution of diploma¹⁰ according to the birth month in our sample. No evident conclusion may be drawn from this figure, but individuals with lower

⁹ Note that the distribution of the individuals belonging to this ‘type’ of entry is quite similar to that of the individuals in Figure 3b, with a profile as a ‘S’ ‘stretched’ on the right.

¹⁰ Principal levels of diploma in France are exposed in Annexe A1.

diploma appear to be more frequently born in the last months of a year, relatively to those who have higher diploma (*i.e.*, higher than French baccalauréat¹¹).

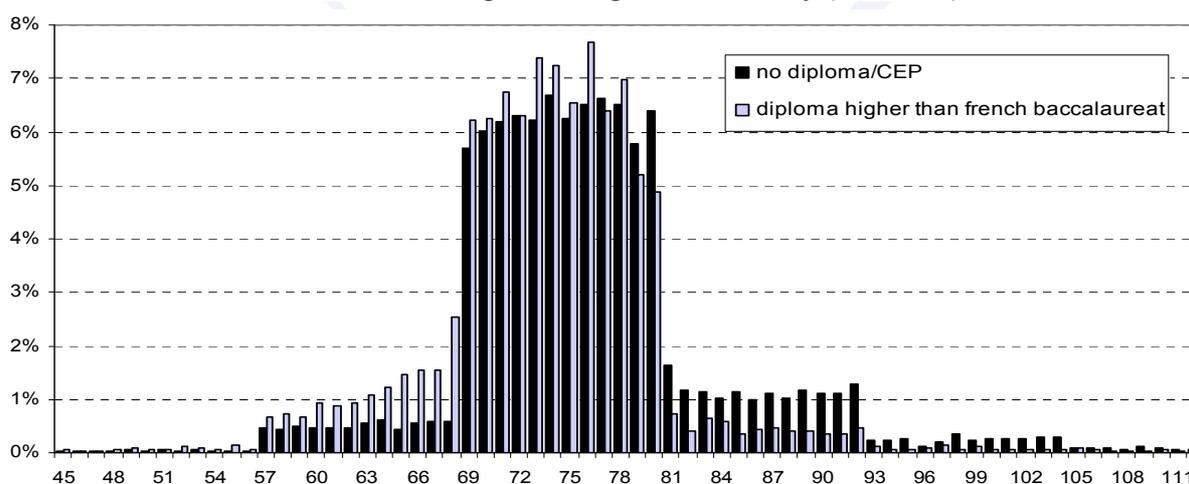
Figure 5. Distribution of diploma according to the birth month



Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author.

Figure 6 provides a similar comparison based on the surveyed individuals' *age at school entry in months*. It appears clearly that on average in our sample, individuals with lower diploma have less frequently entered early, or normally, at school (age: 57 to around 79 months)¹². Furthermore, the same statistics computed for two sub-samples (1929-1951 and 1952-1973 cohorts, see figures A.2. and A.3 in Appendix) exhibit very similar patterns. Moreover, there is negative association, in average in the sample, between the number of years of schooling¹³ and the age at school entry measured in months (Figure 7).

Figure 6. Distribution of individuals from extreme levels of education attainment according to their age at school entry (in months)

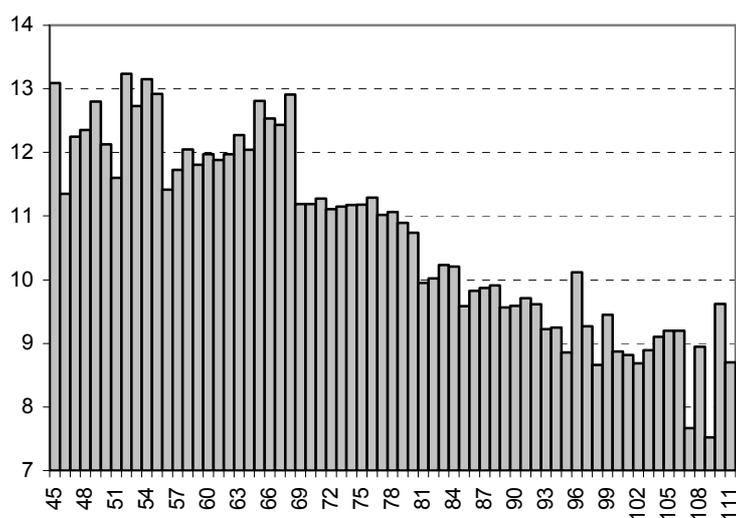


Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author.

¹¹ The French baccalauréat is equivalent to a A-level grade.

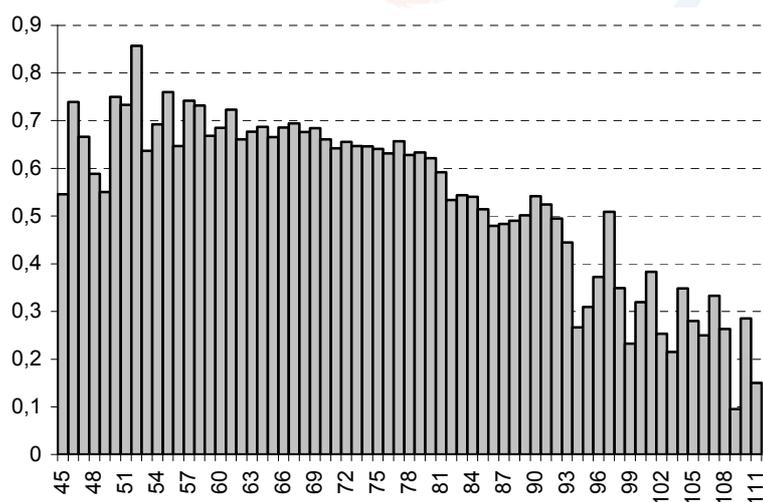
¹² Hence, these individuals have more frequently experienced a late entry at school at school lately (age: older than 81 months).

¹³ It corresponds to the years of schooling *corrected for repeated years or possible breaks during scholarship*.

Figure 7. Average years of schooling according to the age at school entry (in months)

Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author.

Finally, the Figure 8 presents the average probability to repeat at least a year during scholarship, according to the age at school entry measured in months. No clear stylized fact may be inferred from this figure, as the relationship seems to be from ‘quadratic form’, taking the form of an inverted-U-shape with a maximum for an age by around 70 months, ‘deformed’ on the right. Additionally, we shall note that surveyed individuals who experience non-delayed entry present a higher probability to repeat at year during their scholarship, on average¹⁴. Note that in France, the proportion of children who have repeated at least a year during their scholarship has fallen but remains high¹⁵ (Caille, 2004), and higher than in every other OECD country (OCDE, 2003).

Figure 8. Probability to repeat at least a year during scholarship according to the age at school entry (in months)

Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author.

¹⁴ Indeed, the probability to repeat at least a year is 68 % for early entry at school, 64% for normal entry, and 47% for delayed entry in the sample.

¹⁵ Caille (2004) notes that 67 % of the children who entered the ‘sixième’ grade (first grade in secondary school) in 1989 have repeated a year at least one time during their pre-college scholarship.

The descriptive statistics on our sample give some guidelines or suggestions to conduct our econometric analysis. First, older people at school entry tend to be less skilled in terms of initial formation, on average, but this evidence may be misleading because of heterogeneity bias: the econometric analysis (*i.e.*, instrumental variable approach) shall correct for this potential bias. Second, the month of birth isn't sufficient to study the impact of age on educational outcomes; the year of birth (cohort effect) should be a relevant factor as a continuous rise in average years of schooling is observed on the 1929-1973 period. Finally, to use a measure for age at school entry in months is pertinent for the empirical specification as important variation is observed for this indicator.

4. Empirical strategy

We conduct two main types of regressions: (i) 'simple' regressions by ordinary least squares (OLS) or maximum likelihood (ML), (ii) regressions with instrumental variables.

4.1. The naive approach: OLS or ML

We estimate some production functions for educational outcomes. In these functions, our explained variable is a human capital indicator. Our interest variables are *different measures of the effective age at primary school entry*. We also insert some traditional variables used in the human capital literature as control variables in our estimated equations (see section 3.2).

The dependant variable, indicator of human capital, may be of three types: (i) numerical for the years of schooling, (ii) polynomial for the level of diploma, (iii) binomial for the dummy to 'have repeated at least a class', for the dummy to have pursued a vocational (rather than 'general) education, for the dummy to have obtained a vocational (rather than 'general) diploma.

In the first case, human capital is proxied by the years of schooling completed by an individual. The following equation is estimated:

$$h_i = \bar{\delta} + \alpha.y_i + \beta.a_i + \sum_{v=1}^k \gamma_v x_{i,v} + \varepsilon_i \quad (1)$$

In equation (1), a_i stands for an indicator of age at school entry, h_i for the individual's human capital, and y_i for his parent's human capital. The $x_{i,v}$ variables represent other control variables related to the individual. Equation (1) is estimated by OLS.

In the second case, the level of diploma is used as proxy for individual human capital. The level of human capital is used as a latent variable within the framework of an ordered multinomial model, where the explained variable is the *level of the highest diploma of the individual*. Hence, we consider an ordered logit-probit model. In the latter model, the explained variable is discrete with the seven ordered modalities: the first refers to the French lowest level of diploma; the last refers to the French highest level of diploma (see Table A.1 in Appendix for details). The dependant variable of our ordered polynomial model is the level of the highest diploma h_i of the individual and is defined as follows (relation (2) :

$$h_i = \begin{cases} 1 & \text{for } h_i^* < \alpha_1 \\ 2 & \text{for } \alpha_1 \leq h_i^* < \alpha_2 \\ \dots & \\ 6 & \text{for } \alpha_5 \leq h_i^* < \alpha_6 \\ 7 & \text{for } h_i^* \geq \alpha_6 \end{cases} \quad (2)$$

The α_z ($z = 1, \dots, 7$) correspond to thresholds for the latent variable h_i^* that corresponds to the level of human capital that is accumulated by individual i . Since h_i^* is unobserved, we model h_i^* as such:

$$h_i^* = \beta X_i + \varepsilon_i \quad , \quad (3)$$

where X_i represents a vector of explanatory variables (the same as those that are used to estimate equation (1)).

The model is estimated by maximum likelihood.

In the third case, the considered variables of educational outcomes are a dummy to 'have repeated at least a class' [1], a dummy to have pursued a vocational (rather than 'general) education [2], or a dummy to have obtained a vocational (rather than 'general) diploma [3]. These different educational outcomes are successively used as proxy for human capital. The level of human capital is used as a latent variable within the framework of a binomial model, where the explained variable is dummy [1], [2] or [3]. Hence, three binomial logit-probit models are considered. The dependant variable in these models is the value of the dummy h_i of the individual and is defined as follows:

$$h_i = \begin{cases} 0 & \text{if } h_i^* < \alpha_0 \\ 1 & \text{if } h_i^* \geq \alpha_0 \end{cases} \quad (4)$$

α_0 is the threshold for the latent variable h_i^* that corresponds to the educational outcomes of the individual i . Since h_i^* is unobserved, we model h_i^* as such:

$$h_i^* = \beta X_i + \varepsilon_i \quad , \quad (5)$$

where X_i represents a vector of explanatory variables (the same as those that are used to estimate equations (1) and (3)).

Equation (5) is estimated by maximum likelihood (for the defined outcomes [1], [2] and [3]).

4.2. Instrumental variables regressions

To take into account for possible endogeneity of our main variable of interest due to unobserved individual heterogeneity, some regressions are conducted with the use of an instrumental variable approach.

Indeed, it is very likely possible that a large share of the negative association between age at school entry and educational outcomes in our sample (e.g. figure 7) comes from unobserved individual heterogeneity corresponding to selection effects (Fredriksson and Öckert, 2005; Fertig and Kluge, 2005). Late entries at school may be associated with lower levels of human capital because less mature or less able children enter later at school. Individual heterogeneity from other sources may also apply: hence, we decide to endogenize our main variable of

interest (the age measured in *months*) and test its impact on educational outcomes by using an instrumental variable (IV) approach.

The instrument

To conduct IV regressions, we have to determine an instrument to render endogenous our variable of interest. Our instrument is the theoretical age at school entry, where an individual should ‘normally’ enter primary school, measured in months¹⁶ (e.g. Fredriksson and Öckert, 2005; Fertig and Kluge, 2005). This instrument depends only of the birth month of the individual. Two assumptions are required for the validity of an instrument (Cameron and Trivedi, 2005): (i) the instrument is not a regressor in the model explaining the final outcome (*exogeneity*), (ii) there is some association between the instrument and the variable being instrumented (*correlation*). This second assumption is very likely to be met, as most of the individuals in our sample actually enter at school between 57 and 92 months, *i.e.* enter at the age they should enter accord to the school regulation (*cf.* figure 4). It seems harder to conclude about the *first assumption*: the instrument should be exogenous, *i.e.* not correlated with what we may consider as the main source of heterogeneity, student’s unobserved ability. However, the ‘theoretical’ age at school entry in primary school totally depends on the administrative regulation of entry at primary school, which is binding for all children who are 6 years old since the *Jules Ferry Laws* on compulsory primary school (1882). Hence, as the primary school regulation has not changed during the sample period (1929-1973), theoretical age of entry may be viewed as exogenous, as long as family planning does not react to this regulation¹⁷. In addition, as noted in sub-section 3.3, Figure 1 suggests that non specific law in the French education system seems to have an importance on completed years of schooling. Furthermore, as we include in our regressions some controls for the social origin of an individual (parental education and socio-professional categories, see *supra*), possible harmful effects of the violation of the exogeneity assumption of the instrument are likely to be attenuated.

IV methods

For all types of considered educational outcomes (*i.e.*, for numerical, multinomial and binomial dependent variables), we proceed to instrumental variables estimations by two-stage least squares estimations (2SLS). Indeed, 2SLS remains a pertinent method to use even for dichotomous or ordered dependant variable: “*even if the underlying second-stage relationship is nonlinear, linear variables estimates such as two-stage least squares typically capture an average effect of economic interest analogous to the LATE [local average treatment effect] parameter for dummy endogenous regressors*” (Angrist and Krueger, 2001, p. 80). Consider the following equations:

$$a_i = \bar{\gamma} + \psi.l_i + \eta_i \quad , \quad (6)$$

$$h_i = \bar{\delta} + \alpha.y_i + \beta.a_i + \sum_{v=1}^k \gamma_v.x_{i,v} + \varepsilon_i \quad (7)$$

¹⁶ This instrument is very similar to that used by Beddar and Dhuey (2006) which instrument the age at school entry by a variable corresponding to the distance measured in months between the individual’s birth month and the December month. Indeed, our instrument = 69 + this instrument (the instruments are linked by an affine function). Hence, to conduct regressions with this last instrument would provide exactly the same result that with our instrument. See also Fertig and Kluge (2005) for a discussion about the use of the instrument “age at school entry according to the regulation”.

¹⁷ In this case, and as suggested by Fertig and Kluge (2005), this assumption would only be violated at the condition that high ability parents have high-ability children and plan to make them enter at school according to the normal ‘date’ of entry.

where equation (6) endogenizes the age at school entry a_i with the instrument ‘theoretical’ age at school entry, l_i .

In a first step, equation (6) is estimated by OLS. It permits to get estimates \hat{a}_i of a_i . In a second step, equation (7) is estimated by OLS: we regress h_i on $y_i(-1)$, \hat{a}_i and $x_{i,v}$ regressors.

In addition and for robustness check, for the educational outcomes that are binary variables (dummy to have repeated a year, dummy to have pursued a vocational education, dummy to have obtained a vocational diploma), we also conduct instrumental variable probit estimations by using maximum likelihood (ML) in second stage. In this two-steps method, the first step is the same that in 2SLS: equation (4) is estimated by OLS, which permits to get estimates \hat{a}_i of a_i . The second step corresponds to a regression of h_i on the estimated \hat{a}_i and on the control variables, by using ML or minimum Chi-2 method.

We successively present the econometric regressions as follow: (i) regressions for the following educational outcomes: years of schooling, level of diploma, dummy to have repeated a year, then, (ii) regressions for the other outcomes (dummy to have pursued a vocational education, or a dummy to have obtained a vocational diploma). We also present results for regressions on sub-samples of men and women.

5. Results

5.1. The impact of age at school entry on the ‘years of schooling’, ‘level of diploma’, and ‘probability to repeat a grade during scholarship’ outcomes

We firstly test the impact of the month of birth and of the impact of age *in years* on educational outcomes.

The results show a negative impact of the age in years for the year he enters at school on both level of diploma and years of education, and on the probability to repeat at least a year during the scholarship (Table 1, estimations (1), (2) and (3)). Note that the age in years may correspond to a proxy for the timing of school entry (retarded, normal or delayed entry (*cf. infra*)).

We find no significant *impact of the birth month* on the level of diploma and on the years of schooling (Table 1, estimations (4) to (6)). But we find a positive impact of the birth month on the probability to repeat a year, *i.e.* younger children from a given year have a higher probability to experience it (there exists a disadvantage for individuals who belong to the last months of a cohort).

Finally, we find negative impacts of the age at school entry when the age is *measured in months* on educational outcomes (Table 1, estimations (7) to (9)). In other terms, the older an individual enters at school the less he accumulates human capital, and the more she tends to repeat at least one year during her scholarship.

Table 1. Impact of age in years, month of birth and age in months at school entry on different educational outcomes

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		OLS	ML	ML	OLS	ML	ML	OLS	ML	ML
<i>Explained variable</i>		Number of years of education (log.)	Level of diploma	To have repeated at least a year	Number of years of education (log.)	Level of diploma	To have repeated at least a year	Number of years of education (log.)	Level of diploma	To have repeated at least a year
Intercept (s)										
Level of parents education (columns (1), (2) and (3) : log)		0.2226*** (0.0052)	0.1821*** (0.0046)	-0.0108** (0.0051)	0.2282*** (0.0053)	0.1841*** (0.0046)	-0.0061 (0.0050)	0.2223*** (0.0052)	0.1819*** (0.0047)	-0.0108*** (0.0051)
Variables of interest	Age in years at school entry	-0.0587*** (0.0023)	-0.2427*** (0.0173)	-0.4428*** (0.0183)	-	-	-	-	-	-
	Month of birth	-	-	-	0.0003 (0.0003)	-0.0022 (0.0027)	0.0143*** (0.0030)	-	-	-
	Age at school entry (in months)	-	-	-	-	-	-	-0.0042*** (0.0001)	-0.0166*** (0.0012)	-0.0343*** (0.0013)
Year of birth		0.0083*** (0.0001)	0.0318*** (0.0010)	0.0055*** (0.0055)	0.0086*** (0.0001)	0.0331*** (0.0010)	0.0083*** (0.0010)	0.0084*** (0.0001)	0.0320*** (0.0010)	0.0058*** (0.0010)
Be a woman		-0.0072*** (0.0025)	-0.0646*** (0.0190)	-0.1148*** (0.0213)	-0.0063** (0.0025)	-0.0599*** (0.0190)	-0.1068*** (0.0212)	-0.0071*** (0.0025)	-0.0639*** (0.0190)	-0.1149*** (0.0213)
Social origin	Farmer	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
	Store keeper	0.0888*** (0.0050)	0.4932*** (0.0365)	-0.0365 (0.0406)	0.0884*** (0.0051)	0.4878*** (0.0365)	-0.0384 (0.0403)	0.0890*** (0.0050)	0.4933*** (0.0365)	-0.0361 (0.0406)
	Executive	0.2160*** (0.0059)	1.3670*** (0.0499)	-0.2157*** (0.0525)	0.2166*** (0.0060)	1.3630*** (0.0501)	-0.2096*** (0.0519)	0.2165*** (0.0059)	1.3680*** (0.0500)	-0.2139*** (0.0525)
	Intermediate worker	0.1248*** (0.0048)	0.7295*** (0.0374)	-0.0498 (0.0419)	0.1239*** (0.0049)	0.7234*** (0.0374)	-0.0570 (0.0416)	0.1242*** (0.0048)	0.7270*** (0.0374)	-0.0553 (0.04201)
	Employee	0.0742*** (0.0050)	0.3645*** (0.0371)	-0.0391 (0.0419)	0.0714*** (0.0051)	0.3520*** (0.0369)	-0.0586 (0.0416)	0.0741*** (0.0050)	0.3627*** (0.0370)	-0.0396 (0.0420)
	Blue collar worker	-0.0109*** (0.0036)	-0.1820*** (0.0272)	0.0454 (0.0305)	-0.0144*** (0.0037)	-0.1946*** (0.0271)	0.0184 (0.0304)	-0.0115*** (0.0036)	-0.1846*** (0.0272)	0.0415 (0.0305)
Number of brothers and sisters		-0.0190*** (0.0005)	-0.1430*** (0.0045)	0.0184*** (0.0047)	-0.0194*** (0.0005)	-0.1439*** (0.0045)	0.0151*** (0.0047)	-0.0191*** (0.0005)	-0.1433*** (0.0045)	0.0180 (0.0047)
R-Square		0.39	-	-	0.38	-	-	0.39	-	-
Number of individuals		38339	38339	38339	38838	38838	38838	38838	38838	38838

Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author under Stata.

Notes: ***, ** and * stand for significance (respectively at a 1%, 5% or 10% level). Standard errors stand within parentheses.

We conduct other estimations, where we focus on the impact of early, late or “normal” entry at school according to the legal timing (Table 2).

Early entry has a positive impact on educational outcomes while symmetrically, delayed entry has a negative impact on educational outcomes, relatively to “normal entry”. This corroborates the results we find for the impact of the age at school entry measured in years.

Table 2. Impact of regular vs non-regular entry at school on educational outcomes

		(1) OLS	(2) ML	(3) ML
<i>Explained variable</i>		Number of years of education (log.)	Level of diploma	To have repeated at least a year
Intercept (s)				
Level of parental education (column (1) : log)		0.2226*** (0.0052)	0.1811*** (0.0046)	-0.0097 (0.0051)
Variables of interest	Normal age of entry at school	Ref.	Ref.	Ref.
	Early entry at school	0.0773*** (0.0046)	0.4784*** (0.0354)	0.2324*** (0.0388)
	Delayed entry at school	-0.0650*** (0.0039)	-0.2449*** (0.0292)	-0.6792*** (0.0309)
Year of birth		0.0084*** (0.0001)	0.0324*** (0.0010)	0.0049*** (0.0010)
Be a woman		-0.0075*** (0.0025)	-0.0668*** (0.0190)	-0.1162*** (0.0213)
Social origin	Farmer	Ref.	Ref.	Ref.
	Store keeper	0.0890*** (0.0050)	0.4981*** (0.0366)	-0.0396 (0.0406)
	Executive	0.2150*** (0.0059)	1.3642*** (0.0500)	-0.2188*** (0.0524)
	Intermediate worker	0.1251*** (0.0048)	0.7354*** (0.0375)	-0.0529 (0.0419)
	Employee	0.0740*** (0.0050)	0.3688*** (0.037)	-0.0474 (0.0419)
	Blue collar worker	-0.0107*** (0.0036)	-0.1752*** (0.0272)	0.0365 (0.0305)
Number of brothers and sisters		-0.0191*** (0.0005)	-0.1432*** (0.0045)	0.0178*** (0.0047)
R-Square		0.39	-	-
Number of individuals		38339	38213	38339

Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author under Stata.

Notes: ***,** and * stand for significance (respectively at a 1%, 5% or 10% level). Standard errors stand within parentheses.

These first results tend to confirm the negative link between age at school entry and human capital indicators found in the descriptive statistics (see sub-section 3.3): the older an individual enters at school, the less she will accumulate human capital, *ceteris paribus*. In addition, we find that the older she is, the more the probability she repeats at least a year during the scholarship,

But in the empirical analysis so far, we have considered so far the age at school entry as *exogenous*. However, we suspect individual heterogeneity which may have important bias in the estimated regressions so far (see section 4.2.). Hence, we now conduct some instrumental variable (IV) estimations. Hausman test confirms endogeneity for the ‘age at school entry’

variable¹⁸. With an IV approach, we don't find anymore impact of the age (in months) at school entry on the level of diploma or years of schooling (Table 3, estimations (1) and (2)). These results suggest that unobserved heterogeneity explained the significance of the (negative) impact of the age in months at school entry in previous estimations. In other terms, the previously obtained effects were so far the result of endogeneity due to ability, *i.e.* the younger are the best students and the older are such because they are the less good ones. The instrumentation permits to erase the effects of "ability" and to focus on the effects of "maturity".

In addition, we also find, that *the age in months has a negative impact on the probability to repeat at least a year during the scholarship* (Table 3, estimations (3), (4) and (5)), as in previous (non-IV) estimations: being older offers better chances not to repeat a year during the scholarship¹⁹.

Table 3. Instrumental variable estimations of the impact of age at school entry on educational outcomes

		(1) 2SLS	(2) 2SLS	(3) 2SLS	(4) IV (ML)
<i>Explained variable</i>		Number of years of education (log.)	Level of diploma	To have repeated at least a year	
Intercept (s)					
Level of parents education (column (1): log)		0.2277*** (0.0053)	0.1625*** (0.0040)	-0.0019* (0.0011)	-0.0052* (0.0031)
Age of entry at school in months (instrumented)		-0.0004 (0.0004)	0.0018 (0.0025)	-0.0038*** (0.0018)	-0.0102*** (0.0021)
Year of birth		0.0089*** (0.0001)	0.0228*** (0.0008)	0.0016*** (0.0002)	0.0043*** (0.0006)
Be a woman		-0.0063** (0.0025)	-0.0498*** (0.0152)	-0.0255*** (0.0049)	-0.0683*** (0.0131)
Social origin	Farmer	Ref.	Ref.	Ref.	Ref.
	Store keeper	0.0915*** (0.0051)	0.3805*** (0.0301)	-0.0086 (0.0093)	-0.0238 (0.0250)
	Executive	0.2096*** (0.0061)	1.1657*** (0.0428)	-0.0500*** (0.0123)	-0.1322 (0.0323)
	Intermediate worker	0.1259*** (0.0049)	0.5977*** (0.0315)	-0.0127 (0.0096)	-0.0344*** (0.0257)
	Employee	0.0748*** (0.0051)	0.2555*** (0.0302)	-0.0115 (0.0097)	-0.0312 (0.0258)
	Blue collar worker	-0.0119*** (0.0037)	-0.1880*** (0.0202)	0.0069 (0.0070)	0.0184 (0.0188)
Number of brothers and sisters		-0.0196*** (0.0005)	-0.1012*** (0.0030)	0.0037*** (0.0010)	0.0101*** (0.0029)
R-Square		0.38	0.28	0.02	-
Number of individuals		38338	38212	38338	38338
Hausman statistic		101.40	37.43	30.55	-
P-value		0.000	0.000	0.000	-

Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author under Stata.

Notes: ***, ** and * stand for significance (respectively at a 1%, 5% or 10% level). Standard errors stand within parentheses.

Instrument: theoretical age in months at school entry according to the individual's date of birth.

IV (ML): Maximum likelihood estimator is used in second stage.

¹⁸ Indeed, the Hausman statistic and the associated P-value show that we cannot accept the 'null hypothesis' H_0 of exogeneity of this variable (*cf.* table 3).

¹⁹ Nevertheless, we shall note that the coefficient associated to the IV estimation is smaller to that of the maximum likelihood estimation.

As a conclusion, estimations so far indicate that age at primary school entry has no impact on the years of schooling or the level of diploma (this last result is similar to that of Fertig and Kluge, 2005). But it has a significant impact on the probability to repeat a year.

5.2. The impact of age at school entry on ‘type of education / diploma’ outcomes

We now test the possible impacts of age at school entry on the educational guidance. Indeed, the effect of age could take the form of decisions of orientation during scholarship. So, we choose to measure the impact of age at school entry on two other outcomes: *the probability to have attended a vocational education and the probability to have a vocational diploma (or low diploma)*²⁰ rather than a *general diploma* (see *supra*).

Regressions for these educational outcomes are now conducted, by using non-IV, then IV approaches. As in our previous regressions, we use in the IV regression the theoretical age at school entry of an individual as an instrument for the ‘age at school entry’. The estimates are reported in Table 4 (estimations (1) to (8)).

We find a significant impact of age at school entry on both of the outcomes whatever the approach (non-IV or IV). Once again, Hausman test confirms endogeneity for the ‘age at school entry’ variable²¹. Moreover, we find that estimations with or without the use of instrumental variable for our main variable of interest give opposite effects. More precisely, the results for the IV estimates indicate a *significant and positive impact of the age in months on the probability to pursue general training or to get a general (or ‘at least equal to baccalauréat’) diploma*. Once again, we find evidence that the IV method remove endogeneity due to individual differences in ability: the fact that age influences positively the two outcomes “probability to attend a general education” and “probability to have a general diploma” indicates a maturity effect.

These results suggest that the age at school entry has an effect on the type of studies made during the scholarship, or, in other terms, operates through the educational guidance choices made during scholarship. This corroborates some of the results of Grenet (2010) on the French case, but on a different set of data and, partly, on other outcomes (see sub-section 2.2.).

²⁰ For this last variable, we add to the ‘vocational diploma’ category the diplomas that are equal or inferior to Brevet. In addition, students who have a vocational diploma but who have also obtained a *general diploma* from ‘baccalauréat’ level (or higher) belong to the ‘general diploma’ category. It permits to take into account low categories of diploma, and also, for the sake of simplicity, to keep ‘two’ categories, which allows better comparison between the results for this variable (‘type of diploma’) and those with the variable ‘type of education pursued’.

²¹ Indeed, the Hausman statistic and the associated P-value show that we cannot accept the ‘null hypothesis’ Ho of exogeneity of this variable (see table 4).

Table 4. Impact of age in months at school entry on educational trajectories during scholarship

	(1) ML	(2) ML	(3) 2SLS	(4) IV (ML)	(6) 2SLS	(7) IV (ML)	
<i>Explained variable</i>	<i>To have attended a general education [1]</i>	<i>To have obtained a 'general' diploma [2]</i>	<i>To have attended a general education [1]</i>	<i>To have obtained a 'general' diploma [2]</i>	<i>To have attended a general education [1]</i>	<i>To have obtained a 'general' diploma [2]</i>	
<i>Intercept</i>							
Level of parents education	0.0782*** (0.0052)	0.2068*** (0.2576)	0.0185*** (0.0008)	0.0497*** (0.0032)	0.0386*** (0.00107)	0.1219*** (0.0033)	
Age of entry at school in months	-0.0036*** (0.0013)	-0.0259*** (0.0019)	-	-	-	-	
Age of entry at school in months (instrumented)	-	-	0.0042*** (0.0008)	0.0113*** (0.0026)	0.0016*** (0.0006)	0.0061** (0.0025)	
Year of birth	-0.0558*** (0.0011)	0.0152*** (0.0014)	-0.0125*** (0.0002)	-0.0331*** (0.0007)	0.0020*** (0.0002)	0.0104*** (0.0008)	
Be a woman	0.2387*** (0.0214)	0.2576*** (0.0276)	0.0555*** (0.0048)	0.1491*** (0.0131)	0.0366*** (0.0038)	0.1454*** (0.0155)	
Social origin	Farmer	Ref.	Ref.	Ref.	Ref.	Ref.	
	Store keeper	-0.0245*** (0.0402)	0.5009*** (0.0503)	-0.0008 (0.0125)	-0.0174 (0.0248)	0.0785*** (0.0078)	0.2857*** (0.0284)
	Executive	0.5823*** (0.0563)	1.3854*** (0.0613)	0.1300*** (0.0123)	0.3423*** (0.0339)	0.2952*** (0.0110)	0.8296*** (0.0355)
	Intermediate worker	0.0436*** (0.0423)	0.7296*** (0.0501)	0.0097** (0.0098)	0.0239 (0.0259)	0.1395*** (0.0084)	0.4280*** (0.0286)
	Employee	-0.1578*** (0.0420)	0.3060*** (0.0536)	-0.0398*** (0.0097)	-0.1060*** (0.0258)	0.0374*** (0.0078)	0.1606*** (0.0300)
	Blue collar worker	-0.2375*** (0.0296)	-0.4189*** (0.0450)	-0.0584*** (0.0068)	-0.1565*** (0.0184)	-0.0547*** (0.0048)	-0.2402*** (0.0241)
Number of brothers and sisters	0.0402*** (0.0046)	-0.1652*** (0.0076)	0.0083*** (0.0010)	0.0234*** (0.0028)	-0.0166*** (0.0007)	-0.0905*** (0.0041)	
R-Square	-	-	0.08	-	0.21	-	
Number of individuals	38338	38338	38338	38338	38338	38338	
Hausman statistic	-	-	46.46	-	69.38	-	
P-value	-	-	0.000	-	0.000	-	

Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author under Stata.

Notes: ***, ** and * stand for significance (respectively at a 1%, 5% or 10% level). Standard errors stand within parentheses.

Instrument: theoretical age in months at school entry according to the individual's date of birth.

IV (ML): Maximum likelihood estimator is used in second stage.

[1] To have attended (only) a general training (0=vocational training, 1= no vocational training).

[2] To have obtain a 'general' diploma (0= vocational diploma or "Brevet"/equivalent or lower diploma, 1=general education (or *general* "baccalauréat" or higher diploma).

5.3. Differentiated estimations on sub-samples of women and men

For robustness check, we run instrumental variable estimations of the impact of age at school entry on educational outcomes for women and men²².

First, table 5 (p.21) presents the estimations for the following educational outcomes: numbers of years of schooling, level of diploma, probability to repeat at least a year. We find for both women and men that age at school entry, once instrumented, has no impact on the number of years of schooling. We also find that age at school entry has a (positive) impact on the level of diploma, *only for men*. Finally, age at school entry impacts negatively the probability to repeat at least a year during scholarship, for both women and men.

Second, table 6 (p.22) presents the estimations for the following educational outcomes: probability to get a general (vs vocational) diploma and probability to pursue general (vs vocational) education. Our results show that age at school entry (once instrumented) has a positive impact on the probability to attend a general education. In addition, this effect seems larger for women. We also find that age at school entry (once instrumented) has a positive impact on the probability to obtain a general diploma *only for women*.

Hence, the results for the instrumental variables estimations on the impact of age at school entry for sub-samples of women and men differ from that of the whole sample estimations in two main dimensions: (i) age at school entry has an impact on the level of diploma *for men*, (ii) age at school entry has a positive impact on the probability to obtain a general diploma *only for women*.

On Norway data, Black *et al.* (2008) observe sub-samples of women and men: they find no effect of age at school entry on completed years of schooling for men, and little evidence for women, while we find no effect on years of schooling for women and men. Hence, these two sets of results seem compatible.

²² Indeed, Hausman tests confirm endogeneity for the ‘age at school entry’ variable (see tables 5 and 6).

Table 5. Instrumental variable estimations of the impact of age at school entry on first educational outcomes (sub-samples of women and men)

Explained variable	(1) 2SLS		(2) 2SLS		(3) 2SLS		(4) IV (ML)		
	Number of years of education (log.)		Level of diploma		To have repeated at least a year		men	women	
	men	women	men	women	men	women	men	women	
Intercept (s)									
Level of parents education (column (1): log)	-0.0003*** (0.0006)	0.0272*** (0.0008)	0.1570*** (0.0061)	0.1683*** (0.0054)	0.0003 (0.0016)	-0.0041** (0.0016)	0.0009*** (0.0045)	-0.0107** (0.0043)	
Age of entry at school in months (instrumented)	-0.0003 (0.0006)	-0.0004 (0.0005)	0.0061* (0.0036)	-0.0022 (0.0034)	-0.0049** (0.0011)	-0.0027** (0.0011)	-0.0132*** (0.0031)	-0.0074** (0.0030)	
Year of birth	0.0078*** (0.0002)	0.0100*** (0.0001)	0.0146*** (0.0012)	0.0302*** (0.0010)	0.0014*** (0.0003)	0.0018*** (0.0003)	0.0038*** (0.0010)	0.0048*** (0.0009)	
Social origin	Farmer	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	
	Store keeper	0.10584*** (0.0075)	0.0773*** (0.0069)	0.4365*** (0.0450)	0.3266*** (0.0403)	-0.0110*** (0.0135)	-0.0071 (0.0130)	-0.0300*** (0.0363)	-0.0200 (0.0344)
	Executive	0.2387*** (0.0090)	0.1809*** (0.0082)	10.2912*** (0.0643)	10.0415*** (0.0566)	-0.0350*** (0.0173)	-0.0654*** (0.0174)	-0.0947*** (0.0465)	-0.1701*** (0.0452)
	Intermediate worker	0.1484*** (0.0071)	0.1046*** (0.0067)	0.7167*** (0.0472)	0.4881*** (0.0418)	-0.0048*** (0.0138)	-0.0206 (0.0135)	-0.0129*** (0.0373)	-0.0553 (0.0356)
	Employee	0.0887*** (0.0074)	0.0616*** (0.0069)	0.2980*** (0.0449)	0.2175*** (0.0406)	-0.0182*** (0.0139)	-0.0062 (0.0135)	-0.0494*** (0.0374)	-0.0173 (0.0358)
Blue collar worker	0.0082*** (0.0053)	-0.0311*** (0.0051)	-0.1139*** (0.0296)	-0.2571*** (0.0276)	0.0061 (0.0100)	0.0070 (0.0098)	0.0168 (0.0272)	0.0180 (0.0261)	
Number of brothers and sisters	-0.01820*** (0.0008)	-0.0209*** (0.0007)	-0.0962*** (0.0046)	-0.1052*** (0.0040)	0.0037*** (0.0015)	0.0036 (0.0014)	0.0102** (0.0042)	0.0097** (0.0039)	
R-Square	0.3463	0.4075	0.2415	0.3153	0.0176	0.0140	-	-	
Number of individuals	18312	20026	18246	19966	18312	20026	18312	20026	
Hausman statistic	49.10	52.46	27.65	11.44	9.02	22.58	-	-	
P-value	0.000	0.000	0.000	0.0007	0.0027	0.000	-	-	

Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author under Stata.

Notes: ***, ** and * stand for significance (respectively at a 1%, 5% or 10% level). Standard errors stand within parentheses.

Instrument: theoretical age in months at school entry according to the individual's date of birth.

IV (ML): Maximum likelihood estimator is used in second stage.

Table 6. Instrumental variable estimations of the impact of age in months at school entry on educational trajectories during scholarship (sub-samples of women and men)

Explained variable	(1) 2SLS		(2) IV (ML)		(3) 2SLS		(4) IV (ML)		
	<i>To have attended a general education [1]</i>				<i>To have obtained a 'general' diploma [2]</i>				
	men	women	men	women	men	women	men	women	
	Intercept (s)								
Level of parents education (column (1): log)	0.0191*** (0.0017)	0.0183*** (0.0016)	0.0523*** (0.0047)	0.0480*** (0.0044)	0.0363*** (0.0015)	0.0408*** (0.0015)	0.1179*** (0.0049)	0.1262*** (0.0046)	
Age of entry at school in months (instrumented)	0.0022** (0.0011)	0.0061*** (0.0011)	0.0061** (0.0031)	0.0160*** (0.0029)	0.0013 (0.0008)	0.0019** (0.0009)	0.0055 (0.0037)	0.0067* (0.0035)	
Year of birth	-0.0149*** (0.0003)	-0.0104*** (0.0003)	-0.0405*** (0.0010)	-0.0268*** (0.0009)	0.0007*** (0.0002)	0.0031*** (0.0002)	0.0055*** (0.0011)	0.0145*** (0.0010)	
Social origin	Farmer	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	
	Store keeper	-0.0156 (0.0132)	0.0015 (0.0132)	-0.0416 (0.0363)	0.0018 (0.0341)	0.0843*** (0.0110)	0.0716*** (0.0111)	0.34261*** (0.0424)	0.2361*** (0.0386)
	Executive	0.1215*** (0.0176)	0.1358*** (0.0176)	0.3224*** (0.0486)	0.3556*** (0.0474)	0.3186*** (0.0158)	0.2721*** (0.0155)	0.9221*** (0.0511)	0.7451*** (0.0496)
	Intermediate worker	0.0013 (0.0137)	0.0173 (0.0139)	0.0060 (0.0375)	0.0404 (0.0358)	0.1662*** (0.0120)	0.1144*** (0.0118)	0.5464*** (0.0421)	0.3237*** (0.0390)
	Employee	-0.0339** (0.0136)	-0.0459*** (0.0137)	-0.0907** (0.0375)	-0.1202*** (0.0355)	0.0570*** (0.0110)	0.0190* (0.0111)	0.2551*** (0.0443)	0.0789* (0.0410)
	Blue collar worker	-0.0704*** (0.0095)	-0.0483*** (0.0098)	-0.1941*** (0.0265)	-0.1266*** (0.0255)	-0.0359*** (0.0065)	-0.0727*** (0.0071)	-0.1665*** (0.0362)	-0.3050*** (0.0325)
Number of brothers and sisters	0.0072*** (0.0015)	0.0100 (0.0014)	0.0201*** (0.0042)	0.0264*** (0.0038)	-0.0156*** (0.0010)	-0.0175*** (0.0010)	-0.0905*** (0.0062)	-0.0909*** (0.0055)	
R-Square	0.1076	0.0492	-	-	0.2067	0.2166	-	-	
Number of individuals	18312	20026	18312	20026	18312	20026	18312	20026	
Hausman statistic	7.35	46.56	-	-	30.25	39.08	-	-	
P-value	0.0067	0.000	-	-	0.000	0.000	-	-	

Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author under Stata.

Notes: ***, ** and * stand for significance (respectively at a 1%, 5% or 10% level). Standard errors stand within parentheses.

Instrument: theoretical age in months at school entry according to the individual's date of birth.

IV (ML): Maximum likelihood estimator is used in second stage.

[1] To have attended (only) a general training (0=vocational training, 1= no vocational training).

[2] To have obtain a 'general' diploma (0= vocational diploma or "Brevet"/equivalent or lower diploma, 1=general education (or *general* "baccalauréat" or higher diploma).

5.4. Discussion

The main results of the IV estimations for all educational outcomes are summed up in table 7. With an IV approach, we found on the whole sample that age at school entry: (i) has no impact on the number of completed years of schooling or on the level of diploma, (ii) has a negative impact on the probability to repeat at least a year during scholarship, (iii) has a negative impact on the probability to pursue a ‘vocational’ education’ or to get a vocational diploma. Once ability is taken into account, the remaining measured effects are those of ‘maturity’. Hence, the results show that those maturity effects have no incidence on the educational attainment of an individual, but act on her educational trajectories or on the guidance choices that she makes during her scholarship (probability to repeat some grades, type of pursued education). In addition, separated estimations on sub-samples of women and men show two main features: (i) age at school entry has an impact on the level of diploma *for men*, (ii) age at school entry has a positive impact on the probability to obtain a general diploma *only for women*.

Table 7. The impact of age on various educational outcomes: main results of the IV estimations

Educational outcome	Whole sample		Differentiated results on sub-samples of women and men?
	Younger students at school entry	Older students at school entry	
Years of schooling	no effect		no
Level of diploma	no effect		Yes; an effect seems to apply for men
Probability to repeat at least a year	+	-	no
Probability to pursue vocational education	+	-	no
Probability to get a vocational diploma	+	-	Yes; the effect seems to apply only for women

In a comparison perspective, the Table 8 sums up the main results of the recent studies using instrumental variables approach on the effects of age at school entry (including those of the present paper, Fertig and Kluve [2005] and Fredriksson and Öckert [2005]) or on the effects of age at different moments during scholarship (Grenet, 2010), on several educational outcomes. Our results are compatible with those of Grenet (2010), and partially with those of Fertig and Kluve (2005), which also finds no impact on the probability to repeat a class. Finally, we find no effect on educational attainment, contrary to Fredriksson and Öckert (2005).

In addition, as we noted above, our results for estimations on sub-samples of women and men are compatible with that of Black *et al.* (2008): they find that school starting age has at best very small impacts on completed years of education for men or women, while we find no effect on years of schooling for women or men.

Finally, note that when they exist (and in instrumental variable approaches), we find some ‘positive’ impact of the age at school entry on the defined educational outcomes²³. This corresponds to ‘maturity’ effects.

Table 8. Comparison of the main results of the literature (IV approach): the effects of age (in months) on educational outcomes

Study	Country	Impact on ...		
		Educational attainment	Probability to repeat a grade during scholarship	Probability to pursue vocational education
This study	France	∅	-	-
Grenet (2010)	France		-	-
Fertig and Kluge (2005)	Germany	∅	∅	
Fredriksson and Öckert (2005)	Sweden	+		

Finally, the literature distinguishes relative age effects from absolute effects by the persistence of disadvantages for the younger students inside a given class or a given cohort. Our study may bring some indications for the existence for such effects, for the French case. How could one interpret our own results in terms of absolute/relative age effects? On the one hand, the absence of effects of the age at school entry on *educational attainment* (years of schooling, level of diploma) suggests no relative age effects on those outcomes, and so possible absolute age effects. On the other hand, we find some effects on *educational trajectories* (probability to repeat a grade, probability to pursue vocational). It is unclear that these last results indicate relative age effects, as the phenomenon of repeating a class and the choices of educational guidance are totally or hardly reversible: it could confirm the existence of absolute age effects, as those effects may correspond to an ‘response’ to a given situation at a specific moment of the scholarship (low academic results at this moment, *etc.*). Hence, our results as a whole would give credits to the existence of absolute age effects rather than relative age effects²⁴.

6. Conclusion

The goal of our paper was to test the impact of the age at primary school entry on educational outcomes on the French case. To conduct our econometric analysis, we use cross section micro data from the ‘Training and Occupation Skills’ (*Formation et Qualification Professionnelle* INSEE, 1993 and 2003) surveys, the only French source of data providing both educational *and* socio-professional information on surveyed individuals and their parents.

Using an instrumental variable approach, we find no impact of the age at primary school entry measured in months on certain educational outcomes: years of schooling, level of diploma. This suggests, for these outcomes, that significant impacts that were found with OLS or maximum likelihood estimations were mainly driven by differences in ability. But we find an

²³ Level of diploma, probability no to have repeated at least a class, probability to pursued general education of to obtain ‘general’ diploma.

²⁴ However, we shall note that relative effects are easier identified through an analysis on academic results.

impact on the probability to repeat at least one year. We also find that age at school entry has an impact on the type of education pursued (vocational vs general education) and on the type of diploma received during scholarship. Hence, we find evidence that age at school entry acts through educational trajectories or through guidance choices. These results could suggest the existence of possible absolute age effects of age at school entry. We also conducted separated regressions on sub-samples of women and men, which qualify these results. All these results conduct to identify some ‘maturity’ effects.

Through the intermediation of the type of accumulated human capital, there could be an impact on the professional situation, transitions/trajectories on the labour market and earnings for the concerned individuals. Therefore, it would be interesting to test those potential effects. Finally, as the age at school entry has an impact on certain outcomes, compulsory school laws have a likely effect, or could have a substantial effect according to their content. Moreover, some possible public action/support to prevent some potential harmful effects of being younger (those who are born in the last months of a given year, or who have entered lately at primary school) could also take the form of specific ‘attention’ or courses provided to some of the younger students inside a given class. These actions could occur systemically in the first years of the primary school for some targeted populations.

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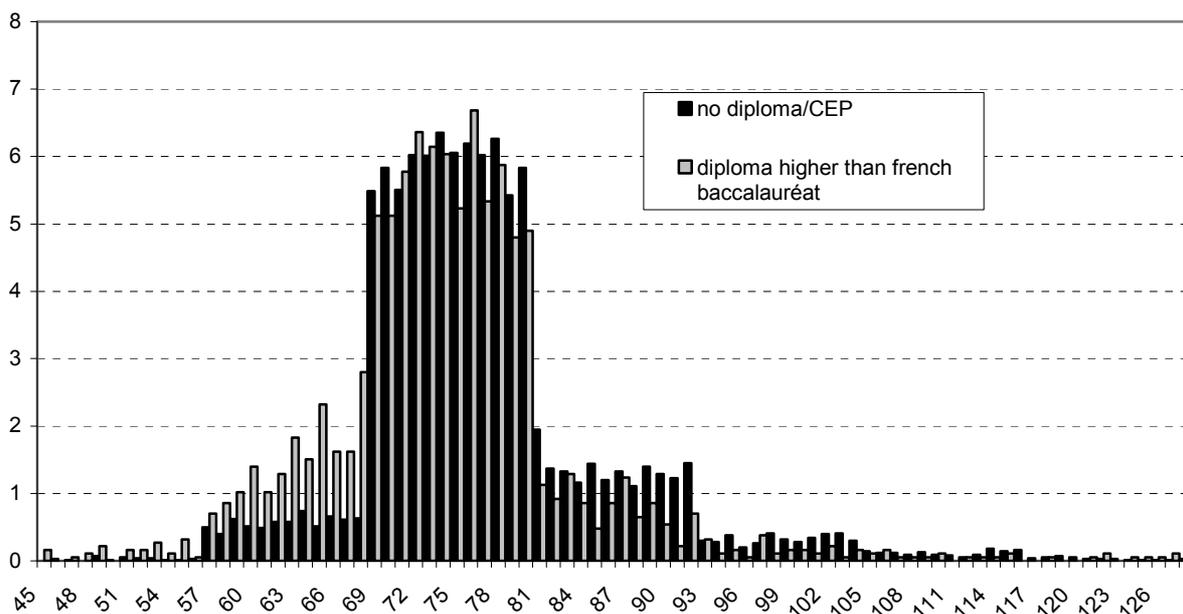
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*Appendix***Table A.1.** French levels of education

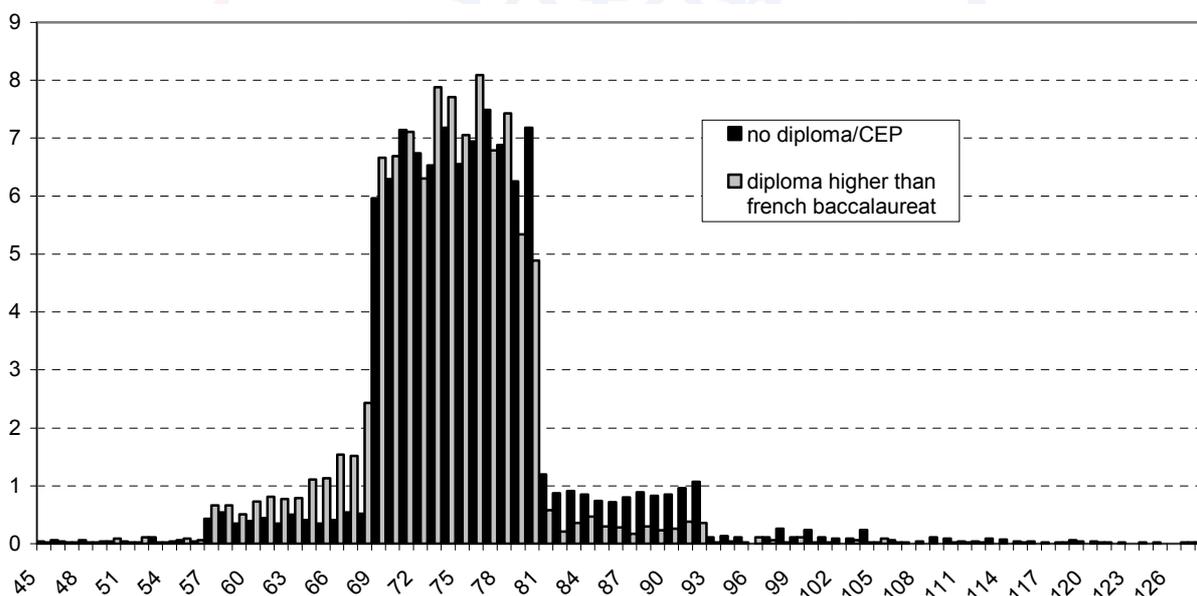
Level of education (INSEE)	Corresponding diploma	Equivalent number of years of education	Theoretical cumulative number of years of education
	<i>No diploma</i>	-	
VI	<i>CEP (Certificat d'études primaires)</i>	<i>(5 years in primary school)</i>	5
V bis	<i>BEPC, brevet et diplôme du même niveau</i>	<i>(3 years before the French baccalauréat (so-called "3ème générale")</i>	9
V	<i>CAP, BEP</i>	<i>(2 years after the "3ème générale")</i>	11
IV	<i>BAC, bac professionnel</i>	<i>French diploma "brevet professionnel, brevet de maîtrise, de compagnon, brevet d'enseignement industriel". Equivalent to a 'A-level' grade.</i>	12
III	<i>Bac + 2 (DUT, BTS, DEUG...)</i>	<i>2 years in 'preparatory' schooling (so-called "école préparatoire en équivalence, propédeutique, DUEL")</i>	14
II	<i>Bac + 3 / Bac+4 (Licence/Maîtrise)</i>	<i>French diplomas to teach in the secondary school (so-called "CAPES, CAPET")</i>	16
I	<i>Bac +5, Magistère, diplôme d'ingénieur, d'école de commerce</i>	<i>Other French diplomas to teach: French "agrégation", Ph.-D, Medicine Ph.-D</i>	17

Figure A.2. Distribution of individuals from extreme levels of education attainment according to their age at school entry (in months), 1929-1951 cohorts



Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author.

Figure A.3. Distribution of individuals from extreme levels of education attainment according to their age at school entry (in months), 1952-1973 cohorts



Sources: FQP surveys (INSEE; 1993, 2003). Computations from the author.

Analyzing the Rubric as a Tool for Evaluating Students' L2 Academic Writing

An analysis of the origins and the effectiveness of a common tool for evaluating students' written work in the English writing class at Japanese Universities

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ABSTRACT

As teachers of English one of the most important parts of our job is how we respond to our students in the classroom. This is especially true when talking about written English and the process of providing feedback to students on their writing usual requires significant amounts of time and effort on the part of academic writing teachers both inside and outside of the classroom. Traditionally teachers in both L1 and L2 classrooms have used rubrics as a tool for helping to make simplify this process. However, recent studies in L1 writing have shown that there are some significant problems with using rubrics as a means of responding to student writing. This area of research has become quite contentious in the field of L1 writing but is only just beginning to have an impact in second language writing research. In order to provide a better understanding on how and why rubrics are used in academic writing classrooms in universities in Japan this paper looks at a proposed study that attempts to construct a clearer picture of the use of rubrics in the L2 classroom. When completed it is hoped that this research will provide some insight into how teachers in Japan are responding to their students' written work and act as a starting point for further research into the possible positive and negative effects of those methods.

The Difference Between Teacher and Student Expectations with Regards to the Logical Structure of Academic Writing Activities

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Abstract

As teachers of English one of the most important parts of our job is how we respond to our students in the classroom. This is especially true when talking about written English and the process of providing feedback to students on their writing usual requires significant amounts of time and effort on the part of academic writing teachers both inside and outside of the classroom. Traditionally teachers in both L1 and L2 classrooms have used rubrics as a tool for helping to make simplify this process. However, recent studies in L1 writing have shown that there are some significant problems with using rubrics as a means of responding to student writing. This area of research has become quite contentious in the field of L1 writing but is only just beginning to have an impact in second language writing research. In order to provide a better understanding on how and why rubrics are used in academic writing classrooms in universities in Japan this paper looks at a proposed study that attempts to construct a clearer picture of the use of rubrics in the L2 classroom. When completed it is hoped that this research will provide some insight into how teachers in Japan are responding to their students' written work and act as a starting point for further research into the possible positive and negative effects of those methods.

Introduction

1.1 General statement of the problem

Written English may be one of the most important skills that students will learn at university in terms of both their future academic and professional lives. While many of the students that I teach will never be required to use English outside of the classroom on a day to day basis they are often asked to write compositions as part of the language tests that act as gatekeepers to their future jobs or further studies. An important part of the process of learning to write in a second language is the feedback that students receive from their teachers and one of the most important questions that we need to ask ourselves as teachers of written English is: "What is the best way to respond to students' writing in a way that enables them to improve in both their current and future written assignments?" This question is essential as a large part of the language teachers' job in the writing classroom is taken up with grading and providing feedback to students. In fact, the job of evaluating students' writing is so central to the English language writing class many teachers do not even question how or why this assessment is necessary: "Many of the decisions that both L1 and L2 writing teachers make in their classes revolve around assessment of students' writing... (and) because a culture of assessment is built into the schooling enterprise, teachers rarely ask whether they need to assess their students."(Casanave, 2007, p. 113)

In order to answer this question this research project will start by examining the current state of assessment in the language classroom at a number of universities here in Japan. In order to do this we will start with the concrete and from there move to the abstract. This is a necessary because, as Brian Huot points out, "theoretical awareness in writing assessment usually lags behind practice" (Hout as cited in Broad & Boyd, 2005) As a result, this research project will start with an examination of a common assessment tool in the English language classroom, the rubric, and move from there to examin whether this tool is doing what it is supposed to; that is, helping teachers to make their students better L2 writers.

1.2 Preliminary literature review

As with many of the techniques found in second language teaching the rubric entered into the L2 classroom through the L1 English class. Rubrics were first used as a tool to analyze writing in 1912 when Noyes proposed the use of a rubric as a way of standardizing the analysis of students compositions: “Our present methods of measuring compositions are controlled too much by personal opinion, which varies with the individual. What is wanted is a clear-cut, concrete standard of measurement which will mean the same thing to all people in all places and is not dependent upon the opinion of any individual” (Noyes, 1912 as quoted in Turley, 2008, p. 88). However the early rubrics developed by Noyes and his contemporaries were not intended to help students improve their writing. As one of these researchers, Hillegas, put it, the rubric is designed to “to provide a standardized form of measurement that would allow administrators and investigators to “measure and express the efficiency of a school system” so that comparisons and rankings could be made between schools across the nation (Turley, 2008, p. 88).

In the field of Second Language writing the ECP, or ESL Composite Profile, is probably one of the most recognizable rubrics and “(i)t or its off- spring, will be familiar from workshop handouts or Xeroxes left behind in faculty coffee rooms” (Haswell, 2005, p. 107). This rubric was developed in 1981 using research taken from the compositions of first language students. Three researchers from Educational Testing Services (ETS) took research done on in 1953 on the grades and comments found on the written assignments of first-year students studying at Cornell, Middlebury College, and the University of Pennsylvania to come up with a rubric that was composed of five main traits, each broken up into a number of subtraits, that they believed could then be used to objectively grade English compositions written by second language speakers. (Haswell, 2005, p. 110)

It is no accident that this rubric was designed by researchers working for a testing organization. One of the key benefits to using a rubric is that it is an attempt to provide some type of inter-rater reliability. This attempt to get around “one of the most vexing dilemmas in writing assessment... the inconsistency with which different readers tend to evaluate the same piece of writing” (Casanave, 2007, p. 124). However, rubrics are not without their problems. The biggest problem, for both language 1 and language 2 speakers is that rubrics were designed as a way of rating students and not as a way of helping them to improve their writing skills. This problem is further compounded in the field of second language writing as many of the rubrics being used are designed for first language speakers and often incomprehensible to L2 learners and may not provide them with the information that they need to improve their writing skills.

However, that is not to say that rubrics are without pedagogical value. In their article “On the Uses of Rubrics” Turley and Gallagher (2008) point out that, “instead of declaring all rubrics “good” or “bad,” we need to examine what they do, why, and in whose interest” (p. 92). They propose a 4 point heuristic to analyze the value of rubrics (or any pedagogical tool):

1. What is the tool for?
2. In what context is it used?
3. Who decides?
4. What ideological agenda drives those decisions? (Turley, 2008, p. 87)

It is these 4 questions that provide a starting point for this research project into the use of rubrics in English language writing classes at Japanese universities.

1.3 Research Questions

Through a close examination of how rubrics are being used in the language classroom at universities in Japan I hope to be able to discover how well these rubrics are suited to meeting the goals of the language teachers who are using them. This study is intended to provide more

information about the types of assessment that is being used in the classroom, where these assessment tools came from and their impact on the both the students and the teachers in the classrooms where they are being used.

This research will investigate the following research questions:

How are teachers evaluating their students' writing?

Why have they chosen this method of analysis?

Where do their analytical tools come from. Were they developed by the teacher or given to them by their department? If they were developed by the teacher, what resources did the teacher use to develop these tools?

How well do the tools being used:

- a. provide a fair and objective method of evaluating their students' written work.
- b. allow their students to improve their English language writing skills.

These questions are based on the assumption that the teachers being surveyed are engaged in some type of evaluation of their students academic writing tasks and that this evaluation is being carried out for two reasons, to provide their students with a grade and to help their students improve their writing skills.

1.4 Significance of the Proposed Research

In the field of first language composition the use of rubrics as a tool to grade student compositions has been a popular topic of research in a variety of academic journals. With researchers coming out both in support of (H. G. Andrade, 2000; H. L. Andrade, Wang, Du, & Akawi, 2009) or against (B Broad, 2000; Kohn, 2006; Wilson, 2007) the use of rubrics to grade written work. One only needs to look at the sub-title of the paper by Turley and Gallagher, "Reframing the Great Rubric Debate", to see that there are strong feelings on both sides of the debate. However, this is a debate that has not yet reached the field of second language writing. While rubrics are mentioned in both texts and journals devoted to the study of second language writing (Bitchener, Young, & Cameron, 2005; Ferris, 1995, p. 37; Hyland, 2010, p. 84) they are usually mentioned in passing as one of a number of possible assessment tools with very little time given to the analysis of their effectiveness as tools for rating and improving student writing. For example, a look at the issues of the *Journal of Second Language Writing* over a 4 year period, from 2008 to 2011, reveals only 9 original research articles that even mention rubrics and in all of these articles rubrics are used unquestioningly as a tool for evaluating students' written work. In fact, a further search of this journal reveals only 2 articles from 1992 to 2011 that actually question the effectiveness of rubrics (Paulus, 1999; Weigle, 2007). One of these, Weigle, simply mentions the current controversy that exists in first language writing about the use of rubrics before dismissing the issue without providing any sources or evidence for her position: "while holistic scales are faster and more efficient, analytic scales tend to be somewhat more reliable than holistic scales, and certainly provide more useful feedback to students, as scores on different aspects of writing can tell students where their respective strengths and weaknesses are." (2007, p. 203) However, this is starting to change with a few researchers, such as Haswell (1998), beginning to look at the problems with rubrics and their use in the second language writing class.

While this analysis is still in its infancy in the field of second language writing I believe that it will become more important in the future. As Wilson points out when talking about first language writing:

a relatively recent shift in writing pedagogy has not translated into a shift in writing assessment. Teachers are given much more sophisticated and progressive guidance nowadays about how to teach writing but are still told to pigeonhole the results, to quantify

what can't really be quantified. Thus, the dilemma: Either our instruction and our assessment remain "out of synch" or the instruction gets worse in order that students' writing can be easily judged with the help of rubrics. (Wilson as cited in Kohn, 2006)

The same can be said for second language writing and there will come a time in the near future where both teachers and researchers will be forced to look at the tools they are using to assess their students and decide if they are doing the job they were designed for.

2. Design and Methodology

2.1 Subjects and Sites Selection

For the purpose of this study I will be sending questionnaires to 100 - 200 teachers who are currently engaged in teaching academic writing to first year university students enrolled in an introductory English class in a number of Japanese private universities, mainly in the Kansai area. These teachers are professionals whom I have contact with either through professional organizations such as JALT (Japanese Association of Language Teachers) or CUE (College and University Educators) or have met in the course of teaching or participating in conferences in Japan. I plan to ask a number of colleagues to assist me with the distributing the surveys to ensure that they will reach as many different teachers as possible. I hope to have 50 to 60 teachers participating in the survey, each of whom will complete the survey and be asked to submit an example of a rubric that they would use to analyze a short essay.

2.2 Data collection strategies

Teachers who agree to participate in this study will be asked to answer a questionnaire that is designed to determine how and they analyze student work in the classroom and provide a sample of a rubric that they would use to analyze their students' writing. The questionnaire will be available in both paper form and online. A self addressed envelope will be included with the paper copy of the survey for teachers who would like to fill in and mail back the survey. Teachers will also be able to participate in the survey online. Teachers will have the option of participating in the surveys anonymously however, teachers who are willing to participate in the next stage of the research will be asked to include an email address to allow me to contact them about the next stage of the research. The entire research project will be comprised of 3 stages:

- a. the initial collection of the survey and the example rubrics.
- b. an analysis of the surveys and the rubrics.
- c. a final follow-up stage with the teachers to share the results of the research.

2.3 Data analyses

This research takes a constructivist approach as a way to determine how various teachers at Japanese universities are using rubrics in their classroom. As such the data analysis will be left very open. The questionnaire consists of 5 initial closed questions that will be used to determine if that teacher uses rubrics in the classroom and where these rubrics originated from. Four of these questions will be graded using a 5 point Likert scale while Question 2 will use a 4 point scale. These 5 closed questions will be followed by 6 open questions which will be analyzed using a textual analysis program such as NVivo in order to determine what ideas are most common in the responses from the teachers. Teachers will be grouped into categories based on their response to the first five closed questions and then a textual analysis will be performed on each of the groups. The textual analysis of each group will be looked at individually and compared to the answers given by the other groups. This same textual analysis will be used on the and what categories and areas of analysis that are given in the sample rubrics to determine what ideas are most prevalent in these rubrics.

2.4 Limitations of Design

This study is intended as an introductory study into the use of rubrics in English language writing classes in Japan. As such it is only focused on looking at how and why rubrics are used and if these rubrics are the best tool for providing a fair and objective analysis of students' written work. However, the more important question of how rubrics can be used to help students improve their English language writing skills, while pertinent to the study of the use of rubrics in the classroom, falls beyond the scope of this research project. It is hoped that this can be examined in a further project when a clearer understanding exists about the types of rubrics that are being used and how these rubrics were developed.

Another area of concern is that there may be only a small number of participants who will be willing to participate in this study. As participation is voluntary the number of people who will reply to the questionnaire and give feedback on their use of rubrics in the classroom may not be sufficient to make the data gathered from this project statistically relevant. I am proposing to use three separate approaches to help alleviate the possibility of this problem. The first is to send out as many questionnaires as possible. Secondly, I hope to make it as easy as possible for teachers to reply by keeping the questionnaire short and simple and providing them with a number of different ways to reply. Finally, I will also target those teachers who are already participating in professional development such as attending conferences as such individuals will be more likely to appreciate the necessity of research into areas such as student evaluation.

With regard to the external reliability of this study, as participation is voluntary and it is my belief that the study will be best served by gathering as much data from as many teachers as possible it will be impossible to control all the variables in this study. However, every effort will be made to record and evaluate all of the data collected. This should enable other researchers to successfully replicate the study. It is also hoped that this study will lead to further investigation into academic writing and the tools used to evaluate this writing not just in Japanese universities but also in second language writing classrooms around the world.

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Appendix #1: Example of ESL Composite Rubric

ESL COMPOSITION PROFILE				
STUDENT	DATE	TOPIC		
SCORE	LEVEL	CRITERIA	COMMENTS	
CONTENT	30-27	EXCELLENT TO VERY GOOD: knowledgeable + substantive + thorough development of thesis + relevant to assigned topic		
	26-23	GOOD TO AVERAGE: some knowledge of subject + adequate range + limited development of thesis + mostly relevant to topic, but lacks detail		
	21-17	FAIR TO POOR: limited knowledge of subject + little substance + inadequate development of topic		
	16-13	VERY POOR: does not show knowledge of subject + non-substantive + not pertinent + OR not enough to evaluate		
ORGANIZATION	26-18	EXCELLENT TO VERY GOOD: fluent expression + ideas clearly stated/ supported + succinct + well-organized + logical sequencing + cohesive		
	17-14	GOOD TO AVERAGE: somewhat choppy + loosely organized but main ideas stand out + limited support + logical but incomplete sequencing		
	13-10	FAIR TO POOR: non-fluent + ideas confused or dis-oriented + lacks logical sequencing and development		
	9-7	VERY POOR: does not cohere/flows + no organization + OR not enough to evaluate		
VOCABULARY	20-18	EXCELLENT TO VERY GOOD: sophisticated range + effective word/idea choice and usage + word form mastery + appropriate register		
	17-14	GOOD TO AVERAGE: adequate range + occasional errors of word/idea form, choice, usage but meaning not obscured		
	13-10	FAIR TO POOR: limited range + frequent errors of word/idea form, choice, usage + meaning confused or obscured		
	9-7	VERY POOR: essentially translation + little knowledge of English vocabulary, idiom, word form + OR not enough to evaluate		
LANGUAGE USE	25-22	EXCELLENT TO VERY GOOD: effective complex constructions + few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions		
	21-18	GOOD TO AVERAGE: effective but simple constructions + minor problems in complex constructions + several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions but meaning seldom obscured		
	17-11	FAIR TO POOR: major problems in simple/complex constructions + frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions + meaning confused or obscured		
	10-8	VERY POOR: virtually no mastery of sentence construction rules + dominated by errors + does not communicate + OR not enough to evaluate		
MECHANICS	5	EXCELLENT TO VERY GOOD: demonstrates mastery of conventions + few errors of spelling, punctuation, capitalization, paragraphing		
	4	GOOD TO AVERAGE: occasional errors of spelling, punctuation, capitalization, paragraphing but meaning not obscured		
	3	FAIR TO POOR: frequent errors of spelling, punctuation, capitalization, paragraphing + poor handwriting + meaning confused or obscured		
	2	VERY POOR: no mastery of conventions + dominated by errors of spelling, punctuation, capitalization, paragraphing + handwriting illegible + OR not enough to evaluate		
TOTAL SCORE	GRADE	COMMENTS		

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(Haswell, 2005, p. 108)

Appendix #2: Questionnaire for the teachers

1. Do you use a rubric to grade students work?

Always / Often / Sometimes / Rarely / Never

2. Did you design this rubric yourself?

By myself / With help from other teachers / Got it from a book / I was told to use it

3. Do your colleagues use rubrics to grade their students?

All of them do / Most of them do / Some of them do / A few of them do / None of them do / I don't know

3. Do you think rubrics are a good way ensure your students are graded fairly?

Yes / Most of the time / Sometimes / Not really / No

4. Do you find rubrics are a good way to improve your students written work?

Yes / Most of the time / Sometimes / Not really / No

5. How do you think your students feel about rubrics?

They really like them / They like them / they don't like or dislike them / They don't like them / They hate them / I don't know

Open ended questions:

1. If you use a rubric in your classroom explain why you chose this method to evaluate your students work:

2. If you designed this rubric yourself explain how you chose the categories and descriptors for the items in your rubric:

3. Do you think your rubric helps your student to improve their writing skills?

4. What do you think are some positive points about using rubrics in the language classroom?

5. What do you think are some negative points about using rubrics in the language classroom?

6. Can you think of anything you do, or that you could do, to make rubrics into a more effective teaching tool?

Are standards-based quality systems a threat to the internationalization of teaching and learning?

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Abstract

This paper explores the current shift in Australia's higher education system moving to a more explicit, standards-based quality system and its potential impact on international partnerships in teaching and learning, particularly in Asia. The new Tertiary Education Quality and Standards Agency and the underlying Higher Education Standards Framework have the potential to threaten a large number of transnational or cross-border programs delivered outside of Australia. With over one hundred and fifty thousand tertiary students studying Australian programs in Asia, the impact could be significant. It would also be significant for countries that leverage of Australian Universities to build human capacity within their country. The paper highlights the current practice of assuring equivalent and comparable academic standards in transnational education and explores how shifting to a more precise standards framework will require more explicit demonstration of standards across teaching, learning and student outcomes. If equivalent or comparable standards were to be achieved across the whole standards framework, it is likely to constrain the opportunities for internationalization and the formation of new transnational partnerships.

Are standards-based quality systems a threat to the internationalization of teaching and learning?

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Introduction

Australia's higher education system is undergoing considerable change. Since publication of the *Review of Australian Higher Education* (Bradley et al., 2008), otherwise known as the Bradley Review, there has been increasing emphasis and debate on the notion of standards in higher education. The review stated that, "Australia must enhance its capacity to demonstrate outcomes and appropriate standards in higher education if it is to remain internationally competitive and implement a demand driven funding model" (p.128). The review also recommended a need for clarification and agreed measurements of standards and for institutions to demonstrate their processes for setting, monitoring and maintaining standards. In essence there was seen to be a need for institutions to explicitly demonstrate their standards for the sake of public accountability. As a consequence of the Bradley Review, the Tertiary Education Quality and Standards Agency (TEQSA) was legislated in March 2011 and established in July 2011 with responsibility for implementing a new Higher Education Standards Framework. This framework has five components and aims to specify more precisely the standards expected from institutions. Institutions are expected to demonstrate achievements against those expectations.

The more precise nature of the standards framework, in particular the teaching and learning component of the framework, will require institutions to demonstrate a whole range of teaching and learning standards. These standards will be assessed and judged in a number of ways, using both qualitative and quantitative indicators. The precise criteria for assessing teaching and learning standards has yet to be fully defined but TEQSA's decision to move away from institutional audits (Lane, 2011) suggests that more emphasis will be placed on a range of quantitative data and benchmarked against institutional and national expectations.

The standards of teaching and the standards of students' learning will obviously focus on teachers and students in Australia. However, what has yet to be publically discussed is that it will also affect teachers and students who teach or study in Australian programs outside of Australia. These are students studying in Australian transnational programs. With nearly one hundred thousand students studying in Australian higher education in transnational programs (plus a further fifty thousand vocational education students), the need to demonstrate precise measures of teaching and learning standards may have considerable ramifications. If the current policy continues to mandate equivalent or comparable standards, a more precise, standards-based quality system may restrict the ability for Australian institutions to engage in transnational partnerships. It may also constrain the types of partnerships and the way in which curriculum, teaching and assessment is done.

This paper provides some background to the current regulation of transnational education and in particular the notion of equivalent and comparable standards. It will then address

the new Higher Education Standards Framework and explore the implications for Australian transnational education.

Australian Transnational Education

The growth of transnational education, also known as cross-border education, since the 1990s has coincided with the growing demand for internationally recognised qualifications, the globalisation of professions and changing socio-economic circumstances in Asia (McBurnie and Ziguras, 2007). Australia has been well positioned to tap into this growth. While many students choose to travel to Australia to study, many stay in their home country, or travel to a third country to enrol in an Australian program. Some of these students may be studying at an Australian offshore campus, and some may be enrolled at an institution that is in partnership with an Australian institution. In either case, transnational students are typically enrolled in an Australian program and upon successful completion will receive an award from the Australian institution. For the purposes of this paper I will use UNESCO's definition of transnational education as, ...all types and modes of delivery of higher education study programs, or sets of courses of study, or educational services (including those of distance education) in which the learners are located in a country different from the one where the awarding institution is based. Such programs may belong to the education system of a State different from the State in which it operates, or may operate independently of any national education system (UNESCO, 2001, p.2).

In 2009 Australian Universities were offering 889 transnational programs delivered outside of Australia with the majority of programs based in Singapore, Malaysia, China, Hong Kong and Vietnam (Universities Australia, 2009). The nationality of students enrolled in those programs also followed the same pattern of countries (AEI, 2010). This means that the majority of students studying Australian transnational were based in their own country of nationality. Currently, Australian higher education enrolls over one hundred thousand students in transnational programs and is forecast to reach over four hundred thousand by 2025 (Bohm et al., 2002). With such a significant number of students, the regulation of quality and standards is critical.

The pursuit of transnational partnerships in the 1990s was largely for commercial reasons. Partnerships were established with little understanding of the risks involved and with little regulatory or legal framework (McBurnie and Ziguras, 2007). Currently, the risks and benefits of transnational education are more widely known and it is recognized that institutions need to be more strategic in their approach to developing new transnational partnerships (Connolly and Garton, 2007). Since the 1990s there has been significant development in the quality assurance of transnational programs and cross-border regulation. There are a range of national and international protocols, guidelines and codes of practice, but because they span different sovereignties, they are often voluntary.

The regulation of Transnational Education

Transnational education crosses social and cultural boundaries as well as the more obvious geographical and national boundaries of sovereignty. Students in Australian transnational programs are both national and international in relation to the host country of study, but few are Australian. Most of the academic staff teaching the programs are unlikely to be Australian. Students, institutions and staff are bound across, and

sometimes between, different national regulatory frameworks, protocols and codes of practice. As a result, transnational education creates complex and dynamic tensions in the assurance and demonstration of quality and standards. These tensions vary between the host and awarding country depending on the mix of stakeholders and development of each regulatory system (Verbik and Jokivirta, 2005). Different regulatory systems assert different levels of control over the assurance of standards in their home country or upon their home-based institutions.

Over time, there has been greater recognition of different regulatory systems and a drive towards the mutual recognition of national quality assurance and regulatory systems. In turn this has driven the development of common or similar regulatory systems. The internationalization of higher education, and with it the internationalization of quality assurance, has had an isomorphic effect on national quality regulatory systems (Van der Wende, 1999, McBurnie and Ziguras, 2007). Supranational agencies like the International Network of Quality Assurance Agencies in Higher Education (INQAAHE) and the European Network for Quality Assurance (ENQA) have emerged. While they are sharing best practice and developing quality assurance guidelines there is a sense that these supranational agencies are also driving a convergence of quality systems and a shared understanding of standards.

Nevertheless, these isomorphic effects also have the potential to create conflict. Regulatory systems are generally national in their scope and are designed to protect national interests. For transnational education, different stakeholders have different views of who should regulate standards and how this should be done. Some have even considered transnational education a threat to national standards. As Adam (2001) states, Significant numbers of institutions view transnational education as some sort of threat to standards and their existence. The scale and intensity of the threat is misjudged as it is currently confined to certain sectors of educational provision. However, its rapid expansion is likely to continue unabated and so will its impact. It needs to be subject to appropriate quality control mechanisms before the problems intensify. Governments and institutions in importing countries must consider why their students choose imported education. Fear of transnational education should not translate into ineffective protectionism (p.47).

The general response to the growth of transnational education in the 1990s was for host countries to increase the regulation of foreign providers or partnerships with foreign awards. However, strategies of tight regulatory protectionism had to be balanced with trade liberalization to ensure that the host country continued to attract high quality foreign institutions. This was a difficult balancing act and so it became apparent that the best way to protect and uphold standards was to have tighter regulation for institutions who award the qualifications (Harvey, 2004, Knight, 2005). In other words, the Australian regulation of standards took precedence over any regulation of a country in which it was being delivered. This does not negate the need for host country regulation but ultimately the awarding institution is more likely to pay attention to their home regulatory system.

Australian Protocols and transnational standards

In Australia, the development of a robust quality assurance and regulatory system has been acknowledged as a critical factor in its success of transnational education (AVCC,

2005a). Whilst the quality assurance of transnational education has largely been dealt with at an institutional level, the institutions are governed by a national regulatory system. Through the National Protocols of Higher Education Approval Processes, Codes of Practice, the Educational Services for Overseas Students (ESOS) Act, and the work of the Australian Universities Quality Agency (AUQA), Australia has been able to develop a transnational quality framework that is considered best practice (Ilieva and Goh, 2010).

In particular, it is the National Protocols of Higher Education Approval Processes, which provide the initial settings for transnational education. Protocol section 4.2 states that if a program is delivered in an offshore campus operated by the Australian university, “standards should be equivalent” to those in Australia. Alternatively, if a program is delivered with a third party provider offshore, “standards should be comparable” to those delivered in Australia (DETYA, 2002).

The regulation of Australian transnational education reveals the complexity and ambiguity of standards in higher education. There is no explicit description within the Protocols as to what types of standard it is referring. Nor is there any explicit information about the definition or level of tolerance within the notion of equivalence or comparability. This ambiguity raises further questions about who sets, maintains, and assesses standards since it assumes that the standards in Australia are appropriate to be delivered in another country.

In April 2005, the Australian Vice Chancellors Committee (now known as Universities Australia) developed a Code of Practice for the provision of international students, which included guidelines for transnational education. The guidelines suggested use of comparability rather than equivalence, broadly following the UNESCO and OECD codes of practice developed in the same year. The AVCC code suggested that, “the quality of academic provision and academic support services offered under the arrangement are comparable” (AVCC, 2005b, p.5). Comparability is tied directly to academic provision and academic support services.

At the same time as the publication of the AVCC Code of Practice, the Australian government published a discussion paper titled *A National Quality Strategy for Australian Transnational Education and Training* (DEST, 2005). Whilst the paper highlighted the success of Australian transnational programs, it also raised concerns over the transparency of Australian and institutional quality assurance, accountability and questioned the equivalence of courses/programs. In May 2005, the AVCC responded to the discussion paper, suggesting that the government failed to recognise existing quality assurance measures and requested clearer definitions of ‘equivalent standards’.

A key element of the discussion paper is that qualifications obtained offshore are equivalent to those delivered onshore in Australia. This idea of equivalence needs to be appropriately defined. Australian universities already address the need for equivalence between onshore and offshore courses through adherence to Protocol 4.2. The university interpretation of this protocol is that the equivalence is between programs offered by the same institution. The Department of Education, Science and Training needs to confirm that its interpretation of equivalence, for the purposes of this paper, is equivalence between programs offered by the same institution” (AVCC, 2005a, p.7).

In this instance, the AVCC was suggesting that equivalent standards were represented by the fact the programs/curriculum were equivalent and therefore complied to the same quality assurance mechanisms.

By November 2005 an agreed Transnational Quality Strategy was published which provided a framework for the planning and implementation of programs offshore (AEI, 2005). The Transnational Quality Strategy focused on three areas:

- Better communication and promotion of Australia's quality assurance systems.
- Improved data collection to inform future strategies.
- A strengthened quality framework that protects and promotes the quality of Australian transnational education.

The publication did not respond directly to AVCC's concern of defining equivalency but was more explicit on the issue. "Courses/programs delivered within Australia and transnationally should be equivalent in the standard of delivery and outcomes of the course, as determined under nationally recognised quality assurance arrangements" (p.1). Without any significant debate, the notion of equivalent standards shifted from *courses/programs* in May 2005, to the *delivery* and *outcomes* of the courses/programs by November 2005.

The broad policy statements that developed over 2005 gave significant room for interpretation and ambiguity. Between the National Protocols and the Transnational Quality Strategy there was no clear policy as to what types of standards needed to be equivalent or comparable and how they should be measured. There seemed to be no real understanding of where these different types of standards sit on a spectrum between equivalency and comparability. The confusion was highlighted in October 2006 in a government commissioned report summarizing a study of fifteen transnational programs in Australian institutions (IEAA, 2006). The report highlighted poor understanding and definitions of terms such as 'equivalence', 'comparable', 'benchmarks', or 'standards' and recognised that terms are often used interchangeably. It went further to suggest that quality assurance in transnational education was a core concern for all stakeholders, and there was a lack of understanding of how the processes of quality assurance effectively worked with a diverse range of transnational programs and partnerships to ensure standards were maintained.

Equivalency and comparability of standards

Equivalency and comparability of standards are central components of the Australian regulatory system for transnational education, however, it is difficult to ascertain whether these concepts refer to programs, teaching, learning outcomes, student support and/or experiences. The national *Transnational Quality Strategy* suggests that delivery and outcomes should be equivalent or comparable depending on whether it is an Australian campus or a partnership (AEI, 2005). Not only is there a need for clarification on what the essential anchor points are for demonstrating standards, but also there is also a need for understanding the acceptable tolerance within equivalent and comparable standards.

Research on the interpretations of equivalence and comparability across a sample of eighty-five participants within Australian transnational partnerships revealed that these terms were used in a variety of ways. "Comparability was generally used to signify similarity (e.g. It is not of equal standard but is not far off) whereas equivalence was used to indicate equality or sameness (e.g. It is of same standard)" (Sanderson et al., 2010,

p.3). The research suggested that the terms equivalency and comparability were used in reference to standards, programs, assessment, student experiences and learning outcomes. The activities of assessment were used most frequently when questioned about standards in transnational education. Thus, the processes of assessment were considered the most valid and reliable reference points for assuring and demonstrating standards. This supports the view that assessment and the moderation of assessment in transnational education is the most effective way to demonstrate the standards of graduates (Thompson-Whiteside, 2011a). Moderation allows for informed judgements and a contextualization of standards.

Considering the variety of delivery models in transnational education, it is difficult to suggest that any standards could be equivalent considering that the students are different, the lecturers are different, the resources and learning environments are different, and the social and cultural surrounding are different. I suggest the wording of *Equivalent standards* in transnational education is a misnomer.

Also implicit within the notion of equivalent standards is that one standard is higher or better than the other. Presumably in this instance, the National Protocols imply that the Australian standards are superior to offshore ones. The notion of equivalency and the assumption that Australian campuses are superior to their offshore ones fails to recognise the complexities of transnational education and ultimately is unproductive in generating mutually beneficial, long-term, sustainable partnerships. Since good partnerships are critical to the success of transnational education (Heffernan, 2005) the notion of comparability, rather than equivalence, provides a more appropriate framework of mutual respect and an appropriate level of flexibility. “The use of comparability recognises the extent of engagement of importing countries in the transnational endeavour. This goes some way to constructing transnational education as a mutually productive and reciprocal engagement” (AEI, 2008, p.13). However, it is also acknowledged that comparability leaves open the potential for too much interpretation and needs to be constrained.

The use of comparable standards, rather than equivalent standards, also allows for contextualization of curriculum and teaching which is seen to positively meet the specific needs of a diverse group of learners and good teaching practice (Leask, 2007). The UNESCO/OECD Guidelines support the view that institutions are to “ensure that the programs they deliver across borders and in their home country are of comparable quality and that they also take into account the cultural and linguistic sensitivities of the receiving country” (UNESCO, 2005, p.15). It suggests that the contextualisation of curriculum and teaching and learning practices are pedagogically and culturally appropriate. This, in turn, creates a range of tensions because if the curriculum or teaching is not equivalent or similar, is it possible to demonstrate equivalent or comparable standards? The presumption is that because the curriculum content is not the same, it is inferior. As Woodhouse and Carroll note, “Higher education is a construct in which the method of delivery, which is heavily influenced by its context, is inseparable from the quality of the outcome. Such a position brings into sharp relief the methods by which we seek to ensure ‘equivalence’ of student learning outcomes. These methods are still heavily influenced by notions of ‘identity’ such as common curricula and centralised examination marking” (Woodhouse and Carroll, 2006, p.85).

These opposing views are also expressed by transnational students who have clear expectations that curriculum should be equivalent, yet contextualized to meet their needs.

If for example, the content is too Australian-centric, transnational students have shown to be critical in student feedback (McLean, 2006). The result of this has been a universalizing of content.

Removing location-specific content is often necessary to avoid confusing offshore students, but by trying to universalize a course, lecturers run the risk of abstracting curriculum from real-world contexts, and thereby elevate the status of 'universal' to many locally and culturally bound ways of thinking, communicating and working. The question we are faced with is why, despite the widespread agreement on the desirability of adapting and tailoring transnational programs to suit specific student groups, does it seem to happen so rarely (McBurnie and Ziguras, 2007, p.65).

Transnational students also want teaching standards to be equivalent to Australian standards, yet flexible to meet their needs (Leask, 2006). When the home regulatory system dominates, an institution is torn between meeting the demands of its transnational students, providing what is known to be good practice, and ensuring standards are near to equivalent by delivering exactly the same curriculum in the same way. The notion of contextualisation suggests that standards are moving away from equivalency and therefore inferior. Navigating between notions of equivalency and comparability for different types of standards entails risks for the institutions that could potentially lead to a loss of reputation, loss of commercial return and closure of a program. For some institutions, the low-risk approach means simply having equivalent standards across as many dimensions as feasibly possible. While equivalent standards in transnational education may reduce the potential risk for the awarding institution, it may not necessarily suit the needs of the host institution or its students.

Shifting interpretation of transnational standards

For the past eight years the Australian Universities Quality Agency (AUQA) has had the task of auditing transnational education and ensuring compliance with the National Protocols. The audits provided a public assurance of quality. The fact that transnational education has the potential for being 'high-risk', and that programs being delivered in another country provide significant signals about the quality of Australian education, the government felt that AUQA should scrutinize transnational activities more closely. In 2003 the Australian government allocated funding to audit transnational programs, which included visiting partnerships overseas as well as speaking to staff and students. Since 2003, AUQA has conducted between two and four transnational audits for every university that has programs offshore.

Greater levels of scrutiny in transnational education had had some effect on universities. It is no coincidence that since AUQA began auditing transnational education in 2003, the number of transnational programs dropped significantly. In 2003, Australian universities reported 1569 transnational programs. In 2007 this had dropped to 1002 and in 2009 to 889 programs (Universities Australia, 2009). Despite this, the number of students enrolled in these programs continued to rise between 2003 and 2009. This suggests that there was a consolidation and withdrawal of programs with low enrolments. Media reports suggested the withdrawal was largely due to potential reputational risk and the lack of commercial return (Armitage, 2007). Of the programs that remained, AUQA auditors largely agreed that Australian transnational education was comparable with their home institutions (Woodhouse and Stella, 2008).

While there are considerable differences in opinion about the assurance of quality and the effectiveness of external auditing (Anderson, 2006), AUQA audits were useful in that programs and appropriate standards could be contextualized. The audits provided a forum to consider informed judgements and different interpretations of academic standards. The diverse social and cultural settings for transnational education make it important to contextualize standards.

Recent changes in Australia's regulatory system raises a number of questions of how transnational standards will be interpreted in the future. Since 2011, AUQA has been replaced with the Tertiary Education Quality and Standards Agency (TEQSA) and is developing a Higher Education Standards Framework. The Higher Education Standards Framework (DEEWR, 2011) has five components:

- Provider Registration Standards
- Information Standards
- Qualification Standards
- Teaching and Learning Standards
- Research Standards

Subsumed within Provider Registration Standards is a sixth element called Provider Category Standards. This section will also contain a revised set of National Protocols. These will describe the principles that govern each type of higher education institution and provide a set of minimum standards. It is unclear at this stage whether the notion of equivalence for offshore campuses and comparability for third-party partnerships in transnational education will remain. Information standards deal with the collection and publication of data. A website called 'myuni' is planned for launch in 2012 and will contain a range of information relating to standards. Qualification standards largely revolve around a revised Australian Qualifications Framework describing the expected graduate outcomes at different levels of education. Underneath this may be the development of subject-level standards described as learning outcomes but this is yet to be confirmed. This would broadly follow the UK benchmark statements that provide external reference points for setting and assessing standards in institutions at the subject level. Teaching and learning standards is perhaps the most difficult and contentious area. The setting and assessment of teaching and learning standards is opaque and complex. It is not clear for example, whether standards will be set according to institutions' own missions and goals, against national or international standards (Thompson-Whiteside, 2011b). Lastly there are research standards, which are likely to be assessed through the Excellence in Research Australia (ERA) initiative, which collects research data to assess research performance within institutions.

While many of these standards are under development it is clear that by withdrawing from an auditing process TEQSA will be relying much more on quantitative data and performance indicators. A range of these potential indicators can be seen from Table 1.0 extracted from Coates (2010). The integrity and reliability of this data becomes paramount. As Coates argues, "it is vital that indicators are valid, relevant to key phenomena, stable across contexts, transparent, non-trivial, responsive to change, auditable, efficient to collect, preferably readily available, as simple as possible, quantifiable and generalisable" (p.6).

	Outcomes	Processes	Inputs
Higher Education Learners	<ul style="list-style-type: none"> • Graduation rates • Graduate destinations • Learning outcomes • Graduate capabilities • Work readiness • Satisfaction 	<ul style="list-style-type: none"> • Student engagement • Retention and Progress 	<ul style="list-style-type: none"> • Entry levels • Entry pathways • Student diversity • Student characteristics • Student aspirations
Higher education Teachers	<ul style="list-style-type: none"> • Teaching experience • Teaching resources 	<ul style="list-style-type: none"> • Teaching processes • Course management • Support systems 	<ul style="list-style-type: none"> • Staff characteristics • University enculturation • Educational resources • Curriculum
Higher education institutions	<ul style="list-style-type: none"> • Institutional growth • Institutional reputation • Community engagement 	<ul style="list-style-type: none"> • Academic governance • Academic management • Academic culture • Staff development • Quality systems 	<ul style="list-style-type: none"> • Institutional characteristics • Institutional resources • Industry engagement • Graduate capabilities • Work readiness • Satisfaction

Table 1.0 Indicators of education quality extracted from (Coates, 2010).

The problem in using a range of these indicators for transnational education is the highly contextualized nature of teaching and learning. The reliance of quantitative indicators in transnational education raises potential problems for transnational education for a number of reasons.

First, the collection of data in transnational education is poor (Garrett and Verbik, 2004, Verbik and Jokivirta, 2005). The fact that students are based offshore from Australia means that the Australian government relies heavily on individual institutions collecting the data. In some cases institutions will collect enrolment data centrally but quite often the collection of data is done in individual departments. While Australian institutions typically report enrolment data to the government there is a lack of data around teaching and learning. Until now the public assurance of quality was done through an auditing process and largely focused on institutional processes. As a result the quality assurance of transnational education has largely been framed around institutional processes of teaching, assessment and the moderation of assessment. Most of these processes do not necessarily involve the collection of data. As a result there is little comparative data analysis between offshore students and onshore students.

Second, one could argue that even if the data were to be collected, it would be invalid to compare offshore students with onshore students. Comparing data across culturally and socially diverse settings, across different locations is bound to be complex. Some indicators are likely to be equivalent but others are likely to be different and these differences can have multiplying effects. The processes of teaching and learning are dynamic, complex processes and not easily measurable as discrete activities. Even if some standards were stable or equivalent, does not necessarily mean that all the other standards would be equivalent. For example, if entry standards and curriculum were equivalent, it does not necessarily mean that teaching, learning or graduate standards are

equivalent. Comparisons of teaching and learning standards using purely quantitative data have the potential to be misinterpreted.

Third, the emphasis on quantitative data has the potential to create a situation of absolutes. If data between onshore and offshore students are compared and not equivalent then one is presumed to be inferior. There is no contextualization of the data. Of course, if the policy settings (e.g. the Provider Registration Standards and the National Protocols) allow for comparable standards then the question is what difference is acceptable? How does one interpret the differences that inevitably will occur in the data?

The shift towards a more precise, quantifiable assessment of standards has potential ramifications for transnational education that has to be fully understood. Where audits allowed for a contextualization of standards, a standards-based architecture that is more ‘light-touch’ and data driven has the potential to highlight differences that exist for very good reasons. If equivalent data between onshore and offshore shows equivalent standards, then logically data that shows significant differences suggests notions of one having inferior standards to the other. Ensuring equivalent data between onshore and offshore is likely to be more difficult depending on the mode of delivery, the level of autonomy and the amount contextualization that takes place in the classroom. By examining the Two Dimensional Typology in Figure 1.0 developed from Davis, Olsen and Böhm (2000), it is likely that a data-driven standards framework will become more risky for transnational education in the bottom right quadrant.

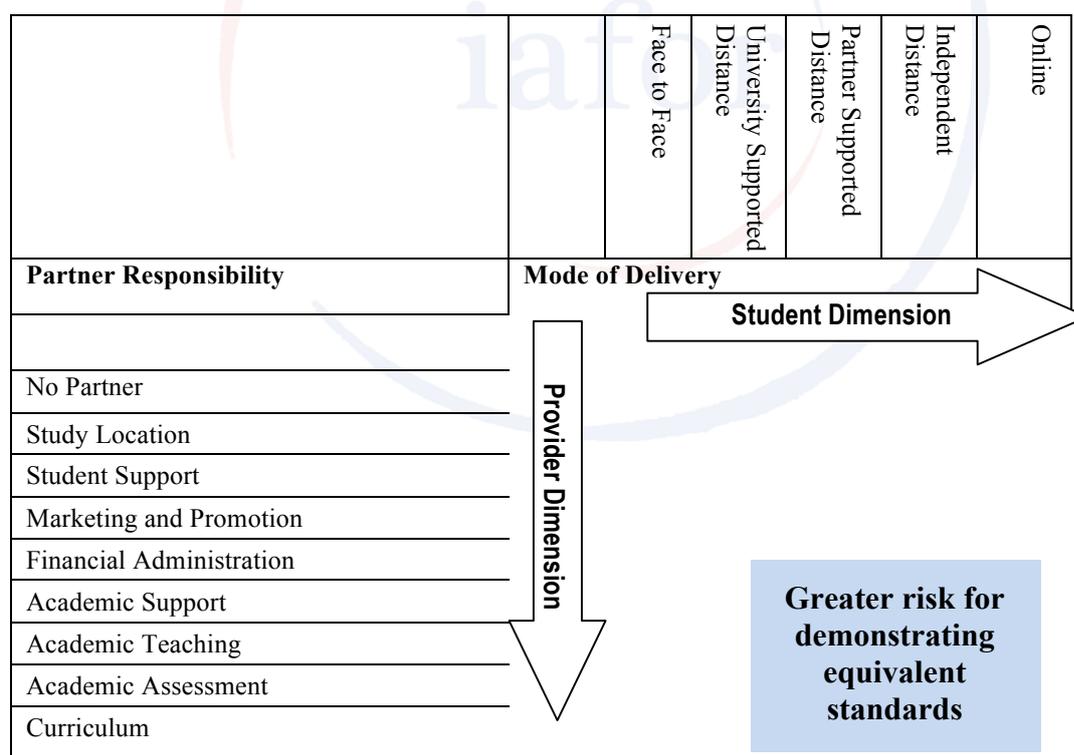


Figure 1.0 Two dimensional model of transnational education extracted from (Davis et al., 2000).

The result is likely to drive institutions away from certain international partnerships, and certain types of transnational delivery models. Australian institutions are likely to want greater control and certainty over their teaching and learning standards. Where

transnational programs have high levels of involvement from third party providers, in the form of teaching, the contextualisation of curriculum, and/or assessment, the risks of demonstrating equivalency in a data-driven standards framework, are likely to be greater.

Conclusion

The recent shift in Australia away from quality assurance and auditing of institutions, to a more precise standards-based framework has considerable implications for Australian transnational education. A standards framework that relies heavily on the comparison of data has implications to drive institutional behaviour away from certain forms of international collaborations and types of transnational delivery. The comparison of data does not sufficiently allow for interpretations and a contextualisation of complex teaching and learning processes. If policy settings still require equivalent standards in transnational education, then the risks for transnational may be too high. Even if policy settings allow for comparable standards, any differences in data will be considered a risk to standards. The notion of difference and the desire to reach equivalency fails to recognise the complexities of transnational education and ultimately is unproductive in generating mutually beneficial, long-term, sustainable partnerships. To minimise any potential differences, Australian institutions are likely to constrain the types of international partnerships, the types of transnational delivery and reduce the number of programs. This in turn will have implications for countries that use transnational education as a way of capacity building. It is likely to restrict access to Australian higher education for students in those countries.

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Constructive E-Learning – A Highway Towards Global Knowledge Economy

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Constructive E-Learning – A Highway Towards Global Knowledge Economy

CONSTRUCTIVE E-LEARNING – A HIGHWAY TOWARDS GLOBAL KNOWLEDGE ECONOMY

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Abstract

The transformation of traditional economy into the global knowledge economy has triggered huge scope for innovative learning initiatives. The constructivism learning theory helps the learner to construct own knowledge by using the experiences. The paper attempts to use constructivism for the development of global knowledge economy through E-learning. 'Constructive E-learning' will help the learners to confidently face the global challenges.

The demands of global knowledge economy are ever increasing. To face the challenges of the knowledge economy we require particular competencies. These competencies can be acquired through constructivism. The rapid development in technology is enabling learners to access the knowledge base from different corners of the world. Use of constructive e-learning is essential to balance the rising needs of knowledge economy and increasing contribution of technology.

The use of constructive E-learning will enable learners to be independent in gaining the knowledge and applying the same to solve the challenges of the changing world. It enables the learner to find out new innovative ways to perform the tasks, which might be more feasible in the particular situation. It will help learner to be flexible, situational and intuitive in gaining the knowledge and implementing the same.

The constructive E-learning will help development of the knowledge, skills and abilities of knowledge workers, peoples and the countries as individual economies. The growth of each economy as a knowledge economy will eventually build the world as a Global Knowledge Economy. Thus 'Constructive E-learning' serves as a highway towards Global Knowledge Economy.

Introduction

The concept of constructivism has its origin in Socratic pedagogy. Socrates says, '**Knowledge is only perception.**' Socrates believed that it is more important to teach students to think for themselves than to tell them the correct answers, it is more important to develop a sense of scientific inquiry among students than presenting bits of information to them, it is more important to create knowledge constructors than knowledge receivers.

Socrates Said "***I cannot teach anybody anything, I just make them think.***" Socrates while teaching his students asks a series of questions and has reasoned dialogue in order to promote critical thinking in them. Because of this reasoned dialogue, students start thinking in a scientific way; examining opinions and ideas logically, inquiring, experimenting, analyzing and drawing out conclusions. Through this process, students gain deeper knowledge and insight than by memorizing pieces of information. Thus, how we perceive knowledge and the process of coming to know, provides the basis for educational practice.

Constructivism is the idea which believes that we build new knowledge based on our current knowledge and experience; the new knowledge then reshapes the things we already know as

we 'construct' our view of the world (Dr. Fleetwood) . Today, ***Socrates is online***. That is to say that E-learning pedagogy features his philosophy of teaching. That's why Von Glasersfeld described constructivism as a "***theory of knowledge with roots in philosophy, psychology and cybernetics.***"

Socrates said, "***There is one good, knowledge, and one evil, ignorance.***" No evil can happen to a good person because he can differentiate between good and evil through his knowledge. In this era of Global Knowledge Economy, I will say, "***There is one investment, knowledge, and there is one divestment, ignorance.***" No loss can happen to a knowledge investor or worker if he or she has a sense of utilizing and constructing knowledge properly for his business purposes. Francis Bacon says, "***Knowledge is Power.***" Really Knowledge is the power of Knowledge Economy, in the sense that knowledge is the capital of knowledge economy and without capital no economy can run.

Here just I want to share my personal experience with my granddaughter. My Granddaughter took my mobile phone and started to operate it when I was busy in some work. When I finished my work, I saw my granddaughter operating the mobile. I sat beside her and asked to teach me how to operate that mobile and I was astonished when that little child of five years showed me a number of applications that I could not know while using that mobile for many days. That event inspired me to think on Constructivism and E-learning.

Evolution of Constructivism

John Dewey's theories of childhood development and education, what we now call Progressive Education, led to the evolution of constructivism in the twentieth century (Ahmed, 2008). According to Dewey (1916), '***Knowledge is dynamic and is built around the process of discovery.***' He recommended problem solving method for teaching. Dewey's constructivism emphasizes development of learners' ability in solving their real life problem where problem solving and free discovery come together. Dewey considered the teacher as a guide rather than a director.

Constructivism falls into three schools of thoughts namely, 'Social Constructivism' and 'Cognitive Constructivism' and 'Radical Constructivism'. Vygotsky, a Russian psychologist and philosopher, emphasized the social context of learning in which learning takes place and how the context has an impact on what is learned (Vygotsky, 1978). His theory is called 'social constructivism' as it emphasizes the influence of social contexts, critical importance of interaction with people, including other learners and teachers in learning. Vygotsky supported Discovery model of learning.

Jean Piaget, Swiss Philosopher and Scientist, says, "***The principle goal of education in the schools should be creating men and women who are capable of doing new things, not simply repeating what other generations have done; men and women who are creative, inventive and discoverers, who can be critical and verify, and not accept, everything they are offered (Piaget).***" He is the artificer of Cognitive constructivism. Cognitive constructivism proposes that learners must construct their own knowledge as humans cannot be given information which they immediately understand and use. They should build their knowledge through experience. Experiences enable them to create schemas - mental models of the world. These schemas are changed, enlarged, and made more advanced through two complimentary processes: assimilation and accommodation (Piaget, 1955).

Bruner initiated curriculum change based on Jean Piaget's belief that learning is an active, social process where students construct new ideas or concepts based on their current knowledge. Bruner (1966) wrote, "*We teach a subject not to produce little living libraries on that subject, but rather to get a student to think mathematically for himself, to consider matters as a historian does, to take part in the process of knowledge-getting. Knowing is a process, not a product.*"

Von Glasersfeld (1995), exponent of Radical constructivism, is of the opinion, "*Constructivism does not claim to have made earth-shaking inventions in the area of education; it merely claims to provide a solid conceptual basis for some of the things that, until now, inspired teachers had to do without theoretical foundation.*"

John D. Bransford, Eleanor Duckworth, George Forman, Roger Schank, Jacqueline Grennon Brooks and Martin G. Brooks are some of the modern educators who have contemplated, written on and exercised constructivist approaches to education.

E-learning Pedagogy

The three most commonly implemented learning theories into an e-learning context are Behaviorism, Cognitivism and Constructivism (Kelly, 2009). Sutton (2003) has discussed the current trends in E-learning that covers Behaviorist and Constructivist theories. He states that there are many aspects of Behaviorism that are positive and that have led to the development of important instructional technologies as; instructional software and computer-assisted instruction. In such type of learning a student is rewarded through an encouraging comment before moving on to the next learning objective. It is evident in the use of the computer games that are as highly addictive to children as their learning behavior is being progressively rewarded as each level of the game is mastered.

But Camp (1999) is of the opinion that when learning takes place in authentic and real-world environments, and with relevance to the learner, is a "primary catalyst of knowledge construction". In E-learning, we do not learn just only by instructional softwares and computer assisted instructions but also make use of all sorts of digital appliances, and a plethora of activities. While using these digital appliances we can realize the relevance of constructivist ideals in today's educational practices, where learners or users construct their own knowledge. Constructive approach has now taken the educationists by storm and has gained enormous attention with e-learning taking up the baton of education and training from the traditional methods (Pandey, 2008).

Cognitivism focuses on how the mind processes and uses information. Cognitive development means development of mental process by which knowledge is acquired, stored, and recalled to solve problems. Therefore, cognitive development theories attempt to explain cognitive activities that contribute to students' intellectual development and their capacity to learn and solve problems. The implementation of cognitive theories in E-learning often involves the use of schema, or mental maps to help organize the learning content (Allen, 2007). Cognitivism also deals with helping the learner tie the material into existing information to help memorize the content (Modritscher, 2006).

Thus E-learning Pedagogy is a comprehensive application of Behaviorism, Cognitivism and Constructivism theories.

Constructive E-learning

Educationists and instructional technologists had defined various aspects of the theory and application of constructivism. In simple words, constructivism means letting the learner create one's own learning. Computers and Internet provide vast possibilities for the learners to explore learning on their own.

Constructivism is often regarded as paragon pedagogy for e-learning as it both draws upon the strengths of the medium and best overcomes its weaknesses (Susan, 2003). Constructivist pedagogy sees the learner at the centre of the learning experience. It is difficult to maintain the traditional role of the teacher in e-environment. E-learning encourages students to actively engage in their learning and gives them such a variety of options of what to study, where to study, how to study and with whom. It places the student at the centre of the learning experience.

Constructivist pedagogy sees knowledge being built and applied according to individual experience. It encourages learners to build their own knowledge based on individual experience and apply this directly to their environment. The focus is on learning rather than teaching with the individual at the centre of educational process. E-learning forces learners to be explorers searching out information, making connections and constructing knowledge. E-learning enables context-based, work-based learning with the learner at the centre of the learning experience, students need to take responsibility for the learning. Online technologies easily allow students to record and reflect upon their learning.

E-learning permits learners to acquire knowledge and pass it to others, apply it to personal as well as social problems. With E-learning the learners are empowered to acquire and disseminate the relevant knowledge. Constructivism focuses on learner's control of learning processes and it narrows the gap between the school world and real-life society.

The hole in the wall project of Dr. Sugata Mitra in India has proved that constructivism approach of learning can be used through E-learning tools to educate the children. Where he put several computers having full time internet connection in slums of India and observed the site continuously through hidden cameras. And the result was that the illiterate children started browsing Internet, teaching each other, recording their own voices etc. Such experiments are done throughout India as well as other countries like Italy, South Africa, etc.

My personal experience about this is that, I could not operate pc, laptop, and iPod properly. I used to ask my daughter to surf on internet and search the information on so and so topic, download videos clips, and download files, make PPTs, sent mails to my colleagues and friends. When she married and went with her in laws, I became helpless. I never operated it myself and each time asked her to do things for me. Gradually, I started operating all these things with trial and error method. Now, I can operate all electronic appliances as I myself started using and operating them. Constructivism helps you learn things in your own way which leads to quick learning.

Constructivist pedagogy sees the learner as an active participant in their learning experience rather than a passive vessel to be filled with information (Susan, 2003). E-learning easily enables communication between learners without the barriers of time and place. Hence here we can coin a term for this constructive learning through e-learning as Constructive E-learning.

I would define Constructive E-learning as “*The construction of knowledge through an active mental and social process by learners via E-learning which covers a wide set of applications and processes of online and offline learning resources of digital appliances.*”

Challenges of Global Knowledge Economy

Knowledge economy emerges from two sources, the rise in knowledge intensity of economic activities and the increasing globalization of economic affairs. Governments all over the world want their countries to have high-value, high-skill economies, and they realize that the first step towards this aim is to have well-educated people. A knowledge-driven economy demands a larger proportion of the workforce with a university education and with access to lifelong learning opportunities.

The world has shrunk to a global village, a globalised and knowledge intensive society. Now a day, industries are driven more by knowledge and brain power than natural resources. The countries that are doing well in global knowledge economy are the ones that have high levels of higher education. The extent of globalization as well as the intensity of the knowledge economy are enhancing rapidly. *Alfred Marshall (1890)* rightly said;

“Knowledge is our most powerful engine of production.

It enables us to subdue Nature and force her to satisfy our wants.”

A knowledge-based economy relies primarily on the use of ideas rather than physical abilities and on the application of technology rather than the transformation of raw materials or the exploitation of cheap labor. Knowledge is being developed and applied in new ways. Trade is expanding worldwide, increasing competitive demands on producers. The global knowledge economy is transforming the demands of the labor market in economies throughout the world. It is also placing new demands on citizens, who need more skills and knowledge to be able to function in their day to day lives. Equipping people to deal with these demands requires a new model of education and training, a model of constructive, continuous, easily accessible, affordable and lifelong learning (World Bank Report-2003).

The global knowledge economy emphasizes the use of ideas and technological resources. In order to build a knowledge-based economy, it is essential to restructure and improve the educational system, while updating the economic regime. The emergence of the global knowledge economy has put a premium on learning throughout the world. Developing countries and transition economies risk being further marginalized in a competitive global knowledge economy because their education and training systems are not equipping learners with the skills they need. To respond to the problem, policymakers need to make crucial changes. They need to replace the information-based, teacher-directed learning provided within a formal education system governed by directives with a new type of learning that emphasizes creating, applying, analyzing, and synthesizing knowledge and engaging in collaborative learning throughout the lifespan.

Knowledge Workers

Constructive E-Learning is crucial for preparing knowledge workers to compete in the global economy. A knowledge worker works for a living at the tasks of developing or using knowledge. He or she works at any of the tasks of planning, acquiring, searching, analyzing, organizing, storing, programming, distributing, marketing, or contributing to the transformation and commerce of information.

Peter Drucker coined the term ‘Knowledge worker’ in his book, *Landmarks of Tomorrow* (1959). The knowledge worker includes personnel in the field of information technology, such as programmers, systems analysts, technical writers, academic professionals, researchers, and so forth. The term is also frequently used to include people outside of information technology, such as lawyers, teachers, scientists of all kinds, and also students of all kinds.

Knowledge workers can be classified in three types; Knowledge Generators, Knowledge consumers and Knowledge Brokers (Gent, 2007). By improving knowledge workers ability to function as members of their communities, education and training increase social connections, reduce crime, and improve income distribution.

Demands of Global Knowledge Economy

Knowledge economy demands command over a set of knowledge and competencies. Rychen and Salganik (2001) explained three categories of competencies:

1. *Acting autonomously:*

Developing a sense of self, making choices and acting in the context of a larger picture, being future oriented, being aware of the situation, understanding how one fits in, exercising one’s rights and responsibilities, determining and executing a life plan, and planning and carrying out personal projects.

2. *Using tools synergistically:*

Knowledge workers should be able to use tools for effective communication; being able to use language, symbols, information and technology interactively to accomplish goals.

3. *Functioning in socially heterogeneous groups:*

Being able to interact effectively with other people, including those from different backgrounds, such as; recognizing the social embeddedness of individuals; creating social capital; and being able to relate well to others, cooperate, manage and resolve conflict.

All these key competencies contribute to a higher quality of life across all areas. The global economy requires mastery over some technical, interpersonal, and methodological skills. Technical skills include literacy, foreign language, math, science, problem solving, and analytical skills. Interpersonal skills include teamwork, leadership, and communication skills. Methodological skills include the ability to learn on one’s own, to pursue lifelong learning, and to cope with risk and change.

These competencies are needed because of the rapid proliferation of scientific and practical knowledge, the shortening of the useful life of knowledge because of the continuous production of knowledge, and the growing influence of science and technology, which profoundly change the organization of jobs and lives. The consequences of these changes cannot be reliably foreseen. These skills also enable citizens to engage more actively in the knowledge economy. It emphasizes the shift to knowledge intensive high skills labor force, international circulation of brains, emphasis on lifelong learning, transferable skills and competences and knowledge management as key individual and organizational capacity.

Constructive E-learning & Global knowledge economy

The demand of global knowledge economy can effectively be met by constructive e-learning. Knowledge economy demands for latest knowledge and competitive knowledge workers of all kinds. E-learning provides such a platform wherever you need it. Businesses need cost-effective ways to meet learning needs of global workforce but increasing bandwidth and better delivery platforms of e-learning makes learning more attractive. Flexible access to lifelong learning is needed, thus emerging technology standards facilitate compatibility and usability of e-learning.

Since the 1990s, the rise of the Internet and proliferation of information technology (IT) have combined to create a global networked infrastructure. This infrastructure has, in turn, accelerated the development of a new global “knowledge economy”. In the global knowledge economy, national economies are, in many ways, inseparable from the larger global economy.

Constructive E-learning forces learners to be explorers searching out information, making connections and constructing knowledge. The constructive E-learning helps in development of each economy as knowledge economy and ultimately leads to a Global Knowledge Economy.

Following are the constructive modes of e-learning which are strengthening global knowledge economy:

1. Mobile technologies

Mobile is a small gateway to the world of information. By Mobiles, knowledge workers can access Internet and other knowledge resources anywhere and anytime. Even small children learn a lot of things on mobile through games, dictionaries, encyclopedias, educational software, videos and multimedia simulations. For Mobile learning there are two distinct potential markets, which are evolving; the first one is for people that are without infrastructure and learners in developing economies. The second one is for people whose jobs require them to continuously move, people learning and receiving information while visiting various sites and locations, certain type’s students needing individualized learning education, on the move and external projects. All sorts of knowledge resources are available on mobiles for knowledge workers.

2. Use of online resources

Any form of online information or communication resource has the potential to allow knowledge to be directly put into practice. Today, it is thus a key element of any work-based learning (Susan, 2003). While using online resources knowledge constructors or workers primarily interact with the computer in a virtual environment, they interact primarily with other networked participants, and with widely disseminated information tools and constructs knowledge for their professional objectives.

3. Make use of a discussion board

Use of a discussion board enables knowledge workers to share ideas, gain new knowledge and collaborate without having to be physically together. The global nature of the Internet also means that this dialogue can also cross-continent, time zones and cultures, enabling new perspectives and greater understanding amongst learning communities (Susan, 2003).

4. *Use web-based resources*

Web surfing is a convenient, faster, easier way of constructive learning. At present most of the working and learning communities spend their lot of time in front on computer screens. They all have digital contents: digital instruction, texts, interactive digital video, computer simulations, computer games, multimedia products and virtual reality, all connected to the World Wide Web. The web is one huge hard disk with all kinds of files: text, images, sound, video and even complete learning tools in the form of applets. In other words, it's a multimedia library par excellence (Rik, 2003). Learning can be accessed by Web browsing on any platform. Browser software and Internet are widely available. Web resources allow knowledge workers to construct their own learning.

Global knowledge economy cannot escape from the influence of the WWW. Knowledge workers find their own way and construct knowledge in planning, acquiring, searching, analyzing, organizing, storing, programming, distributing, marketing, contributing, transforming knowledge for commercial purposes.

5. *Personal Development Portfolios (PDPs)*

Electronic PDPs enable knowledge workers to easily audit, record, store books, communications, audios & videos, games, learning softwares and reflect on their learning anytime and anywhere (Cesarini, 2009). These appliances are also known as information appliances as user can access information through Web and other online resources. PDPs reduce knowledge workers dependency on importable resources of knowledge. Such Electronic PDPs should be made available for students and workers of knowledge economy on cheap prices.

6. *Interactions*

Learning is proportional to interaction. As much we interact on a subject with our colleagues as it enriches our understanding of that subject. According to Kolb (1984), 'Interactivity results in deeper learning because learners can hypothesize to test their understanding, learn by mistakes and make sense of the unexpected.' Technological networking allows students to interact, communicate and collaborate with content experts and with fellow students around the globe. Communication tools like conferencing, e-mail, and chat groups allow knowledge workers to collaborate and exchange information, strategies and create a professional community. Terry Jones, founder and former CEO of Travelocity.com, His son, created a computer game called "Day of Defeat" with four students from the United States, five from Europe and one from Canada. Interestingly, they never met! They collaborated and created this game solely via email and chat interactions.

7. *Virtual Corporate University*

Knowledge is a corporate asset now a days, hence learning and training becomes a strategic initiative and corporate advantage. Corporate universities are not only a training aid for employees, they are becoming profit centers, responsible for training 'a corporate ecosystem' or customers, partners, channel partners and suppliers. More and more companies are starting their own virtual corporate universities. The emphasis is on an integrated curriculum focusing on skills and competencies, and closely related to company knowledge management. Such Corporate universities should be started in all sorts of business.

8. *Game based learning*

Game based learning is one of the important solutions for knowledge workers whose priority is to do their job rather than training courses (Prensky, 2001). In Game based learning the training content is instructed and designed in such a funny, interactive and engaging manner that motivate the learners. Such games help knowledge workers to form skills they can use in real life situations. Such games should be made for all sorts of knowledge workers.

9. *Simulated learning*

Simulation is used in various forms in education as a constructive method of learning, such as; role plays, group discussions, management games, war games, training simulators, model driven simulation etc. In simulation learners actively participate and construct knowledge on their own through simulated situation. The digital nature of simulated learning is multimedia computer simulations that can be seen in the form of graphics, animations, movement, video, games and other dynamic forms of representation, which are affordable to one and all (Rik, 2003). Such computer simulations should be made in all kinds of knowledge workers so that they can construct their own knowledge and competencies without the help of others.

10. *Discovery Learning*

Discovery learning is one of the important forms of constructive learning. We apply this principle in our day-to-day life although we are not aware of it. So do children in different stages of their development. Tots discover words and their meanings incidentally. Piaget and Papert wrote about this in the seventies as in the early sixties, 'discovery learning' was officially promoted by educationalists in the United States as a method of learning (Piaget, 1977) (Papert, 1980).

In the same way we discover a lot of things while surfing on the Internet and using electronic appliances' of communication. Every knowledge worker discovers a lot of knowledge useful in his work. Knowledge workers construct knowledge through discovery learning.

Constraints

It can be unsettling for knowledge workers that are more familiar with an instructional approach. Knowledge workers need new skills to be confident in seeking out information, reflecting on their knowledge and sharing their views through written text with others. All this is in addition to being confident in using ICT and the Internet. One of the key implications of constructive e-learning is therefore the need for students to develop learning to learn skills. Group work in particular can prove difficult online. Furthermore, some students, for a variety of reasons - learning style, learning disability, etc may not be happy working collaboratively online preferring to work on their own.

Conclusion

Constructive e-learning makes learning more independent, individualized, interactive convenient, easy and interdisciplinary and serves most of the needs of Global Knowledge

Economy. The potential of Constructive E-learning is enormous. As technology continues to develop rapidly; knowledge policymakers, knowledge workers, ICT specialist, educational programmers, corporates, teachers and learners need to work together to enrich all the constructive modes of e-learning for the knowledge workers of all the fields and industries. They should make more games, simulations, discussion boards, blogs, websites, learning material, educational mobile software, learning communities of knowledge workers, and chat groups to facilitate constructive e-learning and to harness the benefits of Global knowledge economy. This can also make the world more prosperous because eventually if all countries are able to take advantage of Constructive E-learning, they all can achieve the enormous benefits.

The constructive E-learning is developing knowledge, skills and abilities of the knowledge workers, and the countries as individual economies. The transformation of each economy as a knowledge economy is eventually building the world as a Global Knowledge Economy. As on a Highway drivers drive their vehicles at different speeds and provide transportation facilities and services. In the same way, on the highway of constructive e-learning all knowledge workers are constructing knowledge as per their capacity, providing different knowledge services and contributing the Global knowledge economy.

Therefore, I say that constructive e-learning is a highway towards Global knowledge economy on which every knowledge worker constructs knowledge at fast forward speed to satisfy his needs as well as the needs of Global Knowledge Economy.

I finish my article by quoting Henry Ford, for all knowledge workers, ***“You must know all there is to know in your particular field and keep on the alert for new knowledge. The least difference in knowledge between you and another man may spell his success and your failure.”***

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Application of Hermeneutics in Science Education

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Abstract

It is essential that not to put out of sight the differences between life world and science world. It is also necessary to bridge and to smooth them through a better understanding of the problem of misconceptions and the historical development of science within the historical context of life world. Although , experiments have separate quality from life world experiences: this paper discuss the difference between what is going on in lab world verses what is going on in social world or the world of life

Key words

Hermeneutics, Science Education, Science World, Life World

Introduction

It is an established fact that development of a country depends upon its development in Science and technology. This development is based upon the education system of a country. In all technological advance countries there is a great emphasis on science and technological education. That is why there is an increasing interest of researchers in science education according to Feyman “The scientific enterprise plays a monumental role in contemporary society; in fact, it may be the modern era’s defining feature, residents in these times run the risk of being powerless if they fail to understand science as a complex social activity, run by humans, Scientists are not isolated; they exhibit the same biases and social tendencies as other human, no scientific research is ever completely objective, however, these scientists agree to certain rules of ethics and

conduct, so that the amount of bias and conflict in the results is minimized (American Association for the Advancement of Science, indeed scientific literacy is also generative; one is not limited to the facts and knowledge that the individual acquired in high school; rather, as the individual ages and as stronger scientific theories replace weaker ones, he will be able to use his scientific skills to understand the changes, the world looks so different after learning science ... these are beautiful things, and the content of science is wonderfully full of them, they are very inspiring, and they can be used to inspire others.” (Feyman 1968 Pp 313)

Learning is basically a social process. It deals more with social context. Science education also follows this principle. In the past science teaching was isolated in the laboratories and it was limited to learning theories. The main aim of science education is to enhance comprehension and understanding which is lacking in normal science classes. There is a difference between methods of classical sciences and social sciences. (Bybee 2002)

Meanings of Hermeneutics

Hermeneutics are those researchers who distinguish the methodology of classical natural sciences from the methods of social sciences (Robert 1997 <http://plato.stanford.edu/entries/hermeneutics/>). They argue that the methodology used in natural science is not fit for the field of social science (Arbnor and Bjerke, 1997 <http://plato.stanford.edu/entries/hermeneutics/>). They have a clear line of distinction, however, more than variation in methods applied to the generation of knowledge. Their main difference lying in objectives for generating knowledge whereas the positivists use to explain the phenomena, where the hermeneutics are required to understand them. The differences in explanation and understanding may not be so clear and well defined, but they are substantial. Relationship among the characteristics, behaviours or the both should be explained (Arbnor & Bjerke, 1997 <http://plato.stanford.edu/entries/hermeneutics/>). The explanation should base on the operational definitions; otherwise, it might be confusing if it is based on the objective deviated concepts (Johnson and Duberley, 2000).

Hermeneutics address both art and theory of understanding and explanation of linguistic and non-linguistic terminology. In theory, their base is the ancient Greek philosophy and emerged as an important branch of Biblical Studies in the Middle ages and during Renaissance. Afterward, they concentrated on ancient and classic cultures too. (Sanford Encyclopedia of Philosophy <http://plato.stanford.edu/entries/hermeneutics/>)

Turn in meanings of Hermeneutics

By introducing German idealism, the meaning of hermeneutics have changed totally and it turns philosophical. It is no longer conceived as a methodological or didactic aid for other disciplines, but turns to the conditions of possibility for symbolic communication as such. The question “How to read?” is replaced by the question, “How do we communicate at all?” Without such a shift, initiated by Friedrich Schleiermacher, Wilhelm Dilthey, and others, it is impossible to envisage the ontological turn in hermeneutics that, in the mid-1920s, was triggered by Martin Heidegger's *Sein und Zeit* and carried on by his student(Georg Gadamer 1986).

Now hermeneutics is not only about symbolic communication. Its area is even more fundamental: that of human life and its existence as such. It is in this form, as an interrogation into the deepest conditions for symbolic interaction and culture in general, that hermeneutics has provided the critical horizon for many of the most common discussions of today's philosophy, both within an Anglo-American context (Rorty, McDowell, Davidson) and within a more Continental discourse (Habermas, Apel, Ricoeur, and Derrida 2002 <http://science.jrank.org/pages/9618/Hermeneutics-Gadamer-His-Critics.html>). Adopted from <http://plato.stanford.edu/entries/hermeneutics/>

Hermeneutic turn of Philosophy is the base of change of philosophy of science in the era 60's. it is also called “sociological turn” in the meaning of science . As a result of different attempts made by different philosophers in 80's - 90's a new thinking method was evolved in the Philosophy of science i-e “ the hermeneutics of science”

Hermeneutics of Science Education

Nowadays, the philosophical debates are mainly affected by this theory. It is going to develop an acceptable forum for tackling with philosophical question (Martin Eger 1992). It is not only limited to philosophical debates, it is also have a great linkage with teaching methodology. Learning process is basically a social process. Learning become more effective, long lasting and durable if it is supported by social and cultural orientation.

Science Education is mainly considered as teaching of happenings. Science students understanding about science is limited to science world (Eger 1992). They are unable to make connections between science world and life world. According to Eger *“there are pre-suppositions in our knowledge constructions which constitute the conditions of possibility of our experience, they depend upon life world we embedded in. The student is embedded in his own daily life”*. .

Solution of the Problem

The solution of the problem is application of hermeneutic interpretation of science rather than epistemological interpretation of science (Eger 1992). He further said “This approach may build a bridge between the science world and real world of the student and teachers, this dynamic process can be a key to explaining the scientists' innovative meaning shift to a new interpretation, that is to a new scientific theory, a version of it can be used to shape an educational framework and the student could be guided to understand the different interpretations (realizations) of a given phenomenon offered by scientists considering their life world, and in choosing and utilizing one or the other (and thus achieving himself a RR process) he could come close to the actual aspects of scientific research”. For this purpose it is necessary to study the hermeneutic issues to science education.

In a paper presented by Eger in the “First International Conference on Hermeneutics and Science” , held in 1992 on this topic , Eger points out that *“the well known problem of misconceptions is an indicator of the failures of contemporary educational efforts, we agree on that and we will utilize this issue as a ground for the discussion and among the most interesting proposed solutions to the problem of misconceptions is the constructivist one: misconceptions have been reinterpreted as alternative conceptions, this kind of perspective gives us no explanation of the origin of this learning problem and does not allow a transition process from student mental representations to an actual understanding of science”* . (Eger, 1993 page 22) .

Indeed hermeneutics can give us a new insight on this issue: as Eger has shown, “misconceptions have to be strictly related to pre-conceptions and from a point of view that belongs to the hermeneutical tradition there are presuppositions in our knowledge constructions which constitute the conditions of possibility of our experience, they are not given within the subject of knowledge as for Kant, but they depend on the life world we are embedded in.

Discussion on Solution

Hermeneutics within science is based upon “Galilei's metaphor of nature seen as a mathematical text”.(M. Eger, 1992). He said that “Science is seen as a language through which we give a hermeneutics of this text. Eger is right that before Heidegger hermeneutics was essentially hermeneutics of texts, interpretation of texts Embedding Husserl's phenomenology within his ontological perspective, Heidegger created a new kind of hermeneutics, where interpretation had first of all to be related to our existential conditions within the world. Galilei's metaphor of nature as a book, in my opinion, allows Eger to identify in some sense the two kinds of hermeneutics, the two kinds of explanation and this major hypothesis seems to smooth out the differences between life world and science world, leading to see science world concepts as mere extensions of lifeworld concepts and so deviates in some way from the standard, likewise in their opinion, science world is opposed to life world as the artificial, isolated laboratory world and is related to instruments which, even if they could be considered in some respect as

extensions of our senses, determine completely different conditions of possibility of experience: indeed, we could no more speak in terms of experience *tout court*”.

Conclusion

It is important to not to hide the differences between life world and science world. It is also necessary to bridge and to smooth them through a better understanding of the problem of misconceptions and the historical development of science within the historical context of life world. Indeed, experiments are based on presuppositions related to the particular terms and conditions of instruments and environment. An example we can look at the change in scientific thought before Heidegger had done, as the change from an empirically grounded physics related to life world experience to an experimentally grounded physics’.

With this background, it is necessary to try to build up a between science world and real world science educators and students. The Study was be helpful for

1. science educators to bring a paradigm shift of their methodology from epistemological teaching to social teaching ;
2. the student who is embedded in his own daily life. He faces the world of science through the explanation of scientific results given in a textbook: the gap between the two worlds is such that misconceptions on the meaning of scientific theories result. This study will help in minimizing these misconceptions and gaps ;
3. Curriculum experts of science to revise their curriculum in this new paradigm of thinking and relating science education with the actual world of the students ;
4. looking at hermeneutics for science education would mean to exclude textbooks which are related only to technical purposes, and to come back to the life world and
5. administrators to include ways of co-relating classroom with actual life of the students and make learning a social activity instead of a knowledge activity.

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A METHODOLOGY TO DEVELOP ONTOLOGIES FOR EMERGING DOMAINS

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Keywords: E-Learning Domain; Emerging Domain; Knowledge Informaiton; Ontology; Semantic Web

Abstract: The characteristic of complex, dynamic domains, such as an emerging domain, is that the information necessary to describe them is not fully established. Standards are not yet established for these domains, and hence they are difficult to describe and present, and methods are needed that will reflect the changes that will occur as the domains develop and mature. This research proposes the Liverpool Metadata or LiMe methodology to develop an ontology and organise the knowledge that is necessary for developing the domain environment descriptions. Its aim is to capture Knowledge Information (KI) from research articles and translate this into semantic information with web description languages such as XML(s), RDF(s), and OWL. LiMe represents an Ontological Framework, which provides the concept characteristics, represented as a concept framework that specifies conceptualisations of the knowledge. LiMe supports the Semantic Web development. “e-Learning” has been chosen as an example of an emerging domain in this research. The characteristics of e-Learning concepts will be extracted from research articles of journal websites such ScienceDirect, Springer, etc and represented as knowledge. LiMe also explicitly represents how these concepts are developed and evolve to represent the domain.

1 INTRODUCTION

1.1 Overview

The range and quantity of information available via the Internet today has created well-known problems of information overload, including difficulty of access and problems of selecting information that is appropriate and reliable. To address these problems, ways were required to categorise and organise information for access by users. The idea of using multiple sources can facilitate the reliability of knowledge, but increases the need for effective knowledge management.

A domain of knowledge can typically be seen from different perspectives. Also, information about them is diverse and possibly contradictory. Think for example of the huge mass of information contributed every day on the Internet. Therefore, methods are needed to classify and identify information to find reliable sources to construct the knowledge.

In addition, information can change and be flexible, based on time and need. For example, complex domains such as software development have a lot of platforms and standards. Knowledge or concepts in the domain have been defined or represented in different ways. Therefore, users find it difficult to choose the suitable system or concepts for their own environmental needs.

This shapes a complex and unstructured environment where unstable concepts and information are contributed all the time in a domain. The representation itself of the domain is also difficult. It needs methods to capture new concepts, organise existing concepts, and translate into well-formed information that could be shared and reused.

1.2 Objectives

The work in this research sits broadly in the field of Knowledge Management (KM). KM (Eriksson, H., 2004) is identified as the capabilities and communication that include: (1) converting individual to group-available knowledge; (2)

converting data to knowledge; (3) converting text to knowledge; (4) connecting people to knowledge; (5) connecting knowledge to knowledge; (6) connecting people to people; and (7) connecting knowledge to people. It is represented as the combination of documents and ontology that can help organisations describe, store, catalogue, and retrieve information in a systematic manner.

This research introduces an approach that can help the users to classify their information and to represent it with a well-formed structure. The approach provides an ontological framework to structure one individual existing domain. This work focuses in particular on the problem of information management in an organisation. Information within an organisation need to be accessed for different purposes. Experiences from individuals in the organisation help forming the common understanding, which could used or reused to develop new information, therefore it needs to be made shareable and reusable. In fact, individual experiences are a very important source of knowledge. For examples, researchers use the educational experiences to find the information about their experiences, governors used the working experiences to organise their daily information, and teachers collected the information from books, experiments, and so on to prepare their courses.

The aim of the research described in this research is to investigate issues involved in the representation and management of knowledge arising in an emerging domain.

A number of techniques have been used for representing domain knowledge. In most cases, these methods assume the existence of a well-defined body of knowledge that can be assumed to be reliable and definitive, and needs only to be organised appropriately. In the case of emerging domains of knowledge, however, these assumptions are not valid. In this case, the “body of knowledge” is incomplete and constantly changing, and may include significant errors, inconsistencies, and instances of different assumptions, conclusions and terminology. Only when the domain reaches a state of relative maturity can these issues be resolved definitively. Meanwhile, however, there remains a need for researchers and practitioners to make use of the knowledge while it is in this state of evolution.

This research proposes a framework, Liverpool Metadata (LiMe), as the way to transform the individual experiences into relevant information for a particular domain by applying an ontology approach, structuring these experiences in terms of

concepts and the relation between concepts. Concepts are defined from different perspectives under the same domain. These could be redefined, reused and described as specification of the particular domain. The development processes of the LiMe methodology is described in following section. LiMe provides techniques to measure the relation between the concepts in the ontological framework. This allows to store and access with the other. The relation between the concepts presents a knowledge to improve the framework from new information. It is described with the well-defined descriptions such the formal language such XML(s) and RDF(s).

An ontology is a shared description of concepts and relationships in domain knowledge. It consists of terms, their definitions, axioms relating to them, and a taxonomy organizing them. The main objective of an ontology is to enable communication and knowledge sharing by capturing a shared understanding of terms that can be used by humans and programs. It has been argued for the use of knowledge representation techniques capable of reflecting the situated nature of human cognition (Gahegan, W.P.a.M., 2007). It also facilitates the sharing and reuse of information and can reduce the analysis, design, and development time of complex systems.

Within the body of knowledge to represent, a distinction can be made between information coming from referential sources and information coming from practical sources.

Referential sources use documents such as a research paper which provides reliability to the domain. Practical sources use the working experiences such tasks, activities, etc. In case study section, the approach will be exemplified by means of two case studies, one in the educational field (e-learning case study) and one in the governance field (e-inspection case study).

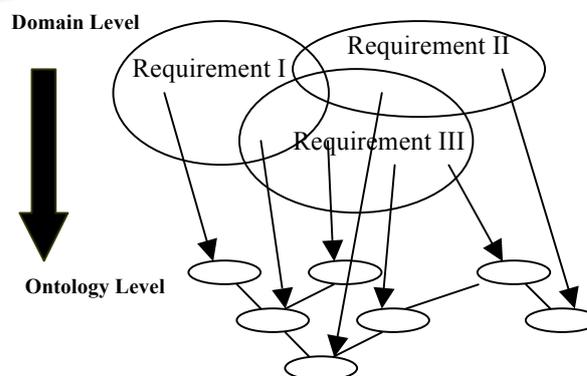


Figure 1: This description of LiMe approach.

For both the above cases, information was developed with the cyclical processes. Firstly, new concepts were defined from individual experiences and formed the structure of knowledge. This was represented as a tree of concepts. Secondly, each concept was linked with the other concepts forming relationships. Users are helped define and arrange these concepts by the LiMe environment. LiMe introduces similarity of concepts in the ontological framework and provides the user with directions for descriptions: generalisation and specification. Therefore, the users can define the appropriate descriptions for each individual information environment.

Figure 1 illustrates the main spirit of LiMe approach: users characterise their own requirements on the domain and are helped to represent them in an ontology.

Organisations typically have to deal with lots of information which is unstructured and difficult to reuse and share.

1.3 Case Studies outline

In this study, two different organisations, educational and government environment, will be used to show how an ontological approach can help classify information in complex scenarios.

The e-Learning case study demonstrates the use of referential sources to capture online learning concepts from research papers to shape the domain knowledge for the Valaya Alongkon Rajabhat University. E-learning is a good example of an “emerging domain”, that is a domain which has the particular additional difficulty that the current body of knowledge is not stable (O’Hara, C.B.a.K., 2007). Research into e-Learning is currently very active (M del Puerto P., 2008), and the concepts involved are constantly also being redefined and introduced in different ways. In the case study described in this research, human researchers deal with an emerging domain by a process of continuous review of published literature, from which the current consensus emerges. In the same way, published research papers will be used as the input resources of this research.

The second case study will demonstrate the use of practical sources to represent the information that is used for describing the problems in the project inspections task for the Royal Thai Government. It will later describe these case studies in detail.

1.4 Research problem

In the Internet era, people are using the information from the websites or place that they connect to. Technology provides a convenient living style. However, there are some problems for information developers in case of complex and ever changing, emerging domains, such as in the government sector or e-learning. The increasing amount of information, especially internal information such documents, projects, tasks, requests, etc, contributes to the unstructured nature of information.

The obstacle of accessing the appropriated information needs much more time and high development costs. This research will provide processes of information classification by using an ontology approach. This is the beginning of this research problem. The research question and problem is described below:

Research question: Is it possible to organise the information of an emerging domain by using an ontology approach?

Hypothesis I: The experiences or information from the different people could be represented with the ontology. These come from the individual person of the organisation.

Hypothesis II: Information from an emerging domain could be used and shared the information by using the existing ontological framework.

Hypothesis III: Semantic Web could be developed from the existing ontological framework as input.

In this research, an attempt will be made to define ontologies to facilitate environment description and represent a complex, frequently changing domain. A tool, LiMe has been implemented to capture the relevant information from a particular domain. The objective is to transfer information and data from paper or oral communication to a representation of the knowledge in a computer system.

2 LITERATURE REVIEW

In this research, an ontology development approach is proposed for capturing information and knowledge in complex domains, such as an emerging domain or a domain involving flexible information, various approaches and methods that change constantly. E-Learning systems will be used to illustrate a domain of the former kind, while a government setting will be used to illustrate a domain of the latter. In the implementation of the research, languages such as XML(s), RDF(s), and OWL are used to describe the domain environment.

This chapter reviews the literatures to support the research approach.

The section has the following four main sections:

- Knowledge: problems such as using knowledge in various platforms, describing knowledge with different approaches, time to develop knowledge in the organisation, etc. Knowledge development is introduced to facilitate and solve these kinds of problem.
- Ontology: ontology technology could be used to organise the knowledge.
- An e-Learning system: the e-Learning systems has introduced as domain example.
- Semantic Web: it has been used to represent the flexible knowledge information in the domain.

2.1 Knowledge and Information

Knowledge characteristic has been classified as degree of articulation and aggregation (Cooper, P., 2007). It is information in the context of other information, such as the relationship between data, information, knowledge and wisdom represented in it.

Knowledge is different from information when it has been used or introduced as problem solutions. The knowledge definitions are concerning on the goal of the problem. For example, the knowledge (in term of learning/teaching of online environment) is the information about the courses in the pedagogical curriculum. Knowledge is the information which solved the particular problem.

Information is derived from raw data in the events. For example, the registration data such as student information, courses registration details, are contributed when the students choose the online courses. Information could be constructed from these data such as registration table, numbers of the courses that open for selecting, instructor/teachers/allocating to the courses.

Knowledge has been defined as classification, without the classification human could be thought, action, or organisation such example of Dewey Decimal Classification (DDC) which is a method that uses in US Library of Congress classification (Wingyan C., 2007). Knowledge is unstructured information provided by different sources such research papers or working experiences. The next section will present some techniques to manage knowledge.

2.2 Ontology

This research is concerned with building an ontological e-Learning requirements framework to facilitate the users or the developer to understand and use it for referencing, describing, searching, retrieving their own environment from the academic research methods or article as knowledge resources. An ontology specifies a common conceptualisation, independent of data model, and this may be presented as Semantic Web. It extracts data user contributions, and captures data as people share their knowledge in terms of classes and relations between classes. It represents existing things by illustrating and structuring the knowledge from important vocabularies. Basically, people adopt their vocabularies to the Ontologies. Then, description languages such XML(s), RDF(s), OWL have been introduced to encode the structured data and tie it with common vocabularies as classes, properties, and relations with well-maintenance namespaces.

The domain will be represented as a common framework and helps to integrate or exchange data from multiple resources. The consistent knowledge of a specific domain environment is captured and combined with different information sources. Then, a reasoning approach is needed to support to interpret this framework as semantic knowledge.

In ontology, the characteristics of an interest domain have been described as concepts or entities, properties of the concepts, and relations between concepts that include the constraints (Patil, L., 2005). Thus, it will be used as value-mapping (support the various format or data), and scalability (depending on the context of data) (N.Huhns, K.M.a.M., 1997).

An ontology is a specification of a concept or property as knowledge (Sheng, 2004) or a concept framework (Zhang, 2006) and content management that consists of five primitives (Wang, 2006): class, relation, function, axiom, and instance. It specifies a conceptualisation of a domain in a term of concepts, attributes, relations, instances, and theories. A concept is a set of individuals or objects in a domain. An attribute is used to depict an intrinsic feature of objects. In addition, the domain scopes or objectives of the domain will be described with concepts and relations. Semantic translation determines the similarity between terms as instances of different domains and maps instances from one to other.

In practical terms, Semantic Web technology uses Ontology abilities to communicate between human and computer by providing an explicit specification for the conceptualisation of the existing domain. The classic Web will be extended with the

meaning of concepts on Semantic Web which could also be shared and reused.

Next, it will explain examples of the research areas that used ontologies to describe their domain environment.

In Information Retrieval systems (Hwang, M.K., 2007), ontology is used to create, query, inference, and management information that help users to edit, delete, and modify the existing knowledge in the domain. In order to retrieve the information from the ontology, the reasoning and processing will be used in the query engine.

For example in the tourism domain (Dai, B.A.W., 2005), it is not only information such as the accommodation profiles (details, facilities, etc) that is annotated with RDF metadata which could be retrieved but also tourism information such as water quality, places, etc could be annotated as semantic data and used for intelligent search (Sebastian Hübner, R.S., 2004).

Web directories (Wingyan C., 2007) has been proposed to use Ontologies to organise voluminous information into hierarchical structures, and help users to quickly locate relevant information and to support decision-making.

2.3 E-Learning

An e-Learning system is an education system that is provided in an online environment, usually via the Internet. Various related terms include virtual classroom, online learning, web-based learning, computer based learning, web instructions, etc.

The use of the Internet in education has the potential to motivate students and teachers, increase student participation and interaction in the classroom, and provide students with a more active role in their learning and increased autonomy in the educational process. While teachers are requested to use the capability of the new high technology to facilitate learning processes, students are encouraged to improve their learning through computer and networked-based activities.

For example, the Ubiquitous e-Learning (Norm Friesen, R.M., 2005) is a formal education which not only outside the classroom but also outside the education environment such as workplace, street, home.

In addition, an e-learning environment (Norm Friesen, R.M., 2005) regards teaching as a continuous process transferring knowledge with delivery in different forms such as offline and online learning; self paced and live learning; structural and unstructured learning; formal and informal learning.

With LiMe, a learning environment to be developed as e-Learning will be designed and organised, and the environment based on individual requirements. These requirements will be transformed as a common understanding framework which available to be modified by each user. The different facilities such human or knowledge experiences, technologies, learning materials, etc could be solved by using this common understanding framework.

2.4 Semantic Web

Semantic Web has been used to produce a semantic context-aware knowledge management framework that enables to integrate knowledge discovery, retrieval, and reuse (Norm Friesen, R.M., 2003).

Semantic Web technologies use smart tools to assist the system administrators to manage and control various kinds of problem. The requirements of the domain environments could be represented without misunderstanding by extracting and modelling the knowledge from the various documents and using Ontology to access and manage knowledge. Consequently, the common understanding of concepts is presented as semantic knowledge.

One of the most important aspects of the Semantic Web is searching knowledge from ontologies. Rules of representation have been designed in machine understandable form (Nenad S., 2002) facilitates to achieve the semantic information. However, it needs mechanisms and background knowledge about the domain for processing on ontologies such as updating or adopting their knowledge and reasoning strategies.

3 LIVERPOOL METADATA

This chapter will illustrate the methodology to build and share Ontologies for representing an Emerging Domain such as the e-Learning requirements domain, and will introduce 'LiMe' (Liverpool Metadata), as a means to facilitate the description of the Knowledge Information.

The idea of LiMe is to provide the descriptors or concepts which represented knowledge that obtained from research papers. In an emerging domain, the research papers provide the only effective knowledge resources, and using an ontology enables to describe this as knowledge information from them.

LiMe presents the knowledge specification of domain environment and provides the ability to share and reuse knowledge, providing a common understanding among different perspectives. People often give different names or definitions for the same thing, or different things can be described with the same definitions. An ontology aims to help this kind of problem.

3.1 Aim

The characteristic of an Emerging Domain (ED) is that the information necessary to describe it is not fully established, and hence it is difficult to describe and present, and needs methods that will reflect the changes that will occur as the domain develops and matures.

Knowledge/Information Ontologies provide the knowledge or descriptions that are necessary for developing the domain environment descriptions. The aim is to capture knowledge information from the research papers and convert to Web Description Language such as XML(s), RDF(s), and OWL.

It represents Knowledge/Information as Ontological framework, in which Concept Ontologies provide the concept characteristics which are represented as a concept framework that specifies conceptualisations of the knowledge. Representation Ontologies use the Semantic Web to illustrate the domain environment based on an ontological framework.

3.2 Characteristics

Methodologies used to develop an ontology have five different techniques: frames and first order logic, description logic, software engineering, and databases (Gomez-Perez, A.n., 2004).

LiMe uses the database technique and presents the domain with hierarchy of concepts as tree in the figure 2. It has been designed to store knowledge from information or paragraphs of the research articles. Both information and paragraphs are called Knowledge/Information (KI) which is a consensual knowledge used to extract the concepts and their properties as Object Oriented modelling.

Environment will be organised and represent the characteristic of the domain. The particular environment is the subsystem or sub-organisation that represents the functions in the domain. For example, in e-Learning domain, it consists of learning, teaching, and management.

Knowledge/Information in the particular environment is used as referencing resources that

defined concept, properties, and instances. This information also facilitates to define the relation between concepts. Relation is the relationship between two or more concepts. LiMe classifies the relation in two different relation categories: specification and generalisation. It also presents the semantic meaning direction. Specification is the top-down approach and generalisation is the bottom-up approach. Both approaches are used to develop trees or taxonomies that are called ontologies in the domain. A circumstance of domain uses ontologies to exchange the common understanding and give as a structure framework.

LiMe methodology organises domains as a five-level taxonomy. For example:

- Domain : e-Learning
- Environment: Learning, Teaching, Administration, Infrastructure, etc.
- Knowledge/Information : definitions or meaning, functions, Examples, etc.
- Metadata : Learning Material, Student, Teacher, Learner, Instructor, etc.
- Properties: Learning process, tasks, etc.

3.3 LiMe resources

LiMe illustrates a hierarchy of research papers as Web resources and Knowledge for developing the Ontology of a particular domain environment. A research paper is organised with two parts: Reference Resource and Knowledge. It is introduced as Web Resources which contain reference information and knowledge. Knowledge will be classified as Information that is captured from the research paper or the individual experience which is contributed by the developers.

A research paper contributes information such as research problems, research methods, objectives, research results, and conclusion, represented using text, tables, or diagrams. This information is used as Knowledge /Information (KI) for developing an ontology. LiMe captures KI from the research papers using the individual experience and background knowledge of the (human) reader. Moreover, LiMe uses KI to extract or define the concepts that are related to the domain. A concept may be a general concept or class, a specific concept or property/instance, or a relation concept that represent the relationship between concepts, instances, or properties.

Instead of searching the knowledge based on keywords from the journal, LiMe organises knowledge that facilitates to reduce the retrieval time. The unnecessary article will not be listed.

However, the appropriate concepts that facilitate to identify or describe the knowledge are important, costly, and time consuming process.

3.4 LiMe's Development Cycle

To capture the Emerging Domain (ED), flexible or new concepts are extracted from the research domain. LiMe presents these concepts knowledge as Metadata and uses to develop ontology. LiMe proposes the development cycle (Figure 2) with four basic methods: KI identification, Concepts extraction, Ontology development, and Requirements representation.

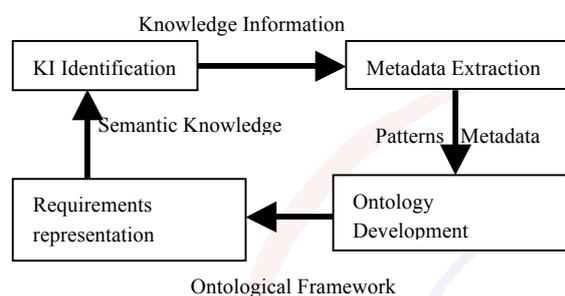


Figure 2: This figure illustrates LiMe development cycle.

The information relating to the ED is gathered from research papers. Our aim focuses on transforming the Domain specification to Semantic Knowledge.

Domain specification > Semantic Knowledge

In LiMe, domain specifications will be represented as the requirements from various researchers that contributed KI included both approaches and results in this research domain area. This knowledge will be organised with concepts that extracted from this knowledge information. Concepts also represent the patterns of knowledge which is used to classify the knowledge categories such as meanings, definitions, specifications, functions, tasks, etc.

An ontology in our research is the knowledge classification. It describes the domain specification. It translates the KI in each particular environment to ontological framework. This framework is the place for interchanging the knowledge in the environment and will be interpreted as semantic knowledge with Semantic Web.

3.4.1 Knowledge identification

In order to extract the knowledge from the research paper, LiMe imports the Knowledge/Information by using the academic journal search engine which the keywords to gather the domain specification from

search engines of the academic journal websites such as Springer, ScienceDirect, IEEE Xplorer, etc. However, this phase does not an automated mechanism, human still have to choose and find the related papers. This process could take a lot of time especially for non-expert knowledge domain developer within huge related domain articles are listing.

LiMe describes KI as the crucial information or context information that help the users (developers, researchers, etc) to understand about the domain where could locate on paragraphs of paper articles such abstracts terms, definitions, notation, abbreviations, examples, approach, results, experiences, discussion, related topics, and so on.

In addition, LiMe also introduces the patterns of knowledge such as meaningful/definitions (descriptions), components (properties, instances), restrictions (relations, condition, constraints), etc. which could be added and improved. LiMe will store these patterns as KI categories and use them to reduce the time of capturing in the future. In order to understand, the tasks of Knowledge identification have been represented as follows.

1. Define the scope or particular environment of domain of interest, which is the objectives for developing an ontology. For example, this research concerns on describing the e-Learning requirements domain, therefore, the objective is to develop an ontology to annotate requirement in e-Learning domain, to help e-Learning researchers or organisation developers.

2. Define the keywords that related to the domain or scope, such as topics, title, instances, etc. Instead of only generate keywords from background experiences consideration, keywords could be found in the LiMe's thesaurus within the existing environment framework.

3. Use the keywords to find the related articles from the academic journal websites. With the large number of online papers, existing keyword-based searches retrieve many irrelevant papers that may use a certain word in different contexts; they might also miss papers when different words about the desired content are used.

4. Find the crucial information related to the domain, based on the previous patterns or categories. A pattern is a kind of context that identifies the relation to the scope, environment, or domain which is not easy to identify. Especially, different researchers express their knowledge in different ways. Background experiences of the domain will help to identify the knowledge context from the general information.

5. Capture the KI from articles and store it to the LiMe system. This KI will also translate to the formal language XML(s). LiMe also captures the article profiles such as title, author(s), journal, volume, issue, page, and URL. This information is a reference resource to refer during developing an ontology. Note that LiMe does not upload the file resource.

6. Update and improve the pattern identification. All the tasks are repetitive tasks. LiMe enables the developer to define the patterns which are the contextual criteria of KI.

3.4.2 Metadata extraction

LiMe produces sets of Metadata of the domain environment which are extracted from KI obtained from the research domain articles. LiMe presents Metadata in the term of "concept". In order to extract the concept from the KI, the follow steps are followed:

1. Find the general or specific topic such as subject or object in the statement. LiMe is concerned with capturing the definitions, components, or functions from the KI. There are various ways to find the concept in the paragraphs: find the specific concept, find the general or abstract concept, and use experiences to define the concept.

2. Given the type of concept, LiMe has four different concept types: class, properties, relations, and instances. Class is the entity or the existing things of the environment in the domain. Properties are the specification details of the concept. Relations are the relationship between concepts, which are properties of a concept. Instances are the example objects for concepts. Some concepts could be both class and properties. LiMe presents concepts as the Object Oriented model in Class, attributes and objects.

3. Define an explicit relation hierarchy between the concepts in the same KI. In addition, properties, and instances are used to specify characteristic of concept. LiMe uses taxonomies to organise concepts, properties, relations, and instances in the ontology. LiMe has relation based on type of the concepts.

4. Compare this topic with LiMe's thesauri that provide semantic between concepts such as synonym relationships. Then, update the new concept to the thesauri. A concept might take different assumptions from different perspectives and be used in different areas. In order to clarify the definition, LiMe proposes the existing concepts with an ontological framework that could be specified the

definition for creating the new concept in the thesauri.

5. Generate tree or taxonomy of the concepts to represent knowledge and also translate this taxonomy to formal description language such as XML(s), and RDF(s). Therefore knowledge is represented with one or more taxonomies from a particular KI as independent descriptions.

At this step, LiMe produces Metadata that will be used to describe the knowledge from KI. LiMe has classified Metadata based on the three basis functional types described from the statements in KI. Descriptive Metadata is a concept that describes the information such as meaning, definitions, etc of the knowledge. Structural Metadata is a concept that classifies or structures information of the knowledge. Finally, Administrative Metadata is a concept that describes information such as constraints, conditions, rules, etc of the knowledge. A set of concepts extracted from KI will be represented in this task.

3.4.3 Ontology development

LiMe proposes to develop an ontology for representing the Emerging domain. The development process is mainly integrating the taxonomies constructed from KI of research articles. An Ontological Framework (OF) is the result of this method. It enables developers to communicate and interact to the Emerging Domain by contributing the common understanding of concepts. This is a structure information that objective, accessible reusability, and flexible accomplishment.

In order to develop an ontology, LiMe proposes two basic processes: Similarity measurement, and Taxonomies integration as following.

3.4.3.1 Similarity measurement

LiMe uses the similarity between two concepts to reduce the redundancy and presents consistent concepts. Similarity could be easily detected by humans, whereas computers need to evaluate parameters to identify the similarity.

Currently, there are some methods that contribute to similarity algorithms such as Information-based similarity (Al-Mubaid, H.N., 2006), functional and textual based method (Ganjisaffar, 2006), and similarity graph (Andreasen, 2003). And, the relationships between concepts could be described in the terms of Synonymies, Hyponymies, and Overlapping (Maria Ruiz-Casado, , 2005). Synonymies denote that two or more concepts have

the same meaning. Hyponymies denote that a concept has more than one meaning. Overlapping indicate that concepts are neither synonymies nor one hyponymy of each other, but represent to some extent the same reality.

LiMe proposes to use the combinations of two techniques to compute the similarity between concepts: first, using the weight of the concepts, and secondly, using the distance between concepts.

3.4.3.1.1 Weight-based technique

This similarity method described in (Ganjisaffar, 2006) is based on functional and textual information. The concept similarity function calculates, from a pair of concepts, a real number between 0 and 1, expressing the degree of similarity between two concepts, based on two characteristics: Taxonomy based concepts and weight Information Content. The “1” value indicates that a pair of concepts are strongly similar whereas “0” indicates that they are different.

3.4.3.1.2 Edge-based technique

This similarity technique counts the edges between concept c_1 , and c_2 . For example, (Zhumín, 2006) describes Wu and Palmer algorithm that calculated the similarity between concepts as following.

$$\text{Sim}(c_1, c_2) = \frac{2x}{x + 2x}$$

Where x and $2x$ are the length of the path from c_1 and c_2 to their most specific common super-concept c_3 , and $2x$ is the length of the path from c_3 to the root of the hierarchy.

3.4.3.2 Taxonomy integration

In order to integrate taxonomies from a domain, LiMe focus on a similarity measurement. The relation between common concepts will be defined with “is-A” and “part-Of” relationships. The “is-A” relation is used to express that a pair of concepts have fully similar characteristics. The “part-Of” relation is used to express that there are partly similar characteristics between two concepts.

LiMe uses both a Top-down and a Bottom-up approach to integrate and express the knowledge direction in taxonomies. Top-down approach is used to annotate a more abstract concept with the specific existing concepts. This could be extracted not only from the research papers but also provided by domain experts as their background experiences.

To optimise taxonomies, LiMe uses Term matching technique patterns (Asanee K., 2004) that

integrate the similarities concepts to structure, form, or extend the taxonomies with four different cases.

A term matching technique is used to integrate a taxonomy which has a concept that could be expressed with relations to a different taxonomy. In additional, a consistency concept is the similarity between concepts in different taxonomies and could be expressed with the “is-a” or “part-of” relation. LiMe calls an existing taxonomy that is extended with a consistency concept as a core hierarchy.

3.4.3 Requirements representation

LiMe is concerned with representing Knowledge that is constructed from individual user perspectives. LiMe defines knowledge provided from the individual research article as requirements.

In order to provide a dynamic or flexible representation, a distinction can be made of the source contributing knowledge in two basic types: the reference requirements and the user-defined requirements. This will allow the users or developers to have a flexible opportunity to define their knowledge as knowledge template.

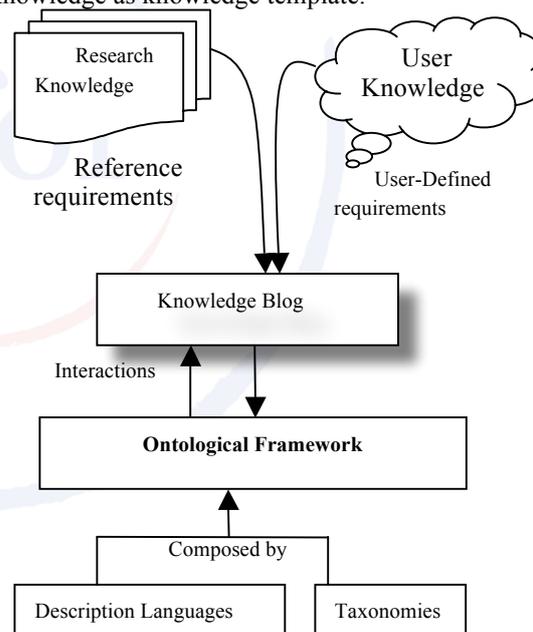


Figure 3: Knowledge Blog in LiMe.

The reference requirements are perspectives on the knowledge, the information from the research paper or articles. The user-defined requirements are contributed by the users or developer in the organisation and will be used to understand the background knowledge about the domain. It is

possible that they do not have the knowledge or understanding about the domain environment.

With the various different knowledge perceptions, a flexible representation approach is required to handle the various information formats. This work proposes a semantic blog, the Knowledge Blog (KBlog), to organise and describe the different understandings of the Ontological Framework in the domain (Figure 3).

The main contribution of the Knowledge Blog is the idea of using a Blog to present the conceptual knowledge. With Blog technology, the knowledge contents are gathered from the individual requirements and research contributions on the web. The KBlog provides the interface to the knowledge of the domain as mechanism of knowledge annotation and facilitates the users to look and find across the blog comparing their knowledge with the others.

4. Case Studies

In order to illustrate how to use the ontological Framework, this section will present the results from two case studies: an educational and a government based case. LiMe helped produce the ontological framework which was used to develop Semantic Web solutions in each domain.

The following evaluation has been carried out, and feedback was obtained on the development. These web based applications are fully implemented and have been used in a real environment.

4.1 Teacher environment

LiMe has been introduced to support the web development for Valaya Alongkorn Rajabhat University (VRU).

This university had attempted to implement an e-Learning policy but this did not work in their environment. LiMe was employed to help improve the teaching and learning environment.

In order to do this, LiMe started from the teaching environment. It mainly supported the teachers in the grading system. In this environment, the activities of students and teachers are homework submission, class attendance, online exam, and grading.

The web developer used LiMe to find useful concepts of the teaching environment from the ontological framework and improved the framework with their teacher working experiences. This provided suitable design requirements, and a clear

picture before developing the software. Teachers had the opportunity to contribute their requirements.

LiMe was especially useful to reduce the time of the requirement collection. The, it was used to present the environment structure. This structure could be modified or improved to accommodate the individual requirements. The following figure (Figure 4) represents the screen snapshot of the application that used LiMe to design and organize information from the ontological framework.



Figure 4: web-based application in the teacher ontological framework.

4.2 Faculty environment

In this experiment, LiMe has been used to develop the information management for the faculty environment in Thailand. It provided the ontological framework that represented information about faculty. Figure 5 shows the Faculty of Science and Technology at VRU. Faculty improved or modified this framework from their requirements. LiMe improved the budget management framework for every sections in the faculty.

LiMe also provided useful features in the operation patterns. It helped define services for each member in the section as service framework. With LiMe, level of services not only is classified but also related to the relevant information from the type of member of staff using the system.



Figure 5: web-based application in the Faculty environment

In addition, the users described their projects within the ontological framework developed from the university framework. This helped establish the required interoperability between the faculties in the university. The process of implementing university strategies and monitoring project quality assurance was also improved.

4.2 Faculty environment

In this experiment, an ontological framework has been applied to develop and organise the information for the inspection system of the Royal Thai Government (Figure 6).

In Thailand, projects are created from the organisation of Ministries. Many projects contribute to a budget plan. Projects need to be tracked to make sure they are implemented correctly also in remote project areas such as villages, and provinces. The inspection serves not only to monitor the processes but also to provide relevant information to the project owners.

LiMe has been used to collect the requirements and design the model of the government inspection. This model will be deployed in the real environment. Therefore, these requirements are very important and need a suitable structure of information to support in the inspection process.

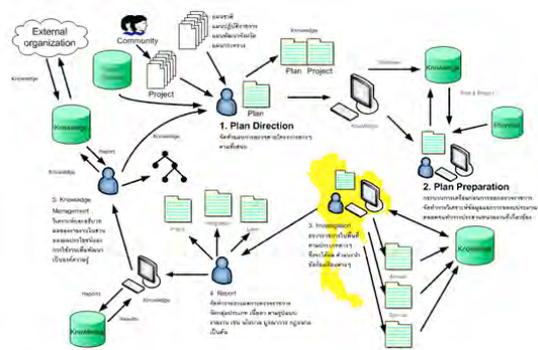


Figure 6: The inspection in Thailand.

Practically, the government inspection has been designed in five processes: plan direction, plan preparation, investigation, report, and knowledge management. An ontological framework was developed for organising and retrieving the information need in the system. It also helped to classify the project problems collected from various areas. The common understanding of the projects was provided to the inspectors. This information was stored as the central information sources.

The Plan Direction process is the defining process. Problems coming from previous projects will be addressed and used to find solutions or

improvements. It involves document classification, risk analysis, and inspection background information. This is the useful information to support the inspectors from the remote area.

The Plan Preparation process is the plan creation. The inspectors will design the tasks, problems, and schedules required by the projects. The relevant information about the remote area, such as contact information, activities, requesting, and others, will be organized to support the task. The topics that needed further information will be developed. The most important information is the project details.

The Investigation process is the data collection process. Information has been captured from the remote areas by the government inspectors. Suggestions and solutions will be provided. These are the results of the project operations. Feedback from the projects is stored in the structured information.

The Report process is the results representation. In order to improve the projects, all information that captured from the remote areas is provided. Different perspectives of the information will be developed and also the comments or suggestions will be added in this process. LiMe applied the ontological framework in the report system. It provided the report designing for the users which allowed to modify the report templates based on the individual requirements.

Lastly, the Knowledge Management process is the core process that applies to every process. It involves information classification. Knowledge is the information used to solve the problem. This is fully supported from LiMe methodology which captured the information, extracted the concepts, developed the ontological framework, and translated it into formal languages.

Basically, the different inspectors introduced different meanings for the information. This is the feature the ontology approach was most useful with. The common understanding of the information will be useful to the environment. The accuracy of accessing the right information from the existing framework was very useful. Knowledge itself could be improved from the descriptions. Therefore, this model will be the more successful, the more members are participating to it. For this reason, the system was designed the experiment as a social network (Figure 7), where members can interact by sharing knowledge, experiences, problems, suggestions, comments, etc, not only as text but also images, and video clips.



Figure 7: This inspector application designing

5 CONCLUSIONS

5.1 Results

This research contributed various terms or methods to this research. For example, the term “Knowledge Information” was introduced to represent the crucial information that is extracted from research articles. This KI has been captured and described based on the individual perspectives from the researchers. It is very useful information, especially for the researchers that require the articles related to their research areas. Instead of searching the academic journal websites, they can use this information to retrieve the related information and access the articles from the journal websites.

LiMe has classified knowledge into two different kinds: User-defined requirements and Knowledge Information. The User-defined requirements are knowledge that is contributed by the ontology developer, or domain expert. Knowledge Information is knowledge that is captured from research articles. LiMe represents knowledge by developing the combination between knowledge in an Ontological Framework.

An Ontological Framework is the intermediate information that provides the specification of knowledge in the domain. It has been represented with a hierarchy of concepts which is called taxonomy. LiMe integrates the taxonomies in the domain of interest based on the knowledge topics.

In order to interact with this framework, LiMe proposes the Knowledge Blog to aid the knowledge representation. It has been developed for retrieving, describing, and analysing the knowledge from the domain.

5.2 Future Works

LiMe has been proposed as an open environment methodology which extends current methodologies. It is still in the development stage. Therefore, it is available to any developer wishing to use this methodology to develop any Ontologies in any research domain.

To perform at its best, LiMe needs a lot of information about the domain. More knowledge information will produce more Metadata to describe the domain. Therefore, LiMe needs a way to integrate Ontological Frameworks, and it could be improved by applying results from the ontology community working on Ontology merging, Ontology mapping, and Ontology alignment methodologies.

LiMe classifies the knowledge based on the individual topics. Therefore, flexible information will be represented in different ways. Similarity methods are needed to resolve the problems of inconsistency in the Ontological Framework.

In practice, LiMe uses description languages such XML(s), RDF(s), and OWL to share and reuse an Ontological Framework. The specification of these languages or versioning will enhance the reliability to describe the context and characteristics of knowledge in Ontological Framework for individual environment domains.

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Affection to Action
Action Research on Care-for-Life Camp
at Tzu Chi College of Technology

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The purpose of the study is to explore how students' service learning experiences and thoughts are contextualized in the camp curricular activities. During the spring semester of 2008 to 2010, there were a total of 714 college freshmen attending the humanity-based camp curriculum and 71 college students participating the situated service learning. Sources of data included questionnaires, learning logs, interviews, and reflex journals. The study followed an action research method to triangulate the different data sources of participants, peers and teachers. Four case summaries were presented to explore how the atmosphere enhanced students' willingness to continue the service learning experiences. The case summaries showed that students were able to reflect on their thoughts through functions and incidents, and students were more willing to overcome difficulties with a keen sense of responsibility. The study suggests that the service learning experiences in the camp environment moved the students' affections to prompt reflections on their attitude and competence.

Keywords: service learning, affection, responsibility

Introduction

The Tzu Chi College of Technology was the first educational institute under Tzu Chi Missions, as founded by Dharma Master Cheng Yen in 1966. The education mission was established with a clear goal of education beyond job training, meaning that character development is the key to professional competence, and humanity-oriented life values are emphasized across the curriculum.

In order to realize the education of “merciful and joyful sacrifice,” as intended by founder Master Cheng Yan, in 2007 the college received a grant from the Ministry of Education for specialized talent cultivation and improvement plan, in order that the Central Education Center could carry out itemized projects for “the faith, hope, and actions of life,” in order to inspire the life value of “long-lasting feelings and great love” in students and teachers as the core value of the general education at the school.

Of which, the Care for Life Camp is the extension of the core general education course “Tzu Chi Humanities” at this school. Camp activities last two days and one night, leading students through a course context that has concern for life and humanist emotions. The course begins with filial piety for parents, followed by speeches, films, and team discussions to introduce the practice of good actions from gratitude and repayment of benevolence.

There is a very special film, “Mother in Heaven,” produced by DaAi TV, which is a true story describing how a mother with cancer guided her husband and children to accept the inevitability of death before she passed away, and donated her body for medical research. This film inspired the student attendees to reflect on parental relationships, and they were moved to realize the reality of impermanence in life, and they should be grateful for the days they have with their families.

The entire work team is also a service learning curriculum, and the Central Education Center, Tzu Chi College of Technology team, Tzu Chi Teacher’s Association teachers, and student workers jointly conduct administration of the function team. Student workers begin their participation after camp activities, where they pledge to volunteer to serve as the camp function team for the next camp. The purpose of this study is to explore how the camp course atmosphere affects students, and how student workers experience the meaning of service through the atmosphere of the camp.

Literature Review

Beginning in 2007, the Ministry of Education began promoting a 2-year university learning solution for various colleges and universities, with three objectives:

1) to promote learning ability, reflection ability, and critical thinking ability, using real life as the context; 2) to make students active learning partners that receive resources and support from the community; and 3) to encourage active student participation in social and national affairs (MOE Service-Learning Website, 2007).

The definition of service learning refers to students engaging in planned service activities and experience reflection activities in order to gain an understanding of learning during service processes (Chen, Chang, & Fan, 2007). In terms of service solution design, Taiwanese scholars (Ho, 2009; Lin, 2007; Wu, 2009; Hsieh, 2003;) generally used the four elements of service learning by Fertman et al. (1996) as the basis of the stages, which are preparatory stage, actual service stage, reflection activity stage, and celebratory stage. The preparatory stage refers to explanations and training prior to service; the actual service stage refers to team formation, project selection, project planning, and project execution; the reflection stage is a continuous reflection on “What service am I carrying out?” “Why do I want this service?” and “What am I learning from service”; and the celebratory stage can be in various forms, such as sharing among personnel, thank you notes, certifications, or gifts that symbolize honor.

Many Taiwanese colleges and universities have planned “service learning” courses for their official curricula, second-year students at the Jen-Teh Junior College of Medicine, Nursing, and Management five-year college must complete 4 hours of group community work in the service learning course of the 2008 academic year (such as at community medical institutions, environment and ecology survey guided tours, community health services, or care for the elderly living alone), 2 hours of service learning research and study activity, and 8 hours of personal service learning (including medical departments, academic counseling for non-profit or welfare groups, documentary administration, disease-prevention promotion, library management, and invoice organization). Questionnaire results show that students had the highest scores in “group cooperative ability,” and students generally used their service journals for reflection (Ho, 2009).

Wu (2009) studied the Chung Yuan Christian University Central Education Center’s second semester 2007 “service learning” curriculum, which planned five types of professional service themes, namely, information technology, community creation, creative design, educational counseling, and international care. The student teams were required to complete at least 12 service hours, and record written “general reflections”, service journals, photography, filming, and blogging, and “regular reflections” were conducted by teams engaging in project progress evaluations and reflection reports. “Final reflection” involved students submitting end-of-term reports, and oral reports on how the service learning project affected them personally,

including any changes before and after service.

Since reflection is the key affecting the effective connection between service and learning, Liu & Yang (2008) referred to Parks et al. (1996) to discover the seven types of spiritual reflection habits (7C), which can help enhance the life energy of those in service: 1) connectivity and complexity: sensing one's own happiness in being connected to the beauty of the world; 2) community: continually working with different people, and redrawing the boundaries between "the self" and "others"; 3) compassion: developing empathy for the pain of others, and in turn, moving oneself to acquire a sense of responsibility for others; 4) conviction: humanitarian, wise, altruistic thoughts and responses; 5) courage: seeing the grace and resilience of life; 6) confession: facing one's own weaknesses and negative emotions; and 7) commitment: continued commitment to service as growth, honor, and feeling of love.

In addition, discussion, writing, art performances, and speeches are reflection methods frequently used in service learning, reflection topics can use the six major fields suggested by Myers-Lipton: events, self, others, service, social issues, and citizenship. Project managers or leaders can use the students' learning goals to correspond to the appropriate topics (Liu & Yang 2008). The three suggestions for the Jen-Teh Junior College service learning projects (2009) involved two points for the reflection activity – strengthening of reflection feedback and enhancing written service journals. This shows that reflection is a key mechanism benefiting service learning, thus, how teachers participating in projects should lead reflection discussions is worthy of research.

Methods

School Context

The student staff voluntarily signed up for the volunteer jobs of documentation, curriculum coordination, venue assistance, food and lodging services, transportation, and group counselors. These student volunteers are recruited after the camp activities, as they are so moved by the spirit and value of life of Tzu Chi volunteers that they are willing to serve as camp volunteers to show their gratitude for inspiration through continued engagement as student staff for the next camp.

Camp Participants

During the spring semesters of 2008 to 2010, there were 714 college freshmen attending the camp curriculum, and 71 college students participating in staff functions.

If time allows, we would like to present four case summaries that highlight their attitude changes, in which they overcame difficulties through a sense of responsibility.

Research Questions

The research questions of this study were meant to explore whether the Care for Life Camp inspires an awareness of the value of life, achieved through inspiration from the life stories of Tzu Chi volunteers. Two research questions were proposed to explore the students' perceptions of life values:

- (1) How did the camp attendees reflect on their relationship to their family?
- (2) How did the camp staff reflect on the meaning of service through functions and incidents?

Research Design

This study was conducted in two stages. The first stage samples the questionnaires of 714 college freshmen (attended the camps in April 2008 and April 2009), as well as 71 student volunteers (participated in April 2008). The second stage documents four case summaries (during the years of 2008-2010) to showcase the humanistic atmosphere of the camp.

Questionnaire

Since the Care for Life Camp is considered an extended learning activity of the core course "Tzu Chi Humanities", the contents of the questionnaire highlight the issues of "ethics" and "discipline" emphasized in the Tzu Chi Humanities course. It consists of a 5-point scale for most of the non-open questions. Over the three semesters, the questions have been modified based on the subjects of the course.

Case Summary

The four case summaries were documented through meetings, interviews, and self reflection journals.

Data Analysis

The descriptive statistical analysis focused on various questions, such as "life values," "being moved by the course content" and "who you are grateful for". For

qualitative analysis, student learning logs and postcard assignments are selectively quoted for in-depth presentation of the camp atmosphere.

Results

Life values

A total of 227 and 245 four-year technical college students participated in the Care for Life Camp in 2008 and 2009, and completed the questionnaire on life values. The top three choices out of the six options were health, finances, and family. The top three prospects for the 71 student volunteers in 2008 were family, health, and benefitting other people.

Feeling Moved by Courses

The top three courses voted by the camp attendees during the years of 2008 to 2009 were “Mother in Heaven,” “The Children of Great Love,” and “See the World with Love”, which are all true stories related by Tzu Chi volunteers.

“Mother in Heaven”, filmed by DaAi TV, is based on a true story, and describes how a mother with cancer guided her husband and children to accept her inevitable death before she passed away, and donated her body to medical research.

“The Children of Great Love” presents how a hyperactive child and multiple disabilities, with the support of Tzu Chi volunteers, was transformed into a compassionate person, and eventually became a Tzu Chi commissioner, who actively recruits members and solicits donations as a living model of love and care.

“See the World with Love” was presented by DaAi TV news anchor, Ming-jun Ni. He shared two video clips. The first portrays his wife’s worry about her unborn child, saying to her husband that if any dangers arise in the labor process, they should first save the child; which demonstrated the love of mothers, willing to sacrifice themselves to protect their children. The other video showed how a child with cancer, Nian-heng Jiang, bravely fought cancer, and used his naïve and genuine heart to motivate family members and other cancer patients to donate money, and to do good deeds to repay the kindness of parents.

Being Grateful to People

The questionnaires completed by 242 four-year technical college students, who participated in the Care for Life Camp in March 2010, were ranked by descriptive statistics on who they are grateful for; the top three were family, teachers and elders, and peers, as shown in Table 1.

Table 1 March 2010 “Who You Are Grateful for” Rankings

	First priority N(%)	Second priority N(%)	Third priority N(%)
Family	176(78)	146(69)	68(40)
Teachers and elders	30(13)	31(15)	37(22)
Peers	9(4)	26(12)	39(23)
Other	10(4)	9(4)	24(14)

The questionnaire also investigated students' willingness to return to the camp as a volunteer. Table 2 details the number of student workers each term. From registration to actual camp activities, these students must participate in two to three planning meetings, as well as one training session. This does not include the small group meetings and discussions by each functional team. Care for Life Camp student volunteers have 10 hours of volunteer hour credits, where they engage in volunteer activities based on their belief in service, rather than just for the certified volunteer hours.

Table 2 Statistics on the number of people willing to serve as workers

Second semester, 2007			Second semester, 2008			Second semester, 2009		
Highly agree	Agree	Possible	Highly agree	Agree	Possible	Highly agree	Agree	Possible
55	71	92	30	28	102	24	24	85
24.23 %	31.28 %	40.53 %	12.24 %	11.43 %	41.63 %	9.92 %	9.92 %	35.12 %

Table 3 shows the different ratio of student volunteers in terms of sophomore-only (SO) volunteers and across-grade-level (AGL) volunteers. The SO volunteer ratio uses the total number of freshmen in the Tzu Chi Humanities course in the previous year as the denominator. The AGL volunteer ratio uses the total number of students in the semester as the denominator. With less than 10% SO volunteers from the previous year, or even less than 5% of the student population on campus, the camp maintains functions and passes on the spirit.

Table 3 Ratio of Student Volunteers

	April 2008 N (%)	April 2009 N (%)	March 2010 N (%)
Sophomore-only volunteers	17 (6.2)	5 (1.9)	23 (8.4)
Across-grade-level volunteers	78 (3.8)	63 (3)	79 (3)

Case Summaries

This paper uses “Time management”, “Touched sentiment”, “Active learning”, and “Leadership experience” to highlight case realization through the camp curriculum.

Realization of Time Management

Ming-yu is an accounting and information student who began school in 2006 and participated in the first Care for Life Camp in March 2007. That October he began working as a camp volunteer until March 2010. He participated in seven work teams, and each semester he served in different positions within the function team, including head of the camp, chief convener, venue organizer, equipment organizer, and group counselor.

Ming-yu indicated that his willingness to learn “additional skills” beyond academic requirements and “to have new experiences” as the reasons for his continued engagement. In addition to his Care for Life Camp service works, beginning in his second year, Ming-yu joined the “Tzu Chi Humanities Club”, which is the school’s service club, and assumed the role of chief organizer for one year. His verbal skills improved during his years of camp engagement and club experiences. Ming-yu recalled his position as venue organizer, which he enjoyed very much:

Everyone brainstormed the best set-up for the equipment and the work route, such as “What objects or equipment do we need at what particular time?” “Where do we need to lead the students to, and at which place and time?” After lunch, everyone began various jobs, moving and arranging things or going through a rundown. Everything was in order, which made me feel disciplined and secure. I found everyone was happy with their jobs, and in the spirit of “learning by doing, and realizing by doing”. I found myself acting as a group leader, in the sense that I must carefully plan in advance. I thought it was very creative to rehearse the camp with the existing students grouped into four simulation teams. I led them to different venues to familiarize them with the route. (Ming-yu’s journal in 2009)

Of course, not every camp activity went smoothly. The biggest sense of defeat came from the more irresponsible student volunteers. Ming-yu remembers working as the head convener of the Care for Life Camp for the second time in the fall of 2008, where he encountered the problem of incomplete documentation:

The function group leaders were not very responsible! At that point, even the elder

sister¹ was troubled, as their documentation was not comprehensive, and we had to fix it on our own.

While struggling to complete the incomplete files, Ming-yu did not feel bad, but rather felt it was a lesson to bear in mind for the future.

I thought it was a valuable learning experience, and would be useful for my future judgments in select work partners. That irresponsible person will have to endure critical lessons in future work places if he maintains such a sloppy attitude.

Even though Ming-yu had continuously participated in the camp activities, he worked hard and approached each task with a refreshed mind, as he understood there would be different people, different venues, different schedules, and most challenging, the unpredictable changes of weather or hazard emergencies.

I remain careful and cautious. Even though you've done something many times, for instance, I have been designated chief coordinator many times, each camp has different students. You don't know their personalities and you have to get to know them.

Ming-yu commented that he treasured every camp activity because he learned about the importance of time management, and to be grateful, and learn from, the critiques of other function staff during meetings.

I think that every time I participated in a camp I perceived the experience as time management practicum. You have to plan when you want to work as a team, when to read, and the rhythm of your life... I have to improve... When I was verbally corrected during a meeting, I would immediately reflect upon my duties. Maybe I did do something wrong, or maybe I did it right. If I really did it wrong, I would say "sorry, I will do it again or change it," and I would feel bad about it. As we grow, chances are small that people will point out your mistakes face to face. In my opinion, someone willing to point out your mistake means that you are viewed as a good friend or family member. Uncorrected mistakes, when you really have forgotten something, means that you miss an opportunity to gain information. In my opinion, those who would correct us are those who care, and their helpful reminder is offered for your benefit, rather than to criticize an inferior performance. Perhaps your information was wrong, and a correction offered in a polite manner...

¹ Sister refers to the administrative personnel and project assistant at the Central Education Center.

Passing on Touching Sentiments

Wei-ming majors in radiology, and was admitted to school in 2006. He participated in a Care for Life Camp for the first time in March 2007, and began to work as group counselor in October. By March 2010 he had participated in six function teams. Wei-ming was also a head convener for two consecutive camps, and even moved his classmates to participate. The primary reason for his continued participation as function staff was attributed to his hope that more students could experience the love and care of the camp courses.

Every time I participate I feel moved, and if this feeling can be passed on to younger students or more people. . . For example, the film Mother in Heaven made me see how important family bonds are between children and parents. It [the film] reminded me of the times I did something wrong and made my mother sad or feel bad. I hope others can be moved in this way too. I feel that if I give through action, it would be more efficient than just hope, and I can serve the students personally.

Wei-ming believes that team work is more than a challenge; it is also important training, as the partners for each camp are different, the ways of interacting are also different. Even schedules and weather conditions are apt to change.

The challenge for the head convener is great, as they are key personnel, and have a powerful impact on the entire team. If this leader forgets things, the entire team would be affected. In a class of 50 people, a team may have from 300 to 400 members, and such complexity results in many team changes. For instance, if we decide to walk back to school, we expect that everything will be fine if the weather is good, and we will return safe and sound, but what if the weather changes? Then the head convener has to coordinate with the students in charge of venues. The head convener must think ahead and think carefully. When encountering unexpected situations that require brainstorming or logical reasoning, the head convener is not allowed to shy away from danger or emergency in annoyance. By considering common unexpected situations ahead of time I would better know what to do next.

In March 2010, after completing practical training, Wei-ming returned to the camp to work as a group counselor. He shared what he observed during camp practicum days, and explained the benefit of being trained in oral reporting, that he gradually became more attentive and patient when listening to others.

Timing and careful thought are very important when determining what to do or say under certain circumstances. In ordinary classes, one must listen and concentrate on instructions; however, during practicum, it is important to openly express opinions in meetings in order to propose suggestions and clarify the thoughts of others. There is a meeting every week, where doctors or senior students present their papers, or discuss new patient histories. When I attempted to discuss my questions and ideas with senior students after a meeting, I discovered that other students were merely listening and did not examine problems or express their opinions. I feel that being able to express my ideas is very important.

Whether preliminary meetings before camp, on-site meetings, or evaluation meetings, all meetings provide opportunities to hone oral skills and organize thoughts. During meetings, students should always take advantage of for the opportunity for elaboration, clarification, negotiation, coordination, and examination of problems that may, or may not have, occurred, in order to be prepared for the future.

They [the student volunteers] probably thought the meetings were unimportant and consumed too much time, but I made the best out of meetings and discussions and learned from the mistakes of others. I think that listening to other groups' explanations and views helps me think about whether the same thing is happening in my team. Every meeting is a good chance for people to learn from each other. I look up to others and reflect on myself, which is an example of good interaction and exchange.

Compared to interns from other schools, Wei-ming felt that he was always willing to give active assistance, and willing and able to treat patients with a view to their perspective:

Looking at the students from other schools, we seemed very capable and willing to serve patients. I am part of the practical training group, and try to be punctual. If the designated time to leave work is 5:30, many would leave according to the clock, or if they have something else to do they might leave early, but for me, if there is a patient that needs me, I would patiently and thoroughly complete my work with the patient and complete the entire case before I leave.

After March 2009, the heavy academic load of the third year in university forced Wei-ming to briefly cease his responsibilities as the head convener, and he became a group counselor. Wei-ming did not feel a sense of resentment in being moved to a

seemingly “lesser” position, as he recognized its deeper meaning, namely, knowing your work load in advance. He hopes that younger students would experience the joy of service, not only learning how to deal with people, but also training their own abilities in dealing with issues.

I am happy when I help other people, and I don't need them to pay me back. Just a smile on a face, I would think this is a major repayment.

Active Learning

Wen-yi is a hospital management student who entered school in 2008, and has participated twice in Care for Life Camp teams, the first was team counseling, and the second as the head of publications. Wen-yi feels that she is a very responsible person; she understands that camp teams have a lot of work, and intends to be diligent in her tasks.

I think I place higher demands on myself, and as I accepted the position I would do it well. I know that there are elder brothers and sisters from the General Education Center to lead us, but I don't want to become a burden to them, so if I bear responsibility, they would be less burdened. My sense of responsibility comes from doing things right. Regardless of how much I do, I do my best to complete it. In terms of communicating with team members, I was actually afraid at first, worrying that they would not do the work, but after team discussions, I feel that they are easy to get along with, and activities should go smoothly. Sometimes I feel that team members are scared, and then, the main thing is to give them confidence to lessen their worry, and let them know that there is support behind them.

Even though he has only participated in work team twice, Wen-yi was careful enough to understand that bearing responsibility needs to make the teachers at ease, and when treating team members, they need to feel the support. Also, because it was the second time she was working as the head of counseling, she understood that higher positions have greater responsibilities, especially when problems occur:

When being a team leader, if you believe something is your fault, but you do not feel bad about it, or your guilt is shallow and short lived, then you are not a leader-rank person. When a leader tells you it is all right, it is usually because they are bearing the responsibility for your mistake, which allows you to do other things while feeling at ease. When one is leader-ranked, they bear responsibility for all team actions, if a team member makes a mistake, perhaps they were not trained well enough, or not

fully counseled in the process. Thus, I think that team leaders must carry a greater sense of responsibility, such as Shu-ting [head convener], who felt deeply apologetic if she made a mistake.

Thus, Wen-yi thinks that she should be more patient with the members of her team, especially those who are less disciplined.

Some people's memories are short lived, or cannot be changed. My current team members are all five-year college students, thus, they are younger with fewer opportunities to deal with responsibilities, so I do my best to remind them. Once or twice is okay, because they will tend remember it. Usually twice is better, as you can double check for understanding, as some team members may feel that if the team leader didn't say it, perhaps it is not expected of them.

Compared to past interaction experiences in the counseling team, Wen-yi thinks that different function teams have different characteristics and abilities, and that counseling requires higher responsive abilities.

I used to work in publication, and then I turned to counseling. He [the publications leader] actually did a pretty good job. Before reminder training sessions or meetings he would send text messages to communicate to us our duties for the upcoming two weeks. When I transferred to team counseling, as there were many more people, information and directions were vastly increased, thus, occasions for repeated reminders were largely reduced, which resulted in the transmission of poorly defined information. In addition, there are more unexpected events during team counseling activities, which make the work harder to deal with. Sometimes, the different places we take students to become a source of problems, and you must be able to react to all situations. Yes, it is probably more difficult than working with publications...

When Wen-yi agreed to work as the head of the publications team, she heard that previous text files were not completed well, which resulted in problems for the teachers at the Central Education Center. She believes that since it is team work, everyone should actively ask questions to understand their responsibilities, rather than passively waiting for arrangements.

For instance, now I'm in publications. Yesterday I received the whole flowchart, I looked at it briefly, and there were added luggage tags to be recorded in the work

report, which must be completed by a certain time, for instance, the name list of students was due to come out, I would ask Sister Qian-ying², to request the format of the name list, from which I would first make the worker name list first. I print out the list and cut them out, making it easier to put together, in order that it was not late.

Wen-yi's clear thoughts on organization and planning are expressed in her imagination of the future workplace.

Society has a wide variety of personalities, some are easy to get along with, some are forgetful, while some are very capable. Team discussions facilitate the identification of skills and personal characteristics, and may indicate potential conflicts. Being responsible for a project means knowing how to deal with issues, a function team has a direct focus; however, a project team includes every aspect of the upcoming event or activities, including small details and task support. It is not necessary to have in-depth knowledge of all areas; however, as a head convener is responsible from the beginning to the end they must have an overall grasp of everything.

From the experiences and learning as head of publications in March 2010, Wen-yi agreed to be the head convener of the next camp team, as she believes that camp service learning can help her to develop her own thinking abilities, sense of responsibility, and hone her communication skills and ability to express her thoughts.

Effective communication begins with an ability to clearly express your thoughts, as a head convener one must explain tasks, details, concepts, etc. to team members, and make reports to higher ranks and teachers. A leader must possess a certain method of speaking; they must be respectful and be able to accurately deliver information and instructions that ensure understanding. Next is organizational abilities; meaning the props, equipment, tools, supplies, etc. required by the team to complete their tasks, which facilitates a smooth progression from one stage to the next.

Wen-yi also encouraged her partners in the publications team to strengthen their computer software application and language abilities:

All pre and post-activities include responsibility for maintaining records and accounts of assigned tasks, and facilitate and supplement all information required

² Qian-ying is a pseudonym for the administrative assistant at the Central Education Center

by a function team, in other words, a supporting role. For instance, if the counseling team requires a certain number of people or a name list in order to move forward, then I would respond immediately. Thus, publications require good information organization skills; moreover, software skills are necessary in a digital age to avoid becoming obsolete.

Experiences of a Leader

Hui-jun is also a hospital management student who began studying in 2008. She joined the Care for Life Camp in October of the same year, in March of 2009 she worked with the site administration team, and then became the head of the team in October. In that same year she hurt her ankle while moving luggage, but continued her work as the site administrator for the camp. Her reflections on being team member and team leader are as follows:

My first time as a team member placed me next to the site administrator, who made the job look easy. I had no idea of the effort and time he had spent planning, and was now assuming a support role. When I became team leader, I found that time management and movement routes must be planned ahead of time, and failing to do so will result in route conflict. Before becoming site administrator, I thought it was a pretty easy job, but I soon learned how mistaken I had been.

Hui-jun thinks that the planning abilities required for a site administrator are far more complex than planning for exams, and time management must be more precise:

It is clear to plan what to study in a course; however, route planning must consider alternate routes, as many things can cause delays.

According to Hui-jun, studying is simpler. She understands there are greater responsibilities as a team leader, yet the sense of accomplishment is greater:

There are major differences between the responsibilities of team members and team leaders, as team member's responsibilities are assigned tasks, given by the team leader, while the team leader's responsibilities encompass everything involving the team. The responsibilities of the position are heavy, and results do not always conform to the original intention. If responsibilities are taken seriously, and an outcome is not ideal, perhaps you would feel that you had worked hard, and perhaps the problem was someone else's fault. As a team member, you don't have to think about so much; however, as a team leader, you are responsible for planning,

arranging, considering what is best for team members, etc. thus, the responsibilities are serious. When you complete these responsibilities, you feel very relaxed and good.

Hui-jun thought that she should improve her abilities as team leader, especially in to the division of labor. A team leader must assign work to team members for completion, rather than completing them on his or her own:

I think I have to continue learning about how to divide work tasks for team members. For instance, the tools required a camp team, such as a seating diagram of the national assembly hall, which should be created and printed by the site administration. However, as there was no open space we assumed the responsibility in General Education, and did not know what to do. I mentioned this problem to Sister Shu-yu³, who said, you can ask your team members or the brothers at General Education for help, but I felt uncomfortable designating work to others. I felt that if I did it on my own I would feel more at ease, and if I let someone else do it, and they did a poor job, who would be blamed for this problem. I thought that I should not be blamed, since it is not my fault, why would I have to be responsible for the mistake? I felt if I did it on my own the mistakes would be minimized, but this may also a mistaken concept? Thus, I still must learn to better designate work.

In the camp, other than becoming familiar with the work of one's own function team, if one can be clear on the procedures of other function teams, they could interact with more people. For instance, in the evaluation meeting for worker training before the 2010 camp, Hui-jun was grateful to the life team leader and activities team leader who helped her as site administrative guides:

Today, just as I was about to start physical and mental relaxation, I was supposed to go and lead them to have snacks, but I forgot. I became confused and felt my confidence was impacted, but then, during lunch the guidance was better, so today I have to thank the guide at the station.

With one mistake, even though her feelings were only slightly affected, Hui-jun remembered that the site administrator must select team members for guide work. When asked whether she wanted to experience other function teams, Hui-jun replied, "we can be quiet when moving things, but working in team counseling, you must talk to other students..." Hui-jun believes that working in site administration service is a

³ Shu-yu is the pseudonym of Central Education Center administrative personnel.

kind of “volunteerism,” as her heart wants to serve others, not because it is required or for honor:

The service at this Life camp is voluntary, I am doing what I want to do. As a volunteer at class services, people may want to vote for you as leader, meaning you are doing it without wanting to. School service is compulsory and is based on attitude, because if there is no change in one's attitude, doing such work becomes meaningless, such as cleaning the environment according to school requirements. For example, service at Care for Life Camp is voluntary, and because you believe this is a worthy service, the work would be easier.

Discussion

Settling Down Physically and Spiritually

During 2008 and 2009, four-year technical college student questionnaire answers on life value choices generally showed desire for “settling down physically,” while only a few chose faith in “settling down spiritually.” Since most students in technical colleges chose technical education because they are focused on employment after graduation, the second priority of “finances” is reflected in their practical life considerations. The top priority of “health” shows that students accept the existence of life and are willing to maintain healthy bodies. The third priority “family” also reflects student reflections upon the meaning of life, or “filial piety.” After all, they are only first-year students at university, and have only reached the fourth week of their Tzu Chi Humanities course, but they are already halfway to success with their insights on the meaning of life, “filial piety.” However, when seen from the actual numbers of those serving as student workers, the true “practice of goodness” is “easier said than done.”

Gratitude Comes from Being Moved

Students have a genuine sense of being moved at camp. Their satisfaction in courses, according to the questionnaire, when they write postcards home, when they perform to repent their lack of filial piety, and the high number of people agreeing that the camp should continue to be held, means that the camp courses moved the students. An accounting of students that expressed their gratitude in March 2010 showed that the students were full of gratitude for their family members. Thus, the atmosphere of camp courses does indeed inspire thankful hearts in students. Even after the camp

team concluded, the following week of Tzu Chi Humanities classes invited students to speak on stage and share their reflections on camp activities, where most students shared stories to the point of tears, which shows that the real life stories of Tzu Chi people truly touch the heart.

Service Comes from Being Moved

According to the student worker questionnaires of April 2008, “family” is the most valued among life values; the camp course emphasis on doing good and being filial apparently allowed student workers to transcend themselves, to emphasize family, and physically engage in “good acts” through volunteer services –meaning workers at the camp enter a life of “filial piety.” Of course, among student workers, there is also a sense of being moved by mutual love and trust. For instance, Min-yu and Wei-ming developed a feeling of partnership, Wen-yi feels gratitude toward the partners at the Central Education Center, and Hui-jun is grateful for the support of other partners. This shows that camp team work creates a family, with the guidance masters, teachers, older students, and younger students. These volunteers gradually feel a sense of belonging at the Central Education Center, and outside of class students happily greet the faculty.

Responsibility Is a Motivation for Growth

The four student workers have the common characteristic of being highly responsible. Ming-yu participated in six consecutive work teams at the camp; Wei-ming participated in five and worked as head convener for two consecutive times; Wen-yi agreed to be the head convener for the October 2010 camp team; Hui-jun worked in site administration twice, and agreed to work as the site administrator twice. Bearing responsibility has made them learn how to manage time, plan procedures, improve techniques in communication and expression, and cultivate the habit of active questioning, which allows them to experience how leaders arrange human resources, and learn to react to changes. The first time Ming-yu worked as a worker he was already a student leader, while the other three began at the team member level. They have developed a deep understanding for the difference in responsibility between team members and team leaders, and have even come to understand that the greater the responsibility, the greater the sense of accomplishment.

Conclusion

This study explores the experiences of inspiration through the Care for Life Camp team, and the spiritual growth of student volunteers. Three conclusions are offered to summarize the results.

Hidden Curriculum of Service Learning

In contrast to in-class instruction, in which a class only has one teacher to bear all the responsibilities, Care for Life Camp is a massive and complex cooperative instructional team, with more than 60 teachers involved in the camp, in addition to the advising masters from the abode. Student volunteers engage in meetings before work, team discussions, hands-on work, and determining solutions to problems.

Even though the Care for Life Camp student volunteers' job is credited 10 volunteer hours, student volunteers actually devoted more than 50 hours, including actual camp activities (about 40 hours of pre-camp meetings), 3 planning meetings (each about an hour long), pre-camp organizers meeting (about 2 hours), pre-camp training (about 16 hours), functional meetings and discussions held by each function team, and the time spent in administrative assistance inquiries. The actual time far exceeds the formal course hours of 36 credit hours per class (over 18 weeks). The camp is indeed a hidden curriculum of service learning.

Belief in Service

With respect to the small ratio of student volunteers to continue their engagement in camp functions, the four case summaries showcase how a small number of students were inspired to learn leadership skills of organizing, coordinating, and problem solving. They grew humble, learning to accept their weaknesses, but felt optimistic regarding corrections and adjustments of improper habits and methods. The common characteristics among the four cases would be "responsible for work" and "joyful to serve." As expressed by Hui-jun, the greater the responsibility, the greater the sense of accomplishment. While the tangible results of the credited hours of service are important, the invisible joy of feeling capable, helpful, and needed for the common good will be carried in their hearts for life.

Affect to Action

In terms of life value perception, the student attendees ranked "health" as the first priority, while the student volunteers ranked "family" first. Among the four cases, Wei-ming's reflections on the stories of "filial piety" had a strong impact on his

motives to continue service learning in the camp. It is an interdependent feeling, similar to the habits of mind for community mapping, as proposed by Parks et al (1996), that the love for one's family expands to the service learning community of the camp. Unlike the club activities, which preparation time does not exceed one month, Care for Life Camps are six months apart, and there are many changes regarding labor force, events, times, venues, and course materials. Perhaps the time interval of six months allows the volunteers to have greater expectations, and thus, a greater sense of emotional bonds.

Suggestions

Finally, two suggestions are proposed as reference for future implementations of camp service learning courses and action research.

Contextualized Teaching at Camp

In camp courses lasting two days and one night, students are situated in the humanistic atmosphere of the Tzu Chi Still Thoughts Hall, where they learn the many life stories of Tzu Chi volunteers. The student attendees not only experience friendly interactions with the staff, but also observe how much preparation work is required, such as the meal preparation and venue details.

These contexts are truly humanistic, and cannot be replicated in ordinary classrooms. The only way to sustain this touching atmosphere is to call for more teachers to join in the team work efforts, then students and teachers share their perceptions at the camp's conclusion.

Reflection Research on Responsive Abilities

Facing the increased development of globalization, educational scholars that promote outcome-based education have indicated that students seem to possess a responsive attitude. Students will no longer be limited to occupations or professions, but rather performance indicators, as based on "roles," (Hsu, & Lin 2008), which emphasize cooperation, complex thinking, and problem-solving abilities. For student volunteers, the entire staff can be regarded as materials to be read and studied, where each interaction enacts a change or challenge.

Among the four cases, three mentioned learning the attitude of responsiveness. For instance, Min-yu says that he maintains a "cautious and careful" attitude at each camp, as all elements may change. Wei-ming stated that every camp has different

working partners, where they must interact differently, and even accept and find solutions for the challenges of venues and weather conditions. Wen-yi observed that there could be improved responsive abilities from the counseling team.

In the future, when researching student volunteers, it is suggested that there should be detailed documentation of their reflections on unpredicted occurrences, as well as reflections during meetings and encounters, which would be documented as situated learning examples, and shared with future camp participants.



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Title:

Teaching computer programming to non-computer science students

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Teaching computer programming to non-computer science students

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Abstract. The paper presents the teaching of a computer programming course for non-computer science students. The biggest challenge is that the students are from different majors and they have few (if not zero) prior programming experience before taking this course. To make the course successful and to improve students' programming ability, we proposed three teaching techniques. The first technique is teaching with examples. If a student is not well trained, he doesn't know how to analyze the description of a programming problem. To solve this problem, we provide more than 40 carefully selected examples in our lectures, through which the students will learn the basic analysis techniques. The second technique is teaching with patterns. Another challenge for a student is that when he is given a new programming problem, he feels it difficult to design an algorithm. To solve this problem, we propose the concept of "programming pattern". A programming pattern is a piece of commonly used algorithm. For a new problem, we can try to divide it into different components, and each component can be solved with a pattern that we learned before. The third technique is teaching with exercises. Even if a student has thought of a good algorithm, he may still fail to write the correct source code. To solve this problem, we developed a powerful online training system which can edit, compile and score the students' programs automatically. The examination results and the feedbacks of the students indicate that they achieved major improvements after the course.

1 Introduction

Introduction to Computer Programming is an introductory programming course for non-computer science undergraduate students at Tsinghua University, China. It is an optional course for anyone interested in studying computer programming. The course focuses on common computational problem solving techniques and no prior programming experience is assumed, although students should know the basics of using a computer (e.g., using a web browser and word processing software). The course is given in one semester of sixteen weeks, and in each week, there is one three-hour lecture and one three-hour lab session. Generally there are more than 120 students in the class, they are from different majors such as materials science and engineering, chemical engineering, hydraulic engineering, mechanical engineering, automotive engineering and building science & technology. The textbook is Computer Language and Programming, which was written specifically for this course by the first author of this paper.

During the study of the course, the students will master the basic procedural programming techniques using the C language. They will learn to write and debug small C programs (50 - 100 lines) using a variety of input sources (console, file) and a variety of output destinations

(console, file, graphical). Students will also learn the design principles that are relevant to this style of programming. Topics covered in the course include:

- Introduction: basic concepts of computer structure and program execution
- Data types and expressions: variables, constants, data types, expressions and operators
- Simple control structures: sequencing, input and output, the *if* statement, the *switch* statement
- Iteration: the *for* loop, the *while* loop, the *break* and *continue* statements
- Arrays: one-dimensional arrays, two-dimensional arrays, character strings
- Writing solid code: coding conventions (naming, comments, error handling, style and layout), program debugging, test cases development
- Functional abstraction: definition and declaration of a function, parameter passing, return values, scope of variables, stack frames
- Pointers: pointer variables, & and * operators, pointers as parameters, pointer and array, dynamic arrays, pointer arrays, pointer to pointer
- Basic data structures: structs, struct arrays, -> operator, structs as parameters, linear list
- Introduction to algorithms: searching, sorting, recursive algorithms based on divide and conquer, recursive algorithms based on backtracking

The authors of the paper have taught the course for several years and find that it is not an easy job. Firstly, the students are from different majors and they have few (if not zero) prior programming experience before taking the course. Furthermore, the course is an optional one for them and they may not spend as much time on it as their major courses. In each semester, we will make a simple investigation at the beginning of the course to know the students' backgrounds. All the students are divided into four groups. The first group has significant programming experiences, they attended programming competitions in high schools. The second group knows how to write simple programs using C or other languages. The third group knows nothing about programming, but knows the basics of using a computer. The last group never used a computer before. A typical investigation result is shown in Figure 1.

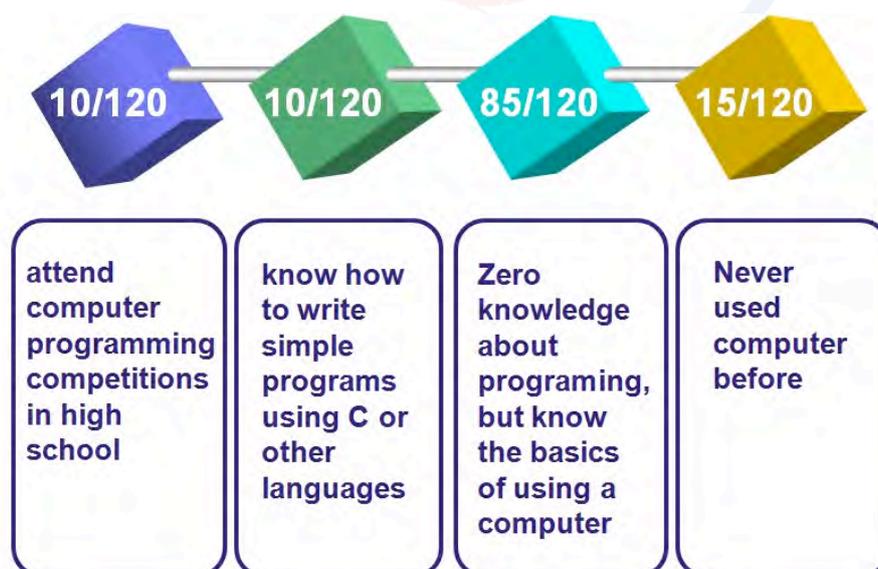


Figure 1. Backgrounds of the students before taking the course

From the investigation findings we can draw a conclusion that most students have few prior programming experiences before taking this course.

Secondly, students don't know how to learn a programming course. After several years of observation, we find that many students (especially Chinese students) are good at studying the textbook or learning the syntax of the C language. But they are not good at solving programming problems and writing solid codes. A common situation is that a student is quite familiar with the details of the syntax such as the different usage methods of ++ operator and the order of evaluation of operators. However, when he is given a practical programming problem, he will have no idea how to solve it. In fact, many students find programming to be difficult and disheartening. They may be stuck on a simple problem for a couple of hours or even several days. Furthermore, in China, most university-level programming courses are taught using the traditional approaches including a blend of lectures, reading and practical sessions. The emphasis is put on the study of a programming language itself and the test is in the form of short questions or multiple choices. Moreover, even the exams of the National Computer Rank Examination (NCRE) generally take the form of multiple choice questions and fill-in-the-blank problems. The environments for these types of approaches will only produce students who are good at studying language syntax, but not good at algorithm design and code writing.

This paper presents a novel method of teaching computer programming course. The whole process of solving a programming problem is divided into three different stages. At each stage, a different teaching technique is employed.

The rest of the paper is organized as follows. In Section 2, we present the related works on the teaching of computer programming courses. Then we give a detailed description of our method in Section 3. In Section 4, the evaluation results are shown and discussed. Finally we conclude our work in Section 5.

2 Related Work

Previous research has shown that the skills required for computer programming are problem solving and analytical skills (Riley, 1981; Henderson, 1986; Maheshwari, 1997; Linn & Clancy, 1992). However, according to Riley (1981), many students, especially the first-year college students, have "woefully inadequate" problem-solving skills. Henderson (1986) notes that problem solving and analytical thinking skills are students' major weaknesses in a computer science course and that the emphasis of the course should be put on these skills. Maheshwari (1997) notes that programming is a study in clear thinking and problem-solving, and it gives students wonderful practice at building representations and working in methodological manner. He also argues that the top-down approach is important in solving programming problems, in which large problems are separated into manageable components that are solved individually and then assembled into the correct solution to the problem. Ismail (2010) interviews with five computer science lecturers from the faculty of computer science in a Malaysian university and these experts believe that most students take the skills in problem solving for granted and fail to identify their programming weaknesses. However, they disagree on the reasons behind the lack of these skills in this area.

In addition to problem solving and analytical skills, writing solid code is also important in computer programming. Bonar & Soloway (1989) report that many programming bugs can be explained as novices inappropriately using their knowledge of step-by-step procedural specifications in natural language. Programming bugs are viewed as patches generated in response to an impasse reached by the novice while developing a program; such patching strategies are called bug generators. Several bug generators are used to describe how natural language pre-programming knowledge is used by novices to create patches. Rist (1996) argues that the main source of difficulty does not seem to be only on the syntax and concepts of the programming language. A student can understand a concept well, but still fails to use it appropriately.

Most of the introductory text books on computer programming emphasize on the study of a programming language. The C Programming Language (sometimes referred to as K&R) is a well-known programming book written by Kernighan & Ritchie (1988), the latter of whom originally designed and implemented the C language. Because the book was co-authored by the original language designer, and because the first edition of the book served for many years as the de facto standard for the language, the book is regarded by many to be the authoritative reference on C. However, in my opinion, the book is not suitable for a textbook because it doesn't teach readers how to solve problems in C. A student may still sit around and don't know what to do when he is given a practical programming problem, even after he has learned all the materials in the book.

There are also misunderstandings about the teaching methods of a computer programming course. Gal-Ezer (1996) notes that in most academic institutions, the first introductory course has not dramatically changed over the years, and it almost always involves the study of a programming language. Even if the teacher has introduction to algorithmics in mind, the emphasis in practice is on the technicalities of a programming language, coding and running programs on a computer. McGill and Volet (1997) found that most of the introductory courses in computer programming tend to overemphasize students' acquisition of the syntax of a particular programming language at the expense of their development of problem-solving strategies and their understanding of computer-programming principles. Furthermore, most programming courses are taught using the traditional approaches including a blend of lectures, reading and practical sessions (Gray, Boyle & Smith, 1998). In fact, when learning a programming course, the most important thing is not listening to lectures or reading textbook, but doing enough programming exercises. Practice makes perfect.

Many software systems have been proposed to train students' programming skills. For such a system, one of the core facilities is automatic assessment of programming assignments, which means that students can receive the feedbacks immediately after they have submitted their assignments. Automated assessment systems seem to have existed for as long as educators have asked students to build their own software (Douce, 2005). The earliest example of automated testing of programming assignments may be found in Hollingsworth (1960). A grader program was run against a student program and two different results were returned, either "wrong answer" or "program complete". A second-generation system can loosely be labeled as "tool based". Assessment systems are developed using pre-existing tool sets and utilities supplied with the operating system or programming environment. Testing engines and systems are often used and activated in the form of command-line or GUI programming

tools. An example of a second-generation assessment tool can be seen in the work of Isaacson and Scott (1989). The third generation assessment systems make use of developments in web technology and adopt increasingly sophisticated testing approaches. For example, Daly and his colleagues have developed a Java-oriented assessment system called RoboProf, deployed in an honors degree program at Dublin City University (Daly 1999; Daly and Waldron 2004). The system presents programming problems within a web browser and the student is asked to type a program into a text box. When complete, the assignments are submitted, compiled, and results returned.

3. The Method

3.1 Teaching Method

After teaching the Introduction to Computer Programming course for several years, we propose a method that is different from traditional ones. The objective of the course is twofold. Firstly, it will teach students the basic procedural programming techniques using the C language. Secondly and the most importantly, it will improve students' ability of computational problem solving.

The basic idea of our method is illustrated as Figure 2.

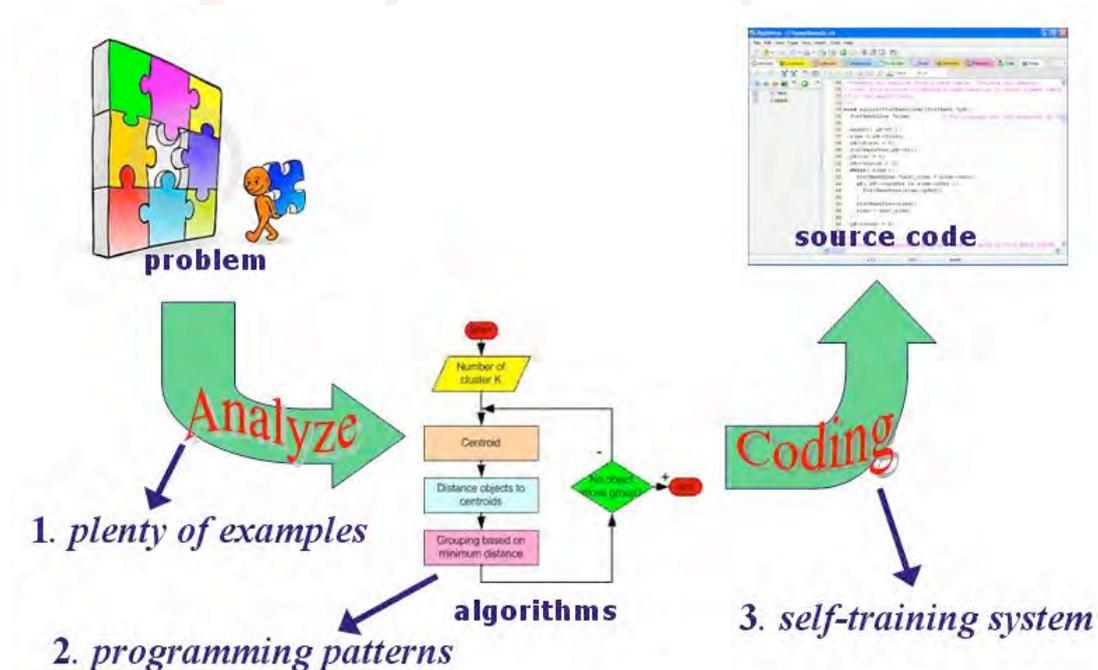


Figure 2. Programming model

As shown in Figure 2, computer programming can be regarded as the transformation from a practical problem specification to a piece of source code. The whole process can be divided into three steps, i.e. problem analysis, algorithm design and coding. For each step, we will propose a different teaching technique. Specifically, we provide plenty of programming examples to show the students how to analyze a problem specification, and propose the concept of “programming pattern” to help students design appropriate algorithms. Lastly, an

online training software system is provided for the students to practice programming at any-time they like.

3.2 Teaching with Examples

Problem analysis is the first step in computer programming. Usually the description of a problem is a paragraph of sentences. If a student is not well trained, he doesn't know how to analyze the problem, and how to find important information in the sentences. Actually, unlike the C programming language that has numerous reference books to introduce the language syntax in details, there are a few materials to help students develop their analytical skills. Even in a programming course, the lecture may take these skills for granted and the students have to learn all by themselves. This is one of the main reasons that students still don't know what to do when given a practical programming problem even after they have mastered the language syntax and finished a term of course.

To solve this problem, we provide more than 40 programming examples in our lectures. Through these examples, the students will learn the basic analysis techniques. Actually, only one third of the lectures are about the C language itself, including the syntax and concepts of the language, all the others are different types of programming examples.

Figure 3 is a programming example in our lectures, the Hanoi problem. The description of the problem is summarized as follows: there are three poles in an ancient Indian temple. These poles are named as A, B and C. There are totally 64 golden discs placed at the pole A, each disc is on the top of another. Disc #1 is smaller than disc #2, and disc #2 is smaller than disc #3, etc. We need to move all the discs from pole A to pole C with the restrictions that only one disc can be moved each time and at any time no bigger discs can be placed on the top of smaller ones.

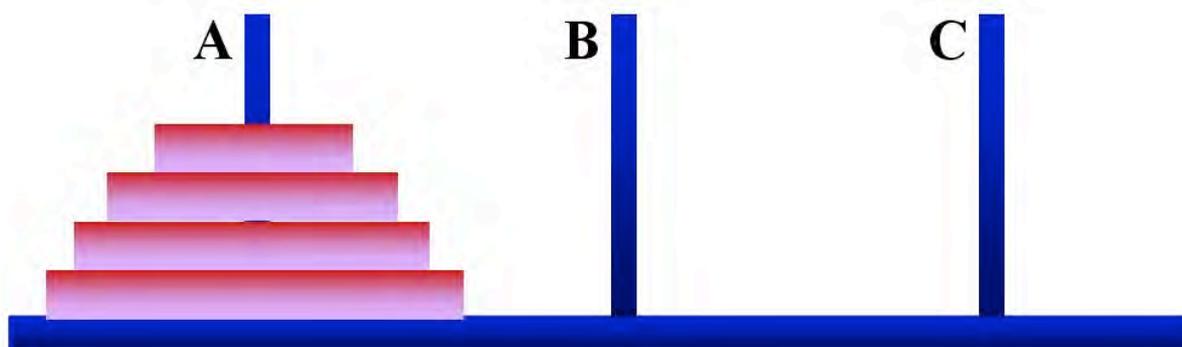


Figure 3. The Hanoi problem

During the course lectures, we will illustrate students how this problem is solved step by step. Firstly, we will consider the simplest case, i.e., there is only one disc at the pole A. In such case, students will find out the answer easily. Secondly, we will consider another simple case, i.e., there are two discs at the pole A and disc #1 is on the top of disc #2. Thirdly, we will consider a relatively difficult case, i.e., how to move three discs from A to C. In such case, we need to put the problem in a quite different view, we need to think of it recursively. Lastly, we will generalize the problem to arbitrary number of discs.

3.3 Teaching with Patterns

In our observations, the biggest challenge for a student is that when he is given a new problem, he has no feelings and don't know what to do. He feels it is difficult to design an algorithm. Actually, in many programming courses, students are not taught and exposed to proper algorithm solution.

To solve this problem, we employ the concept of "programming pattern". A programming pattern is a piece of commonly used algorithm. Here are some examples:

- Calculate the sum of a variety of numbers
- Find the maximum/minimum value among a set of numbers
- Compute the frequency of each word that occurs in a paragraph of text

When a student is given a new problem, he can try to decompose it into several smaller problems, and each problem can be solved using a programming pattern that he is previously familiar with. After that, he can just combine these patterns together and the original problem is solved.

Here is a simple example of how this concept is used in our teaching. Suppose the students are given a new programming problem:

Get a series of integers from the user and count the numbers of negative and positive values. The total number of these integers is unknown and we will stop when a "sentinel value" (i.e. 0) is received.

When the students firstly see this problem, they feel it is difficult and have no idea about what to do. However, after the analysis, this problem can be decomposed into two smaller problems. The first one is how to get a series of integers from user until a special value is encountered. The second one is how to process these integers and calculate the numbers of positives and negatives. And in the previous sections, we have already met a problem named Robust Input:

Read in a parameter for a function and ensure that the value is in a valid range.

When solving that problem, we have already extracted a programming pattern "read in a series of values repeatedly until a valid one is encountered". It is obviously that this programming pattern can be used to solve the first problem here.

In the previous sections, we have also met another problem named Gauss's Problem:

Count the sum of 1, 2, 3, ..., 100

In such problem, we have proposed another programming pattern “calculate the sum of a variety of numbers”. It is obviously that this programming pattern can be used to solve the second problem here.

Now we have decomposed the original problem into two smaller ones, and each smaller problem can be solved using a programming pattern that we learned previously, therefore the only thing we need to do is to combine them together.

3.4 Practice Makes Perfect

The last step in computer programming is coding, i.e., translating an algorithm into the corresponding source code. This is not an easy and natural thing for an inexperienced student. Actually, even if a student has thought of a good algorithm, he may still fail to write the correct source code. You can always see a student, sitting in front of a computer for a long time, just to locate a small bug in his code.

To solve this problem, and to help student learn by themselves, we developed an online training system - Kaleidia.



Figure 4. The Kaleidia system

Kaleidia is a powerful web-based self-learning system. The users are categorized into three different types: teachers, students and administrators. All the lecture notes are posted on the website by the professor, and students can download them to their local computers freely or view the lectures online. They can also post articles about the course and seek for help on the website. A live chat tool is provided which make it possible for online students to communicate with each other quickly and share their ideas freely.

Another important feature of Kaleidia is programming practices. The professor will post the exercise assignments on the website every week, the students can edit the source code, compile it and debug the program online. When the students press the “submit” button, Kaleidia system will score their programs automatically, so the students will know the scores immediately. This is important for a programming practice because the students don’t have to wait for a couple of days to know the result after they submit their source code, which means that they can practice programming at any time their like.

4. The Results

The above method has been applied in the Introduction to Computer Programming course for several years and major progress was observed. At each semester’s end, there will be a programming exam when the course is finished. The exam generally consists of six programming problems, the students are supposed to finish all of them in three hours. The maximum score is 100 points and the minimum is 0. Figure 5 is the examination result of a recent semester.

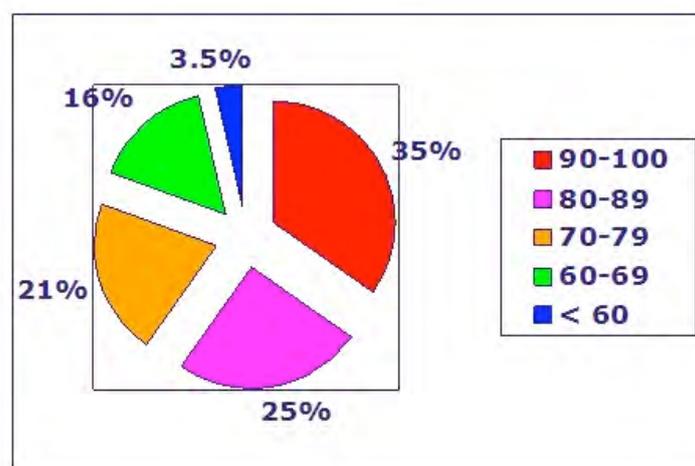


Figure 5. The examination result

The examination result shows that the students achieved major improvements after taking this course, about one third of the students achieved high scores and only four students failed.

At Tsinghua university, every time when a course is about to finish, all the students will evaluate the course and the teacher online. There are different items such as Devotion and Passion, Clear, Well-organized course structure, etc. For each item, if the score ranks top 15% among all the courses, there will be a smiling face. But if the score rank the last 15%, there will be a crying face. In a recent semester, we got 8 smiling faces and no crying faces.

The following are some of the students’ feedbacks:

- The classroom atmosphere is involving and enjoyable, the teacher is humorous, the language is so precise that make the abstract principles much easier to understand.
- The teaching style is unique and attractive.
- Just one word: terrific!
- I enjoyed so much, please teach us one more semester!

5 Conclusion

The paper presents a novel method of teaching a computer programming course to non-computer science students. The whole process of solving a programming problem is divided into three different stages, i.e., problem analysis, algorithm design and coding. At each stage, a different teaching technique is employed. The evaluation results show that the students achieved major improvements after taking the course, and most of the feedbacks of the students are pretty positive.

Ongoing and future work includes the further improvements of these teaching techniques. More sophisticated methods will be used to accurately investigate the real status of the students after taking the course. We want to know exactly which type of skill is improved and which one is not. We will also like to improve the online training system and provide the student with a more powerful and convenient training platform.

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Training English Teachers to Become Global Citizens

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Globalization is motivated by several reasons. According to Habu (2000), there are three main reasons: 1) commercialism, 2) "...the promise of enhancing the exchange of free ideas by creating communities of scholars that cross national boundaries" (44), and 3) the aim of internationalization (45). Even though Habu wrote this over ten years ago, it is still true. So how does this affect the globalization of English teachers? We teach English under the premise that by teaching English, scholars will be able to create these communities of exchange of free ideas. However, the reality is that much of English teaching is motivated by the almighty dollar, the renmin bi, the Euro. Many TEFL certificate programs have cropped up where teachers can receive certification to teach English in as little as an intense weekend of courses. Then there is the issue of companies in business to teach English, hiring any person off the street who claims that they speak English. According to Brody (2010), unless both of these practices are discouraged, English teachers will never command the professionalism they deserve. To this end, quality EFL Certifications need to be developed. Since English is the current lingua franca, future EFL teachers need to be taught to be global citizens, and to be knowledgeable of the different types of world Englishes.

The question is, how do future EFL teachers learn to become global citizens, especially if they have never left their own country? Professional development is the answer. However, professional development can mean many things, from a weekend course to a semester or year studying abroad. The reality is that most EFL teachers cannot afford to take off for long periods

of time. However, it is important to develop a comprehensive program of development, no matter if it is a long term study abroad opportunity, or a short term opportunity. It seems to be beneficial to develop a three-pronged approach for helping EFL teachers to become global citizens. First, defining a global citizen is important. In order to understand this concept, we have applied the Sociocultural Theory as developed by Vygotsky to global citizenry. Then applying this theory to the culture of the classroom and finally, providing a capstone experience for teachers where they are given the chance to study in an English speaking country, and experience the culture themselves. This paper will detail a unique teacher training workshop in which experienced EFL teachers from a Chinese university take part in a three week professional development workshop where teachers learn about the sociocultural theory of learning and how it applies to English teaching and learning, come to America for a week to experience an English speaking country for themselves and then apply what they have learned using authentic material they have gathered while in America in their own classrooms in order to help motivate their students to become global citizens.

The time frame for this workshop is two weeks in July and one week in the following October. The teachers attend an intense week of workshops discussing Vygotsky's Sociocultural Theory as it applies to second language teaching and learning. They then go to America for one week of intense workshops concerning the motivation of students and how to use authentic materials in the classroom. Finally, two months later, the teachers are observed teaching English in China for one week. Then discussions take place as to how their teaching improved, and what the teachers still feel they would like to learn.

The Sociocultural Theory of development is crucial to understanding globalization. First off, the definition of globalization that is discussed in this paper is defined in part by Lagos

(2002), "... global citizenship remains the purview of individuals to live, work and play within trans-national norms and status that defy national boundaries and sovereignty". In order for a person to be a global citizen, he/she must understand the different cultures in which they work and play. A global citizen must be able to change his/her behavior to adapt to the mores of society in which he/she finds him/herself at any given time. Baker (2009) echoes this definition when he states, "EFL [English as a lingua franca] needs to move beyond the traditionally conceived target language-target culture relationship to incorporate an awareness of dynamic hybrid cultures and the skills to successfully negotiate them (567)". In order to be able to adapt, we must first understand how we are socially constructed.

Vygotsky suggested that, "Consciousness 'arises, functions, and develops in the process of people's interaction with reality, on the basis of their sensuously objective activity, their socio-historical practice (Spirkin, 1983, 153)". Vygotsky was discussing the development of the child in society. However, his theory can be applied to the development of the human being, no matter what age. As humans, we are constantly developing and evolving based on our own experiences. Thus the saying, "Once bitten, twice shy," indicating that once something bad has happened to a person, that person is leery to try the same thing again. In other words, based on this person's socio-historical experience, he/she has learned or developed his/her consciousness concerning this one matter where he/she had a bad experience.

Lantolf and Appel (1994) go on to explain that "development does not proceed solely, or even primarily, as the unfolding of inborn faculties, but as the *transformation* of these innately specified processes once they intertwine with socioculturally determined factors (5)". Therefore, in order for one to truly become a global citizen, one must experience the cultures and mores of other cultures. Ideally this means that we all become globetrotters. However, this is not

realistic. But in the workshop, EFL teachers from China are able to experience this transformation first hand when they come to America to study for one week.

“Vygotsky argued for the uniqueness of the social milieu. He conceived of the sociocultural setting as the primary, and determining factor in the development of higher forms of human mental activity... (Lantolf and Appel, 1994, 6)”. If this is true, then one cannot truly know another culture unless one spends some time in that culture. This is a problem for English teachers who are teaching EFL in another country and have never been to an English speaking country. For the EFL teacher, how can one teach the language without an understanding of how that language is used?

But you may ask, this is done all the time. Yes it is, but how effective is this type of English teaching? It is not very effective. What often happens is a setting for miscommunication and inefficient English teaching. Another outcome of not experiencing the target culture first-hand is when teachers teach about English using their first language as the language of instruction, rather than English as the language of instruction. This type of teaching conveys to the students that there really is no need to learn English, except for a grade, because they will never need it except to pass a test and in the classroom setting. However, this is not true as English, has become a tool to be used in our globalized world of business and academics.

For teachers teaching in an EFL situation, such as a Chinese English teacher teaching English in China, these teachers need to be sent to English speaking countries for professional development. Without first-hand experience, teaching English is like being blind and trying to describe an elephant. Without the experience of being in an English speaking country, these teachers cannot explain completely how the language they are teaching is used, understood, and

an integral part of that culture. Without going to another country, these teachers will become insular, leading their students to be insular and perpetuating a global ignorance.

“Historically, Vygotsky argued , while humans sought to adapt to their external world through assimilating the laws of nature, they also attempted to control and master nature. The need for control led to the creation and invention of tools, technical as well as mechanical. Tools allowed individuals, in collaboration with other individuals, to shape their world according to their own motives and goals... (Lantolf and Appel, 1994, 7)”. Vygotsky also considered language a tool (Vygotsky , 1986). Since language is considered a tool, one needs to be able to use it in collaboration with other individuals to shape their world. Lantolf and Appel (1994) explain, “Tools are created by people under specific cultural and historical conditions. As such, they carry with them the characteristics of the culture in, for example, reflecting the state and level of labor activities. Tools are used to accomplish something, to aid in solving problems that cannot be solved in the same way in their absence. ...In turn [tools] also exert an influence on the individual in that they give rise to previously unknown activities and previously unknown ways of conceptualizing phenomena in the world (7-8)”. It is in this use of language within its native culture, whereby EFL teachers are changed and can become more passionate and vibrant teachers.

This brings us to the second approach, and that is, understanding the culture of the classroom. In most pedagogy programs in the US, understanding that the classroom has its own culture as it is influenced by the culture in which it is located, is not normally discussed. However, for EFL teachers, this is critical for effective teaching. Cortazzi and Jin (1996) state, “...that much behavior in language classrooms is set within taken-for-granted frameworks of expectations, attitudes, values and beliefs about what constitutes good learning, about how to

teach or learn, whether and how to ask questions, what textbooks are for, and how language teaching relates to broader issues of the nature and purpose of education (169)". A mistake that many ESL students, especially from South American cultures make is to assume that because North American countries are democracies, that the classroom is also. Therefore, some South American students feel free to question quite openly what is going on in the classroom. This then is often magnified by the fact that what South Americans consider a discussion, North Americans often consider an argument. Quickly, miscommunication happens and feelings become hurt, thereby raising the affective factor for learning a second language.

On the other hand, native English speakers who are teaching EFL abroad need to be careful not to view another culture of learning through "Western eyes". Cortazzi and Jin (1996) surveyed British, North Americans and Australians who had much experience in teaching English in China concerning what they thought were the strong and weak points of Chinese learning styles. They report that the students were, "...diligent, persistent, thorough and friendly. They were good at memorizing (185)". However, they also reported that they were weak in communicating both orally and through writing. They were quiet in class, and did not participate, but rather just sat and listened. They did not want to learn for learning sake, and were not open to new ideas.

Cortazzi and Jin (1996) who have studied the culture of the Chinese classroom extensively refute these opinions of these teachers by stating,

There is a danger in such interpretations: the students' abilities and ways of learning are being interpreted according to current Western notions of English language teaching. It could be argued that this is a kind of linguistic or cultural imperialism (Phillipson, 1992) in which one culture of learning is being imposed on those who naturally follow another, and that the latter way is made to appear inadequate or second class. The fact that it is the native speakers of English who adhere to the first culture of learning strongly reinforces the process of viewing the Chinese culture of learning in terms of deficit. Therefore

students are ‘weak at communicating’, ‘shy’, or ‘passive’. But this is a little one-sided. It does not take into account the Chinese culture of learning, or students’ achievements and expectations (185).

It is dangerous for teachers to teach in another culture without first doing research on that particular culture of learning. One runs the risk of misinterpreting one’s students’ goals and motives for learning the subject matter one is teaching, in this case, English. When Cortazzi and Jin wrote this article 15 years ago, the communicative approach to language learning was the Western cultures’ be-all approach. Many is the time I saw teachers from the US come to China and promote the communicative approach to learning a language at teacher workshops for Chinese teachers. However, the US teachers had never stepped into a Chinese English classroom, never studied the philosophy of education and its history in China, never considered the motives and goals of the Chinese student. This indeed, was a type of linguistic and cultural imperialism.

Another danger of teacher training programs developed for EFL teachers, actually occurs on the part of the EFL teacher in training. Too many times, EFL teachers are too accepting of a “better methodology” for teaching a foreign language. There is a tendency to think that a new concept from a native English speaking country must be better than what the teachers are currently using, so the EFL teacher will attempt to implement this “new concept” without analyzing how it can be successfully implemented into their own culture of learning and teaching.

The lack of professional training programs for teachers, developed by native English speakers, with an understanding of the culture of the Chinese classroom creates a lack of help for the Chinese English teacher. It also creates a lack of understanding on many Chinese schools of what constitutes good and effective English teaching. Many school systems have come to

believe that good English teaching can only come from native English speakers, and that Chinese English teachers are second rate to their native English counterparts. Unfortunately, because native English teachers in China are in such demand, this situation still continues, and worse, many times native English speakers are hired to teach English for the only reason that they have a Western face and are native English speakers. They are not trained teachers, and have no concept concerning the culture of the classroom, let alone how to teach in one that is different from their own culture of learning.

As an example of just how difficult it can be to meld new methodologies and concepts from one culture of learning to another culture of learning, let's take a look at just a few differences between the Chinese and United States English classroom and the culture of learning and teaching. Let's begin with the classroom itself. In China, most classrooms have a stage in the front of the class from which the teacher stands and gives his/her lecture. (However, the stage seems to be going by the wayside in some new schools.) The teacher is physically higher than the students. The students need to look up to the teacher. However, the classroom does not belong to the teacher, it belongs to the students. It is the students who clean it, erase the boards, wash the boards and arrange the desks if the desks are not nailed to the usually cement floor. The walls are most often white and unadorned with one chalkboard, and in more schools, there is also a screen in the front of the classroom, if it has AV capability.

In contrast, the American classroom is often carpeted and in K-12, belongs to the teacher. There is no stage to stand on. The teacher's desk is on the same level as the students'. There is a perceived front to the classroom, however, there are bulletin boards and smart boards and white boards quite possibly on three of the four walls of the classroom. The teacher will roam around the classroom as students are doing individual work, group work or pair work. She/He will most

likely choose different sides of the room to teach from depending on what board is being used. The teacher is in charge of making sure the classroom is organized and cleaned to his/her liking. So we can see, from the very beginning, the physical aspects of the two classrooms are starkly different. But, we can also see how the philosophy of education is different just from where the teacher is expected to stand while delivering lessons. In China, the teacher is to be revered and stands above the students. In America, the teacher is on the same level as the students, equally participating in their education. These physical differences portray the differences in how the teacher is viewed between the two countries. In China, the teacher is to be revered and looked up to. In America, the teacher is viewed as a tool that can be utilized to help the students learn, but is not revered.

In China, the teacher is the storehouse of knowledge and it is his/her job to impart this knowledge upon the student. Students do not ask difficult questions of the teacher, because if the teacher cannot answer it, the teacher will lose face. The teacher is expected to be a good role model and be kind to students. According to Cortazzi and Jin (1996) “While students expect the teacher to be strict,..they also expect the teacher to be a friend, even a parent. ...This means being friendly, gentle, showing concern, offering to help students who have personal problems, talking to students socially and giving advice *outside* the classroom. ...Western teachers are seen as friendly but they do not have the Chinese parental approach...(188)”. In many cases, a high school student will even live with a teacher while attending school.

In the U S, the teacher is also supposed to be knowledgeable, but also be able to find the answers to questions, in other words, a good researcher. The teacher is to be professional, while still being friendly and caring. However, the teacher is looked at more as a facilitator of learning, rather than the giver of information. The teacher is in the classroom to do the job of

teaching, not parenting, though this in truth, is a role that is played on a limited basis. In K-12, the teacher is not to be considered a friend, but rather as the teacher. In university, friendships are more likely to occur, but there is still a hierarchy that exists. In university, parenting is rarely a role, switching more to an advisory role and only when the student asks for advice.

We can see that without an understanding of each of these classrooms, miscommunication could easily happen. The American teacher will not understand why the Chinese students do not ask questions and the Chinese teacher teaching English, will do so in the culture of the Chinese classroom, imparting English knowledge upon his/her students. If the students' goals are to do well on the examinations, then this type of English teaching is sufficient, even necessary. However, if the students' goals are to study abroad at university in an English speaking country, then the Chinese teacher, teaching about English is not sufficient. On the other hand, for American teachers to teach English in China solely for communication purposes, without concern for the final exam, when all the student desires is to do well on the exam, is not helpful to the Chinese student. It is these problems that are discussed in the teacher training program.

The second aspect of the English teacher training is the capstone experience. So that teachers of English in China may experience being in an English-speaking country, they come over to America for one week, during which time they continue workshops on how to motivate students, gather authentic material and continue discussions on second language acquisition. The teachers then are taken to eat American food, go shopping, go to museums and special events that might be happening at the time they are here as well as to see historical places and places of significance. The teachers are encouraged to pick up free material wherever it presents itself from restaurant menus to car catalogues. This authentic material is a good resource for teaching

English to their students. It is motivating and the teachers can tell the students from personal experience about the culture. It also adds depth to the class and allows the students to get out of the textbooks and to let their minds wander outside the classroom to another country.

So how do these short stints of the workshop overseas help English teachers become global citizens? After the Chinese English teachers return to China, two months later, I visit them and observe their classes as well as have meetings with them to discuss their teaching and the program overall. The overwhelming comment has been, that by going to an English speaking country, they have gained confidence to use more English in their classrooms. The second most discussed topic was how to keep, or what to do with students who sleep in class. This was an unexpected issue, but one that is a concern, given the average size of the classes of 40-50 students. The teachers also expressed more of a willingness to try new things in the classroom.

EFL teachers learned from their experiences in another country and incorporated these learning experiences into their classroom teaching and their future life plans. They learned that understanding another culture of learning helped them reflect on their own culture of learning and to reflect more critically on the methods they use in the classroom. They became more open-minded and willing to try new methods. They also learned that it is important to be able to adapt to another culture in order to live successfully in that culture, and that this is a skill that needs to be passed on to their own students. In Vygotskian terms, they were transformed by this experience.

There are, however, several weaknesses in these exchanges. The first is that so far, the only time that Chinese English teachers can come to the US or is the summer. Therefore, the Chinese English teachers have not had an opportunity to observe English classes in America.

The second weakness is the short time frame that the teachers have to be abroad. It would be ideal if the teachers could go abroad for one semester at least. In this time, a better understanding of the culture and the language would help to further the cause of globalization.

In conclusion, the three-pronged approach to teaching globalization to English teachers has seemed to be effective. First, we defined and discussed globalization. We also discussed the culture of the classroom. Within this discussion, we also looked at our own culture and other cultures. The English teachers had a chance to come to America and experience an English-speaking culture themselves. Thirdly, the teachers were observed teaching English in their home institution, applying what they had learned in the workshop. We know that these measures are only a beginning to helping our teachers to become global citizens, but it is a beginning. We strive to as Baker (2009) states, “construct a conception of English that accepts a plurality of Englishes and an understanding that English is not seen as the property of one culture or community”. We implemented a curriculum to help EFL teachers to become global citizens, which in turn will hopefully play out in the globalization of their students.

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Title: On the Nature of Displacement Operations in Early Child Grammar of Japanese: A Preliminary Study

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The logo for the International Association for Frontiers of Research (iafor) is centered on the page. It features the word "iafor" in a light blue, lowercase, sans-serif font. The text is enclosed within a circular graphic composed of two overlapping, curved lines: a light blue outer arc and a light red inner arc, creating a sense of motion or a stylized globe.

On the Nature of Displacement Operations in Early Child Grammar of Japanese: A Preliminary Study

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1. Introduction

One notable characteristics of human language is the presence of displacement operations; that is, elements can behave as if they were in different positions. This unique property of human language has been a focus of investigation under the generative framework, as the trait in question may ultimately provide us with clues necessary to clarify our linguistic ability; that is, universal grammar.

Significantly, one type of displacement operation yields semantic ambiguity, exemplified in the contrast between (1a) and (1b) (e.g., Hoji 1986):

- (1) a. dareka-ga daremo-o aishiteiru.
 someone-nom everyone-acc love
 ‘Someone loves everyone.’
- b. daremo-o dareka-ga aishiteiru.
 everyone-acc someone-nom love
 ‘Everyone, someone loves.’

(1a) means that there is someone who loves everyone in the group under consideration. Let us call this reading “individual reading.” (1b) also allows this individual reading, but it can also describe the situation in which each group member is loved by someone, not necessarily by the same person. The latter interpretation can be illustrated in (2):

- (2) Mary is loved by John; Susan is loved by Bill; Nancy is loved by Mike ...

We call this reading “pair-list reading.” (1b) shows that scope ambiguity results when the object quantifier phrase (QP, hereafter) precedes the subject QP.

With this reading of (1b), let us move onto (3a, b):

- (3) a. Taroo-mo Hanako-mo nani-o katta-no.
 -also -also what-acc bought-Q
 ‘What did Taroo as well as Hanako buy?’
- b. Nani-o Taroo-mo Hanako-mo katta-no.
 what-acc -also -also bought-Q
 ‘What did Taroo as well as Hanako buy?’

Notice that both (3a) and (3b) only allow the interpretation that Taroo and Hanako bought the same goods as other members bought, and the speaker would like to know what it is. For example, an appropriate response to these questions is (4a), but not (4b):

(4) a. individual answer

Taroo-mo Hanako-mo hon-o kaimashita.
-also -also books-acc bought

b. pair-list answer

#Taroo-wa hon-to-enpitsu-o katte, Hanako-wa hon-to-kaban-o
-top book-and-pencil-acc buy -top book-and-bag-acc
kaban-o kaimashita.
bag -acc bought

In short, (3a) and (3b) only allow the individual reading. No scope ambiguity yields in these examples, no matter whether the object *wh*-phrase is placed before the subject QP. This paper reports experimental data examining how Japanese child learners of English interpret the type of questions in (3), and seeks possible implications for foreign language teaching.

This paper is organized as follows: Section 2 introduces basic theoretical background for scope interaction between QPs and between a QP and a *wh*-phrase and for properties of the particle *mo* ‘also’; Given this background, Section 3 turns to previous FLA research on scrambling and scope interaction between a QP and a *wh*-phrase. We review Hayashibe (1975) and Sugisaki and Isobe (2001) for scrambling, and Yamakoshi (2004) for scope interaction between QPs and properties of the particle *mo*; and Section 4 introduces our experiment. In Section 5, we turn to seek educational implications of our findings. Finally, Section 6 concludes this paper.

2. Theoretical Background for Scope Interaction and the particle *mo*

Section 2 begins laying out our assumptions concerning how scope is determined. We then clarify some of the properties of the particle *mo*, relevant to our concern.

2.1. Scope Interaction

According to Watanabe (2000), there are two distinct operations changing word-orders: scrambling and absorption. In essence, scrambling only yields phonetic effects whereas absorption, discussed below, results in phonetic as well as semantic effects.

Let us first illustrate these two operations with (1a, b), repeated here as (5a, b) respectively:

(5) a. Dareka-ga daremo-o aishiteiru.
someone-nom everyone-acc love

‘Someone loves everyone.’

- b. Daremo-o dareka-ga aishiteiru.
 everyone-acc someone-nom love
 ‘Everyone, someone loves.’

In (5a), as far as the scope relationship between the subject and object QPs is concerned, “what you see is what you get”; the subject QP necessarily takes scope over the object QP. This fact is straightforward since neither scrambling nor absorption is involved in this example. Thus, semantics can just read off its scope relation between the two QPs, based on their structural c-command relationship. In contrast, (5b) involves either scrambling or absorption.

First, scrambling can bring the object QP to the sentence-initial position, as illustrated in (6):

- (6) [TP daremo-o₁ [TP dareka-ga [VP t₁ aishiteiru]]]
-

Watanabe assumes that the operation in question does not bring any scope interaction between the two QPs, and thus, scope relationship between these QPs never changes; the subject QP takes scope over the object QP.

Second, the word-order in (5b) can also be obtained via absorption. In this case, (5b) involves movement operation of the kind illustrated in (7):

- (7) [TP [QP [QP daremo-o]₁ [QP dareka-ga]₂]₂ [VP t₁ aishiteiru]]
-

In (7), the object QP is adjoined to the subject QP, forming a QP complex, as schematized in (8):

- (8)
-

Watanabe claims that this configuration enables the object QP to take scope over the subject QP. Important for our purpose is that scope ambiguity results when two distinct operations, scrambling and absorption, are both available.

Bearing this point in mind, let us turn to (3a, b), repeated here as (9a, b):

one who is a member of the set of the students staying at the hotel. Yet, Speaker A says that John is not the exception of the students staying at the hotel. Kawashima explains that the particle *mo* widens the “contextually given narrow domain” in the same way that English *any* does.

Adopting Kawashima’s proposal to the particle *mo*, Saito (1999) claims that the absence of the pair-list interpretation in examples such as (12) is due to the presence of the particle *mo*:

- (12) [[daremo-ga dare-o sonkeishiteiru]-ka] oshiete kudasai .
 everyone-nom who-acc respect -Q tell-me please
 ‘Please tell me who everyone respects.’

Assuming here that {Taro, Hanako}, which is the narrow domain contextually given, is widened to {Taro, Hanako, Jiro}. (13) is the individual reading of (12):

- (13) Individual reading:
 For which x , ‘[every $y: y \in D$] y respects x ’ continues to hold when D is widened from {Taro, Hanako} to {Taro, Hanako, Jiro}?
- (14) $R = \{ \langle \text{Taro, Obama} \rangle, \langle \text{Taro, Clinton} \rangle, \langle \text{Jiro, Obama} \rangle, \langle \text{Jiro, Clinton} \rangle, \langle \text{Hanako, Obama} \rangle \}$ where $R = \{ \langle x, y \rangle : x \text{ respects } y \}$

Saito argued that the question of (12) premises that Taro and Hanako respect more than one person, and asks which of them Jiro respects as well. In the case of (14) where Taro respects Obama and Clinton, Hanako respects Obama and Clinton and Jiro respect Obama, the answer of “Obama” is only available to the question (12).

In regard to the pair-list reading of (12), Saito presupposes this reading as (15):

- (15) Pair-list reading:
 [For which f , ‘[every $x : x \in D$] x respects $f(x)$ ’ continues to hold when D is widened from { Taro, Hanako } to {Tom, Hanako, Jiro}.
- (16) { $\langle \text{Taro, Obama} \rangle, \langle \text{Taro, Clinton} \rangle, \langle \text{Hanako, Obama} \rangle, \langle \text{Jiro, Bush} \rangle$ }
- (17) a. { $\langle \text{Taro, Obama} \rangle, \langle \text{Hanako, Obama} \rangle$ }
 b. { $\langle \text{Taro, Clinton} \rangle, \langle \text{Hanako, Obama} \rangle$ }

Suppose here that Taro respects Obama and Clinton, Hanako respects Obama, and Jiro respects Bush. The functions in (17a) and (17b) satisfy ‘ x respects y ’ with the narrow domain; in other words, a set of Taro and Hanako. The question of (12) asks which of the functions continue to fulfill ‘ x respect $f(x)$ ’ when Jiro is added to the narrow domain; namely, the whole domain is widened. Saito discussed that it is fuzzy how the pair of $\langle \text{Jiro,}$

Bush> can satisfy the function required in (16) in the situation of (17b). In short, when the domain is widened, a random pair such as (17b) cannot meet the function as an answer for (12). Saito therefore concludes that the unavailability of the pair-list answer is due to the presence of the particle of *mo*. The examples in (3) receive the same account.

In short, the presence of the particle *mo* “masks” the effects of absorption discussed in Section 2.1. In Section 3 which follows, we turn to previous research on scrambling and scope relations between QPs in child Japanese grammar.

3. Previous Research on Scrambling and Scope Relations between QPs in Child Japanese Grammar

In Section 3, we introduce Hayashibe (1975), Sugisaki and Isobe (2001) for scrambling, and Yamakoshi (2004) for scope relations between QPs and the domain widening property of the particle *mo*, enabling us to set a stage for our hypothesis presented in Section 4.

3.1. On Scrambling

3.1.1. Hayashibe (1975)

Hayashibe (1975) pointed out that in general, children aged around 5;0 tend to interpret OSV sentences like (18a) as if they were like a SOV in (18b):

- (18) a. Kamesan-o Ahirusan-ga oshimashita.
 turtle -acc duck -nom pushed
 ‘The duck pushed the turtle.’
- b. Kamesan-ga Ahirusan-o oshimashita.
 turtle -nom duck -acc pushed
 ‘The turtle pushed the duck.’

According to Hayashibe (1975), children of around 5 years old, tend to interpret OSV sentences as if they are like SOV. Under Watanabe’s (2000) framework, this result means that children have scrambling, but not absorption, approximately around the age of 5.

3.1.2. Sugisaki and Isobe (2001)

Previous works on passives (Sugisaki 1997; Otsu 2000) discovered that children have more difficulty understanding passives with A-movement than ones without such movement. Such works imply that operations involving A-movement are more difficult than ones with A’-movement. In the context of scrambling, results from acquisition of passives predict that A-scrambling is more difficult than A’-scrambling. Sugisaki and Isobe (2001) tested this prediction, examining the double object construction in Japanese. They examined whether child subjects accept or reject the four types of sentences schematized in (19):

- (19) a. Subject-Indirect Object-Direct Object-Verb (two test sentences in total)

Satoshi-ga akachan-ni pokemon-o miseta-yo.
 -nom baby -dat -acc showed
 ‘Satoshi showed his Pokemon to the baby.’

b. Subject-Direct Object- Indirect Object-Verb

Satoshi-ga Pikachu-o okaasan-ni miseta-yo.
 -nom -acc mother-dat showed
 ‘Satoshi showed Pikachu to his mother.’

c. Indirect Object-Subject-Direct Object-Verb

Kasumi-ni Satoshi-ga Pikachu-o miseta-yo.
 -dat -nom -acc showed
 ‘Satoshi showed Pikachu to Kasumi.’

Sugisaki and Isobe found that although their child subjects correctly accepted (19a) and (19c), their performance for the type shown in (19b) was at the chance level. Given the assumption that the word-order in (19b) is derived from (19a) via A-scrambling (e.g., Nemoto 1993; Tada 1993), their results show that children have difficulty understanding A-scrambling.

Murasugi and Saito (1992) show that rigidity effects only show up with A'-movement, and the fact that scrambling in the sense of Saito (1985, 1992) can change the scope relation between QPs indicates that the operation in question is A-scrambling. Given this proposal, Sugisaki and Isobe's results suggest that scrambling available to children must be A'-movement, which in turn indicates that scrambling does not change scope relation between QPs in child Japanese grammar. Under Watanabe's (2000) framework, Sugisaki and Isobe's finding implies that absorption is not available in child Japanese grammar.

3.2. On the Domain Widening Property of the Particle *mo*

Yamakoshi (2004) points out that Japanese-speaking children incorrectly accepted pair-list answers such as (21b) in questions like (20a, b), and concludes that this over-acceptance of pair-list answers is due to the late acquisition of the domain widening property of the particle *mo* that we discussed in Section 2.2.

- (20) a. *Dono-hito-mo/dare-mo-ga dare-o aishiteimasu-ka.*
 which-person-also/who-also-nom who-acc love -Q
 ‘Who does everyone love?’
- b. *Dare-o dono-hito-mo/dare-mo-ga aishiteimasu-ka.*
 who-acc which-person-also/who-also-nom love -Q
- (21) a. individual answer
Ichiro-o dono-hito-mo/dare-mo-ga aishiteimasu.
 -acc which-person-also/who-also-nom love
 ‘Everyone loves Ichiro.’

b. pair-list answer

Mary-ga Ichiro-o, Kate-ga Matsui-o, Sarah-ga Nomo-o
 -nom -acc, -nom -acc -nom -acc

aishiteimasu.

love

‘Mary loves Ichiro, Kate loves Matsui, and Sarah loves Nomo.’

The domain widening property of the particle *mo* is not yet acquired by the child (aged from 4;0 to 6;0) subjects, and thus, individual answers were not forced. Yamakoshi’s child subjects, one should highlight, accepted not only pair-list answers but also individual answers. Given the discussion on A-scrambling in Section 3.1, her subjects appear to have already passed the developmental stage where only A’-scrambling is available in the grammar. These results appear to highlight that children still have difficulty acquiring the domain widening property of the particle *mo* at around the age of 5, an area beyond the scope of the current paper.

4. Experiment

4.1. Hypothesis

Given that children acquiring Japanese have already had scrambling, but not absorption, and have not acquired the domain widening property particle *mo*, this study hypothesizes (22):

(22) Japanese-speaking children accept only “pair-list reading” responses to questions such as (3a, b), repeated in (23a, b) at around the age of 5.

(23) a. Taroo-mo Hanako-mo nani-o katta-no.
 -also -also what-acc bought-Q
 ‘What did Taroo as well as Hanako buy?’

b. Nani-o Taroo-mo Hanako-mo katta-no.
 what-acc -also -also bought-Q
 ‘What did Taroo as well as Hanako buy?’

Since the unique property of the particle *mo*, discussed in Section 2.2, is not yet available in their grammar, the effects of scrambling and absorption should be “unmasked” and observed even in examples such as (23a, b). However, since absorption is still unavailable at this stage of language development, the only operation that makes the word-order in (23b) possible is scrambling. Consequently, no individual reading should be available in (23b) as scrambling is assumed not to change scope relation between QPs.

4.2. Subjects

Twenty-two monolingual Japanese-speaking children, ranging from 3.6 (year; month) to

5.10 (mean age, 4;3) were examined. Each session took approximately 15 minutes for each child. Table 1 shows the number of subjects for each age group.

Table 1: The number of subjects in each age group

Age	3-year-olds	4-year-olds	5-year-olds
#	8	7	7

4.3. Materials and Procedure

The experiment adopted the Truth-Value Judgment Task (Crain & Thornton 1998). Each child subject was told stories, each of which was accompanied by several paper-made characters such as a doggy, a buddy, and so on, presented face-to-face. At the end of each story, two puppets were presented to the subjects; one puppet asked a question (a test sentence) to the other puppet, and the latter answered to the question. The task for each child was to answer the question; if the puppet uttered a correct answer, they patted the puppet, and if it gave a wrong answer, they fed a toy bug to the puppet. A sample story and two types of test questions are given in (24) and (25) respectively:

- (24) Aru hi, Wanko-to-Usako-wa suupaamaaketto-e ikimashita.
 one day doggy-and-bunny-top supermarket -to went

Wanko-wa ninjin-to-ringo-o, Usako-wa ringo-to-momo-o kaimashita.
 doggy-top carrot-and-apple-acc bunny-top apple-and-peach-acc bought

‘This is a story about a doggy and a bunny. One day, the doggy and the bunny went a grocery store. The doggy bought a carrot and an apple, while the bunny bought a carrot and a peach.’

- (25) Test sentences:
- Wanko-mo Usako-mo nani-o kaimashita-ka. [SOV]
 doggy-also bunny-also what-acc bought -Q
 ‘What did the doggy as well as the bunny buy?’
 - Nani-o Wanko-mo Usako-mo kaimashita-ka. [OSV]
 what-acc doggy-also bunny-also bought -Q

Although only individual reading is available in the grammar of Japanese native speakers, the puppet provided either an individual or a pair-list answer, one answer for one question. (26a) corresponds to an individual answer whereas (26b) illustrates a pair-list answer.

- (26) a. individual reading answer

Wanko-mo Usako-mo ninjin-o katta-yo.
 doggy-also bunny-also carrot-acc bought-EXCL
 ‘The doggy as well as the bunny bought a carrot.’

b. pair-list-reading answer

Wanko-wa ninjin-to-ringo-o katte, Usako-wa ninjin-to-momo-o
 doggy-top carrot-and-apple-acc bought, bunny-top carrot-and-peach-acc
 katta-yo.
 bought-EXCL
 ‘The doggy bought a carrot and an apple, and the bunny bought a carrot and a
 peach.’

Types of test sentences with the puppet responses are shown in (27)-(30):

(27) [\sim mo, \sim mo+ WH]

a. Wanko-mo Usako-mo nani-o kaimashita-ka.
 doggy-also bunny-also what-acc bought -Q
 ‘What did the doggy as well as the bunny buy?’

b. Nani-o Wanko-mo Usako-mo kaimashita-ka.
 what-acc doggy-also bunny-also bought -Q

(28) [WH + \sim mo, \sim mo]

a. Nani-ga Wanko-mo Usako-mo oikakemashita-ka.
 what-nom doggy-also bunny-also chased -Q
 ‘What chased the doggy as well as the bunny?’

b. Wanko-mo Usako-mo nani-ga oikakemashita-ka.
 doggy-also bunny-also what-nom chased -Q

(29) [\sim mo, \sim mo + WH]

a. Wanko-mo Usako-mo dare-ni aimashita-ka.
 doggy-also bunny-also who-acc met -Q
 ‘Who met the doggy as well as the bunny?’

b. Dare-ni Wanko-mo Usako-mo aimashita-ka.
 who-acc doggy-also bunny-also met -Q

(30) [WH + \sim mo, \sim mo]

a. Dare-ga Wanko-mo Usako-mo syootaishimashita-ka.
 who-nom doggy-also bunny-also invited -Q
 ‘Who invited the doggy as well as the bunny?’

b. Wanko-mo Usako-mo dare-ga syootaishimashita-ka.

doggy-also bunny-also who-nom invited -Q

The answers to each question from (27) to (30) are shown below:

(31) a. individual answer:

Wanko-mo Usako-mo ninjin-o katta-yo.
doggy-also bunny-also carrot-acc bought-EXCL
'The doggy as well as the bunny bought a carrot.'

b. pair-list answer:

Wanko-wa ninjin-to-rinngo-o katte, Usako-wa ninjin-to-momo-o
doggy-top carrot-and-apple-acc bought, bunny-top carrot-and-peach-acc
katta-yo.
bought-EXCL
'The doggy bought a carrot and an apple, and the bunny bought a carrot and a peach.'

(32) a. individual answer:

Tako-wa Wanko-mo Usako-mo oikaketa-yo.
octopus-top doggy-also bunny-also chased -EXCL
'The octopus chased the doggy and the bunny.'

b. pair-list answer:

Tako-to-Ika-wa Wanko-o, Tako-to-Fugu-wa Usako-o
octopus-and-squid-top doggy-acc octopus-and-swallowfish-top bunny-acc
oikaketa-yo.
chased -EXCL
'The octopus and the squid chased the doggy, and the octopus and the swallowfish chased the bunny.'

(33) a. individual answer:

Wanko-mo Usako-mo Kamesan-ni atta-yo.
doggy-also bunny-also turtle -dat met-EXCL
'The doggy met the bunny and the turtle.'

b. pair-list answer:

Wanko-ga Kamesan-to-Kaerusan-ni atte, Usako-ga
doggy-nom turtle -and-frog -dat met bunny-nom
Kamesan-to-Ahirusan-ni atta-yo.
turtle -and-duck -dat met-EXCL.
'The doggy met the turtle and the frog, and the bunny met the turtle and the duck.'

(34) a. individual answer:

Wanko-mo Usako-mo Kamesan-o syootaishita-yo.
 doggy-also bunny-also turtle -acc invited -EXCL
 ‘The doggy and the bunny invited the turtle.’

b. pair-list answer:

Wanko-wa Kamesan-to-Ahirusan-o, Usako-wa Kamesan-to-Kaerusan-o
 doggy-top turtle -and-duck -acc, bunny-top turtle -and-frog -acc
 syootaishita-yo.
 invited -EXCL
 ‘The doggy invited the turtle and the duck, and the bunny invited the turtle and the frog.’

Considering the fact that children around 3;0 to 5;0 have a short span of concentration, we gave each child subject one test sentence for each type.

4.4. Results

Test results are summarized in Table 2:

Table 2: Results of *~mo, ~mo/wh* interpretation in Japanese

Type		Age	All	3	4	5
(27) <i>~mo, ~mo+WH</i>	to accept individual readings		4/22 (18.1%)	2/8 (25.0%)	0/7 (0.0%)	2/7 (28.5%)
	to accept pair-list readings		21/22 (95.4%)	7/8 (87.5%)	7/7 (100.0%)	6/7 (85.7%)
(28) <i>WH+~mo, ~mo</i>	to accept individual readings		4/22 (18.1%)	2/8 (25.0%)	1/7 (0.14%)	2/7 (28.5%)
	to accept pair-list readings		20/22 (90.0%)	7/8 (87.5%)	7/7 (100.0%)	6/7 (85.7%)
(29) <i>~mo, ~mo+WH</i>	to accept individual readings		4/22 (18.1%)	2/8 (25.0%)	1/7 (0.14%)	2/7 (28.5%)
	to accept pair-list readings		20/22 (90.0%)	7/8 (87.5%)	7/7 (100.0%)	6/7 (85.7%)
(30) <i>WH+~mo, ~mo</i>	to accept individual readings		4/22 (18.1%)	2/8 (25.0%)	0/7 (0.0%)	2/7 (28.5%)
	to accept pair-list readings		20/22 (90.0%)	7/8 (87.5%)	7/7 (100.0%)	6/7 (85.7%)

Even though the results reported here are still preliminary, in the sense that the number of subjects and test sentences are relatively small, our results appear to confirm the hypothesis in Section 4.1. No matter whether the phrase with the particle *mo* precedes the *wh*-phrase or not, pair-list answers were significantly preferred.

By way of a short summary, this study concludes (35a) and (35b):

- (35) a. Absorption is not available in child (at around the age of 5) Japanese grammar.
 b. The domain widening property of the particle *mo* is not yet present in child (at around the age of 5) Japanese grammar.

5. Educational Implications

Section 4 shows that children's strong preference of pair-list answers over individual answers in examples of the type given in (3), repeated here as (36), is due to their lack of absorption and the not-yet acquired domain widening property of the particle *mo*.

- (36) a. Taroo-mo Hanako-mo nani-o katta-no.
 -also -also what-acc bought-Q
 'What did Taroo as well as Hanako buy?'
- b. Nani-o Taroo-mo Hanako-mo katta-no.
 what-acc -also -also bought-Q
 'What did Taroo as well as Hanako buy?'

This study appears to indicate that not only Japanese children but also learners of Japanese may also go through similar developmental stages in the course of language development. Importantly, even if learners should allow all the correct word-orders "on the surface," making use of scrambling, this does not guarantee that absorption is also available in their grammar. From an educational point of view, teachers need to ensure that learners can also detect semantic effect yielded by absorption, suggesting exercises focusing on the semantic aspect of the displacement operations should be incorporated into the teaching of displacement operations in Japanese. In short, teachers should focus on the availability of the individual reading yielded by absorption as well as the domain widening property of the particle *mo*.

6. Conclusion

This paper has shown that the children's over-acceptance of pair-list readings in sentences with Japanese particle *mo* is due to their late acquisition of both the domain widening property of the particle *mo* in Japanese and absorption operation.

This paper also suggests that teachers need to ensure that the learners can also detect scope ambiguity which is realized by the two distinct word-order changing operations, scrambling and absorption. Exercises focusing on the semantic aspect of the displacement operations should be incorporated into the teaching of displacement operations in Japanese.

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Overcoming Behaviour Disorders in Students: Teacher Preparation with Learning Autonomy
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Introduction

Major challenges to behaviour analysis lies in dealing with the complexity of human behaviour, especially in applied setting where controls are impossible, impractical or unethical. Human Behaviour is quite complex in terms of its diversity, strength, direction, persistence and change etc., and a close observation of behaviours of our fellow beings would reveal that not only do different people behave differently in the same situation but also the same person behaves or performs at different levels on different occasions. Deviation from the socially accepted code of behaviour is unpleasant and may trigger disquiet.

Understanding behaviour disorders in children and adolescents involves education, but education must play a major part in any effective response to the challenges. Most of the behavioural disorders in children and adolescents are socially disapproved and harmful to social harmony. Such behaviours are definitely harmful and jeopardize not only the individual's life but also the life of the community and the development of the nation. Such disorders should be taken care at the early years itself and that the deviant behaviour can be channelized into pro-social behaviour. The high incidence of behaviour disorders in students and their effect on student's academic, social, inter-personal and intra-personal relationships warrants for early intervention or remediation by the parents and particularly by the teachers.

Teacher educators are primarily responsible for preparing teachers in special education. An appropriate technology in the hands of a competent teacher can ensure optimum assimilation of instructions by providing proper motivation. Alternatively one has to look into the possible ways and means of providing such knowledge and skills that are essential. In this context, it is worth to think about the development and use of self instructional modules on behaviour disorders in students. It develops learning autonomy and ensures achievement of an expected standard.

Behaviuor Disorders

The term 'behaviour' is sometimes used in a wide sense to cover all purposive activity (*Mc Dougall, 1972*). It will, however be confined to its narrower and more usual meaning of the individual's response to his social environment as expressed in his bodily movements. *Jahoda (1958)* maintains that there are three basic aspects of mental health i.e. '*criteria of normality*' as

follows: active adjustment, attempts at mastering the environment, unity of personality, stable integration of experience and correct perception of the world and self- independent of personal needs. The individual or a person deviated from the above said normality is said to be behaviourally disordered or person's behaviour is not only strange and unusual but also annoying or upsetting then that individuals at risk of being called 'abnormal' or somewhat roughly equivalent to terms such as crazy, nuts, mentally ill, neurotic or queer. The pupil with behaviour disorder often experiences considerable personal disappointment, misery, rejection and loss of opportunities as well as a general reduction in the quality of life. The behaviour disorders are also referred by many labels: behavioural disturbances, maladaptive behaviour, impairments, deficiencies, deficits and psychopathology. To understand behaviour disorders of children and adolescents, one need to understand the biological, psychological and interplay of bio-psycho factors in child development. The determinants of the context for behaviour dysfunction are genetics and development, physical and motor development, cognition and communication, emotional development and socio cultural context in family, peers and school. Risk factors or risks are also variables that increase the chance of behavioural difficulties or impairment.

The American Psychiatric Association in its Diagnostic and Statistical Manual of Mental Disorders – Fourth edition (DSM-IV, 1994) defines a disorder as “an impairment or dysfunction of the individual that causes distress to the person or increased risk of death, pain, disability or loss of freedom”. In addition, this syndrome or pattern must not be merely an exactable and culturally sanctioned response to a particular event. Whatever its original causes, it must currently be considered a manifestation of a behavioural, psychological or biological dysfunction in the individual. Neither deviant behaviour nor conflicts that are primarily between the individual and society are mental disorders unless the deviance or conflict is a symptom of a dysfunction in the individual as described above. *The tenth revision of the International Classification of Diseases and Related Health Problems (ICD –10, 2002)* published by the World Health Organization, Geneva defines, “disorder as the presence of hallucinations, delusions, or a limited number of severe abnormalities of behaviour such as gross excitement and over activity, marked psychomotor retardation and catatonic behaviour”.

The American Heritage Medical Dictionary (2007) defined behavior disorder as any of various forms of behavior that are considered inappropriate by members of the social group to which an individual belongs. *Melissa Kelly (2011)* stated that behavior disorders are conditions

that are more than just disruptive behavior. They are related to mental health problems that lead to disruptive behavior, emotional and social problems. **Bower (1981)** described the emotionally handicapped child as exhibiting one or more of five characteristics that are measured over a period of time: An inability to learn which cannot be explained by intellectual, sensory, or health factors, An inability to build or maintain satisfactory impersonal relationships with peers or teachers, Inappropriate types of behavior or feelings under normal conditions, general, pervasive mood of unhappiness or depression, tendency to develop physical symptoms, pains, or fears associated with personal or school problems.

No such definition is universally accepted by special educators or other professionals but each represents a viewpoint that needs to be considered as one attempts to understand behaviour disorders more fully. The above definitions clearly show the multi-faceted nature of behaviour disorders in children and adolescents.

Research studies estimated that around 9 percent of school children (**Jayaprabha, 2003**) and 10 to 12 percent of high school students who are in adolescent age (**Shyamala, 2004**) are experiencing various types of behaviour difficulties. Research studies also noted that if the childhood disorders are not remediate at early years and continue up to adolescence, they become antisocial in nature (**Dodge et al., 1995**).

Classification of Behaviour Disorders

The most widely used classification system of behaviour disorders are: American Psychiatric Association's Diagnostic and Statistical Manuals of Mental Disorders (**DSM**), International Classification of Diseases (**ICD**) developed by the World Health Organisation (**WHO**), Geneva and 0 – 3 is a system developed to classify mental disorders of very young children (**Zero to Three, 1995**) by National Centre for Clinical Infant Programmes.

The DSM classification system is the dominant system in the world. The DSM is a categorical approach to classification and thus accepts a view that the difference between normal and pathological is one of kind rather than one of degree. It also says that distinctions can be made between qualitatively different types of disorders. The DSM is an outgrowth of the Original Psychiatric Taxonomy developed by **Kraepelin in 1883**, from which children's disorders were omitted. **DSM-I (1952)** contained only two categories of childhood disorders: Adjustment reaction and Childhood Schizophrenia. **DSM-II (1968)** added the category of behaviour disorders of childhood and adolescence which was subdivided into six kinds of

disorders. The next two revisions, *DSM-III (1980)* and *DSM-III-R (1987)* expanded appreciably the number of categories specific to children and adolescents.

The following are the major *DSM-IV's (1994)* categories described as diagnosis in childhood or adolescence. Mental Retardation, Learning Disorders, Motor Skills Disorders, Communication Disorders, Pervasive Developmental Disorders, Attention Deficit and Disruptive Behaviour Disorders- disruptive behaviour disorders, conduct disorder, attention - deficit / hyperactivity disorder, Feeding and Eating Disorders, TIC Disorders, Elimination Disorders and Other Disorders of Infancy, Childhood or Adolescence:(This grouping is for disorders that are not covered in the sections listed above)- Separation anxiety disorder, Selective mutism, Reactive attachment disorder, Stereotypic movement disorder, Personality Disorders- Paranoid, Schizoid, Schizotypal, Antisocial, Borderline, Histrionic, Narcissistic, Avoidant, Dependent, Obsessive Compulsive personality disorders.

Identification and Assessment of Behaviour Disorders in Students

Determining the rate of frequency of disorders of children is important because it suggests the extent to which identification, assessment and treatment are needed. *Murphy and Weisz (1996)* indicate that there has been ready application of knowledge in such areas as the identification, assessment and prevention of disease and the healthy development of cattle and crops but the utilization of scientific knowledge relevant to the optimal development of children has been spotty and inadequate. Identification of behaviour disorders in students is possible only when the characteristics are exhibited by the students and observed by parents, peers and teachers. To identify the characteristics of behaviour disorders in students, the sound assessment techniques can be used. Pupil with behaviour disorder does not systematically differ from those without on much behaviour. The classroom experience and scientific research (*Cullinan et al., 1979*) indicate that some behaviour characteristics are more likely than others to lead to pupil's identification as behaviourally disordered. Regular and special teachers alike will sooner or later encounter a broad variety of both normal and maladaptive behaviour pattern of pupil. Although the teacher can hardly afford to focus exclusively on only a few characteristics of behaviour disorders, they need to be particularly knowledge and skills regarding these characteristics. After identification of characteristics among children and adolescents with behaviour disorder, it is important to find the range of disorders in children and adolescents. To find out the nature of disorder, the assessment is required.

Assessment must be comprehensive in evaluating a variety of potential presenting problems, measuring a variety of aspects of youngsters themselves and assessing various contexts and other individuals. Moreover, information must be obtained from a variety of sources such as children, parents, teachers, peers etc. The multiple sources are required to assess problems that may vary by context or be displayed differently in interactions with different individuals. A team of carefully framed persons in the administration and interpretation of specific procedures and instruments best accomplish assessment. If treatment ensues, assessment should be a continuous process, so that new information can be gleaned and the ongoing effects of treatment can be ascertained.

For assessing behaviour disorders in students, different techniques are to be in use. They are: Interviews with parents and teachers, rating scales and checklists to assess behaviour disorders, direct observation, self-reporting instruments and inventories. In addition to the above, standardized tests of intelligence, academic achievement and adoptive behaviour are useful. Medical examination of EEG or brain scan is of worth to be considered for finding out the biological factors of behaviour disorder in students. There is good number of standardized tests to ascertain behaviour disorder in students in Western context. The test likes *Test Batteries for Identification of Conduct Disorders in Students (TB – ICDS) (Vijayan, 2011)*, *Check-list to Identify Behaviour Disorders in Students by the Teachers (Arunachalam, 2004)*, *Child Behaviour Checklist and Teacher Report Form (Achenbach, 1991)*, *Child Behaviour Inventory (Eyberg, 1992)*, *Student Behaviour Inventory (Sutter-Eyberg, 1992)*, *Self Report Delinquency Scale (Eliot et al., 1985)*, *Behaviour Observation System (McMohan and Estes, 1997)*, *Behavioural Coding System (Forehand et al., 1980)*, *Personal Process Code (Rugby et al., 1991)*, *Parent Daily Report (Chamberlain and Reid, 1987)*, *Child Depression Inventory (Kovacs, 1992)*, *Child Depression Scales (Reynolds, 1989)*, *Peer Nomination Inventory of Depression (Lefkowitz and Tesiny 1980)*, *Behavioural Avoidance Tests (Hamilton and King, 1991)*, *Manifest Anxiety Scale (Reynolds and Richmond, 1985)* and *Child Behaviour Profile (Achenbach, 1978)* are in use. The above discussion clearly reveals that a good number of research tools / inventories have been developed and are in use to identify the behaviour disorders in children and adolescents. It is also observed that most of these tools are developed and used in Western world.

Role of Teachers in Overcoming Behaviour Disorders in Students

Grosenick (1981) and *Huntze and Grosenick (1980)* viewed that teachers, obviously are not the only professional group concerned with behaviourally disordered youngsters. Out of all professionals concerned with children and adolescents with behaviour disorders, the regular classroom teachers are often the first professionals to suspect the possibility of a behaviour disorder. They are in a position to know the pupil's individual needs, adapt their instruction to those needs and draw on the assistance of other professionals in order to minimize or reverse the course of some behaviour disorder. They must also know when additional services are need in pupils' best interests and insist that the pupil receive them. Some of the roles of the teachers in overcoming behaviour disorder in students are: (*Douglus et al., 1983*) Provide various services in different setting and service arrangements, Suggest and demonstrate special instructional methods or materials and arrange further resources from within the school or another professional agency, Meet pupils regularly and teach academic, social, or other skills and give other assistance that may help them remain in the regular class, Provide a modified learning environment for most or all, of the school day to a group of pupils with behaviour and learning disorders, Also serve in residential institutions in which behaviourally disordered children and adolescents can be found such as in detention centres, mental hospital and psychiatric wards of medical centres. They may temporarily provide homebound instruction in some cases. Often a teacher must perform several of the just-described roles each day. The educational administrators, through their actions with respect to allocation of money and personal, selection and professional development of teachers, integration of school and other services and in other ways, indirectly but critically affect education for the behaviourally disordered. University and college educators are primarily responsible for preparing teachers in special education both directly such as pre service, in-service courses and workshops and indirectly such as journals, book publications, consultation to schools, conference participations, advocacy to government and community agencies.

Knowledge and Skills Required For Teachers to Overcome Behaviour Disorders in Students

While the printed book performs some functions of the teacher, the teacher does not feel threatened by its presence, the teacher knows that the book cannot not replace him, it could only supplement what he does providing more information and storing information for future reference. The skills required for teachers to overcome behavioural disorders in students are:

Knowledge about behavioural disorders (cognitive skill), Understand the concept and meaning of behavioural disorders. (Affective skill), Have a skill to identify and assess the behaviour disorders in students, Perform properly in respect of nature of behaviour disorders in students, Explore or analyze the various behavioural disorders in students, application of suitable behavioural intervention strategies to overcome behaviour disorders in students, consequences or products of results after application of acquired skill. The above said required knowledge and skills of teachers under cognitive, affective performance, exploratory or expressive and consequence or product competencies of *Taxonomy of Teaching Skills (1973)*.

The teachers are called the second parent of students. Therefore, the teacher should have knowledge and skills in identification, assessment and treatment of behaviour disorders in students. By virtue of the nature of his / her job, the teacher is spending more time with students in classroom and he / she is able to identify or suspect behaviour disorders in students.

The teacher must acquire knowledge and skills regarding behaviour disorders' concept, meaning and nature of behaviour disorders, classification of behaviour disorders in children and adolescents, biological and psycho-social factors associated with behaviour disorders, available formal and informal identification and scientific assessment procedures, and intervention strategies / therapies / treatment methods to overcome behaviour disorders in students. This knowledge and skills are helpful to the teacher to identify and guide the students properly to overcome such disorders.

A boy or girl who deviates from his / her normal or standard classroom behaviour and makes him / her discomfort with self or others, unable to cope up with regular classroom activities and their peers, keep alone or aloof and this passiveness leads to behaviour disorders. In this situation, the proper knowledge of the teacher on behaviour disorders helps him / her to identify the affected students and guide them properly for improvement. The acquired skills of teachers on behaviour disorders in students help them to identify and assess the behaviour disorders in students. This type of knowledge and skills on behaviour disorders in students on the part of teacher helps them to co-ordinate with parents of behaviour-disordered students, and guide them properly for appropriate treatment or remediation. In this respect, it is worth to mention that the skills acquired by the teacher help him in many times to find remediation by themselves without referring to the other professional. Of course, if the disorders are severe he/she has to seek the expertise or help from psychiatrists or medical professionals. If a child or

an adolescent is identified and treated in early stage it can be easily curable. This is only possible if there is a co-operation and co-ordination among teachers, parents and students. The students with behaviour disorders should be treated in a proper time, in a proper way, for securing life.

Mode of Developing Knowledge and Skills on Behaviour Disorders in Students

Buch (1974) considers teaching as “a process aiming at bringing out change in pupil”. So teaching simply can be viewed as behaviour modification. **Cooper and Weber (1972)** states “the competencies to be acquired by the students and the criteria to be applied in assessing the competency of the student are made explicit and the student is held accountable for meeting these criteria. They may be pattern to knowledge, performance or product”. The Taxonomy of Teaching Skill (1973) is classified into: cognitive skill, affective skill, performance skill, consequence or product skill and exploratory or expressive skill. All these competencies are essential for a competent and good teacher to develop students with characteristics. The behaviour disorders in students hamper the development of the individual, society and nation as a whole. Hence there is an immense need to promote knowledge and skills on behaviour disorders of students among teachers through suitable teaching learning strategies.

The different methods that are used in teacher training programmes to provide adequate knowledge and skills to teacher trainees are group methods and individual methods. Group methods include: lecture method, micro teaching, project method, seminars, symposiums, panel discussions, role plays, games, puzzles, probing, group discussions and group oriented media packages. Individual methods include – assignment, individual project work, programmed learning, teacher guided modules, self- instructional modules and self oriented media packages. Each method has its advantages and disadvantages. It is up to the teacher educator to select. Depending upon the need, nature of content and situation, the teacher educator can use any one of the methods or combination of methods to make learning more meaningful.

Need and Importance of Development of Self Instructional Modules on Behaviour Disorders

For the development of knowledge and skills on behaviour disorders in students for teacher trainees, the instructional strategy should be very effective and suitable one. The instructional strategy refers to the application of appropriate psychological principles or definite methods and techniques in the instructional objectives in the best possible manner at the lowest possible cost. In instructional strategy, there are various approaches, methods, techniques and

models to impart instruction to the teacher trainees. Though there are various instructional strategies available, the modular instructions are found to be more feasible and profitable.

Modular instruction is self-contained, self-learning and self-explanatory in nature. In teacher preparation, the concept of behaviour disorders is included here and there in the core methodology. It is not wholistically covering the concept, meaning, importance, causes, characteristics, associated factors, identification and assessment and treatment of behaviour disorders in children and adolescents. It is not possible to include the concept of behaviour disorders in the existing curriculum since it is already overloaded. Realizing the need and situation in the present context, we cannot simply ignore or omit the concept of behaviour disorders in teacher education.

Alternatively one has to look into the possible ways and means of providing such knowledge and skills to the in and pre service teachers are essential. In this context, it is worth to think about the development and use of self instructional modules on behaviour disorders in students. The in and pre service teachers can master such self instructional modules at their own time and pace. Once these self instructional modules are standardized and validated, that can be widely used in different teacher training colleges and made this as a part of curriculum.

Modular Instruction

Module is a self-contained instructional material. This approach provides an opportunity for the teacher and the taught to mutually share the responsibility in learning. A module is said to be self-contained because everything is self-explanatory in a module. It is also a self instructional package and learner friendly. Modular approach combines various self-learning techniques. It aims at mastery of learning. It incorporates a lot of activities that ensure active learning. The objectives are made clear and the concept can be well explained in a module. In every stage, the content learned is recapitalized and self-assessment exercise is given. At the end, a test is made based on the objectives. The students take this test and evaluate their attainment. Module will help the learners in following ways: It develops learning autonomy in a learner because it is an auto learning material. It ensures achievement of an expected standard. It provides remedial instruction. The embedded tests and the objective-by-objective movements help the learner to classify things. Learning packages, uni-packs, learning activity packages, etc. are some of the names used for a strategy useful for self-learning.

Elements of Module: A learning module has the following elements. A title or topic designation, a list of major concept to be learnt, the rationale for studying the module, a pre-assessment activity, objectives stated in behavioural term, guidelines for learner / preparation, a detailed learning sequence and suggested depth or quest activities a post assessment study. In order to maximize learning, suitable instructional materials in the form of modules may be developed. These modules should be validated before execution. Instructional modules are extensively used in different situations for efficient learning. The different components of an instructional module are:

- Instructions
- Entry test
- Pre test
- Objectives
- Study materials
- Post test

The special features of a module are: validated tested material, mass produced for use in institutions for learning different subjects, participants or learner explicit and specially suited for individual self-learning. Modular approach plays a prominent role in the present day teaching learning process. They not only supplement the teacher but also enrich the content. They also provide a unique experience to the learner in the presentation of the content. The modular instruction makes the learning more effective particularly the individual and group learning under teacher educator and trainees interaction. It provides opportunities for teacher educator and trainees to work together in small groups to discuss, to question, to report, to evaluate or to engage in other forms of personalized instruction outside the classroom experience. They bring forth better progress and developments in teacher education. Even the below average trainees can have conceptual clarity in teacher education programme by using self instructional modules because the trainees can learn the concepts at their own time and pace.

Self instructional module is self-contained, auto instructional and self instructional materials. It means everything is self-explanatory. The learner can take his own time, convenient to complete the self instructional module. The teacher's intervention during the learning of the self instructional module is not required and the teacher is acting as a facilitator whenever doubts / clarification raised during learning.

The self instructional modular approach has the following advantages from the in and pre service teachers point of view. It supplements the instructions of the in and pre service teachers. The in and pre service teachers are involved in the learning process and their commitment to task is increased. It creates interest among in and pre service teachers, as it is a novel experiment. The in and pre service teachers have full control over the rate of study and they can progress at their own pace. The consequences of failure are reduced. Each in and pre service teachers can master each module completely before proceeding to the next. Each teacher trainee can participate in the decision whether he/she has learned the subject matter adequately. They can be used for auto learning at home. Thus it can cater to individual differences. Each in and pre service teachers can develop a sense of responsibility for his own learning. Below average in and pre service teachers need more revision, repetition and practice that are not possible with a living teacher educator. But this can be easily provided in this mode of instruction. It may be practical for some modules to be checked-out as a study at home resulting in saving the time.

Need and Importance of the Study

When students behave in such ways that create discomfort or hindrance or problems for themselves or others, they are said to show behaviour disorders. In our late twentieth century society, the vast majority of children and adolescents with behaviour disorders are / will be the pupils (***Douglas et al. 1983***). Regular classroom teachers are often the first professionals to suspect possibility of a behaviour disorders. They are in a position to know the students' need, and to adapt their instruction to those needs. Therefore, teachers should get appropriate teacher education from promise to reality by those who are prepared, by virtue of skills and knowledge, to serve pupils with behaviour disorders. The purpose of the teacher education is to prepare effective teachers who will be able to face many challenges, emanating from expanding horizons of knowledge as well as other forces impinging upon the consciousness of the pupils to quote from the document on ***The National Education Policy (1986)***. The teachers should develop favourable attitude and adequate interests which will enable them to foster all round development of the learners under their care and to offer educational counselling and guidance to individual learners.

In a developing country like India, to minimize the behavioural problems in students, the teachers are the only source than any other professional consultants such as psychiatric doctors, special educators, trained counsellors etc., but it is not possible to imbibe the knowledge and

skills about behaviour disorders in students to the existing / working teachers. The only possibility is to inculcate the knowledge and skills about behaviour disorders in students in teacher education. The teacher trainees, i.e. the future teachers of our society must be provided with adequate knowledge and skills about behaviour disorder in students through B.Ed. teacher training programmes.

National Council for Teacher Education (NCTE, 2000) also stated, “no proper classification of behaviour disorders in students existed and intervention strategies to minimize behaviour disorders in students at schools were totally in absence”. Hence there is an immense need to inculcate knowledge and skills about behaviour disorders in students at B.Ed. teacher training level, in addition to their regular curriculum. As the regular curriculum is already overloaded, the alternative ways and means of providing this sort of knowledge to B.Ed. teacher trainees must be explored.

One such ways and means is the development of self instructional modules on various aspects of behaviour disorders in students. These self instructional modules must give scope for self-learning, that involves reflecting, reviewing, evaluating and monitoring one’s own progress according to his/her time, convenience and pace. Such an attempt facilitates the B.Ed. teacher trainees to master the required knowledge and skills, needed to deal with the students having behavioural disorders. Whenever the in and pre service teachers feel difficult with any of the concepts, the psychology teacher can assist them during the course of study. This is a more feasible way of doing the things in the present environment of in and pre service teachers course, considering the time and resources available, both human and material.

The present teacher education is having the following curriculum worldwide: nature and growth of children, philosophical and sociological foundations of education, curriculum development, school management and respective optional and language teaching. As already mentioned, in the core paper ‘Nature and growth of children’, the behaviour disorders in students are covered here and there . This is not sufficient and adequate for teacher trainees if we look at the extent of population experiencing behaviour disorders at school level. At the same time it is not possible to incorporate the components of behaviour disorders in students in the content of the existing curriculum since it is already overloaded.

Hence, there is a need for the development and use of self-learning modules for equipping the in and pre service teachers on behaviour disorders in students, in addition to their

regular classroom teaching. The self instructional modules are more convenient to in and pre service teachers and learning is done in their own pace, time and need. Whenever the in and pre service teachers require clarification, the guide teacher will assist him / her.

The development of self instructional modules are made covering their nature, characteristics, factors associated with behaviour disorders, identification and assessment, strategies to overcome behaviour disorders in students which is the need of the hour. Such validated and tested self instructional modules are of much use to promote better knowledge, attitudes and skills in pre and in service teachers. Attempts of such planned activities promote the efficiency of the in and pre service teachers to deal students with behaviour disorders at school level. The present investigation is an attempt in this direction.

The present study is an attempt to develop the self instructional modules on ADHD, ODD and DD for teacher trainees

Objectives of the Study

- ✓ To develop the self instructional modules for in and pre service teachers on certain areas of behaviour disorders- attention deficit hyperactivity, oppositional defiant and disruptive disorders in students
- ✓ To validate the developed self instructional modules for in and pre service teachers on certain areas of behaviour disorders- attention deficit hyperactivity disorder, oppositional defiant and disruptive in students

Development of Self Instructional Modules on Behaviour Disorders for in and pre service teachers

The major objective of this study is to prepare the self instructional modules on behaviour disorders in students for B.Ed. teacher trainees. The research works of ***Reddy and Ramar (1997), Reddy and Janakkumar (1997 & 1997a), Russell et al. (1981), Ramar (1996), Subramania Pillai (1991), Arunachalam (2004), Arunachalam and Gopal (2010)*** indicated that modules were more useful for self-learning.

In each self instructional module, at its first page the overview of the module, which specified the unit, the conceptual sub-units and the pattern of the self instructional modules were presented. In the succeeding page, instruction was given to the trainees as to how to use for self-learning. The third page contains the entry test consisting of objective type test items to assess the preliminary knowledge or the entering levels of competencies of the trainees required for

learning the module. If a trainee fails to obtain the prescribed minimum level of competence or achievement i.e. five scores out of ten, he / she may not understand the module and he / she should go for remedial mini course or prior module to strengthen his entering level of competency. When he / she believes that he/she was ready to take the entry test again, he / she may allowed to take the test and may be further allowed to proceed to the pre test, if found competent enough. Then comes the pre test, which was again an objective type test. It helps to self-evaluate the trainee's status when he / she proceed with the module. It was followed by the introduction of the topic. General and specific objectives were delineated in behaviour terms. Then, learning materials for objective 1,2,3, etc., were presented. Necessary pictures, case histories, examples, etc., were included in the materials suitably.

Since module is a self instructional package, there is a greater need for formative evaluation, to measure the process and guide the content and pace of the lessons. *Slavin (1987)* viewed that formative evaluation is done to discover the strength and weakness in learning to make midcourse corrections in pace or content of instruction. In the modules, provision was made for formative evaluation in the form of embedded test. These tests are useful to the degree that it was informative, closely tied to the curriculum being taught, timely and frequently. Also, they provide feedback to the students that they can use to improve their learning.

After all the learning materials were presented, a post-test was given. This was also of objective type in nature. It was used to make summative evaluation of the students' knowledge or skills. It allows for comparison among trainees. Necessary and further references were also furnished in the modules. Finally, keys to entry test, pre-test, embedded test and post-test were appended at the end in each module.

The above provisions enable the trainees to self-study with the help of the modules. The modules thus developed were keenly edited with reference to the accuracy and relevance of the material, style, vocabulary, density of presenting the facts and content interest. This scanning was very useful to eliminate ambiguities, obscurities and other inadequacies. It also helped to improve the logical sequence of the presentation and also to improve the technical accuracy of the content presented for proper editing of the modules. The services of the colleagues and subject experts in the field of education, special education, psychology and psychiatry were utilised.

Once the editing was over, the modules were presented for tryouts. Try-out is an essential process of validation and tryout helps in refining the modules and makes it relevant to the target population. So the modules developed for this study were subjected to individual as well as group tryouts. In the individual try-out, the investigator sat face to face with the randomly selected individuals of the target teacher trainees one at a time. This gave him an opportunity to study the reactions of the learner in respect to the materials presented. He noted down the time taken for reading and understanding, clarifications asked, remarks made, and the pre-test and the post-test scores were also noted down. On the basis of these ratings and analysis of the tryout, necessary corrections, modifications, refinements etc., were made then and there itself. Thus, after completion of twelve individual tryouts, the material becomes better refined.

After this, the developed modules were subjected to a group tryout. The group contained trainees of the same population. Separate answer sheets were provided for writing the answers to the pre-test and post-test items. Sufficient time was given for the trainees to use the module and answer the questions, congenial atmosphere was created and proper rapport was established, since these were the requirement of any group tryout. The trainees were instructed about the nature of this auto instructional material and what is expected of them along with the purpose of this try-out. The reactions of trainees during the tryout were noted down. Answer sheets of trainees were finally evaluated for finding out the percentage of incorrect responses and their level of mastery achievement. On the basis of these ratings and analysis of the tryout, required corrections, modifications, refinements, etc., were made wherever necessary. Both the tryouts ensured better refinement and perfection of modules.

Validity of the Self Instructional Modules

Validity indicated how adequately the content of the test is sampling that domain about which inferences are to be made. The self instructional modules for in and pre service teachers to overcome behaviour disorders possess content validity and face validity. Content Validity- A logical examination of content and presentation of the self instructional modules was done by the panel of experts from Education, Special Education, Psychology, Social Work, and Medicine. Their suggestions were incorporated to enhance the content and quality of the self instructional modules. In view of the changes made in the language, content, coverage, format, etc., it can be said that the self instructional modules used in this study possess content validity. Face Validity- Face validity refers to the way the self instructional modules looks to the examiners, module

administrators, educators, psychologists, social work experts, etc., and the like. The investigator assumed that, the self instructional module used in the study possesses face validity, by the opinion of the experts who are familiar with the development and use of the self instructional modules.

The specimen copy of the developed and validated self instructional modules on attention deficit hyperactivity disorder, oppositional defiant and disruptive in students are appended separately.

Conclusion

Marcus Tullius Cicero said what nobler employment, or more valuable to the state, than that of the man who instructs the rising generation. Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is the most important (**Bill Gates**). Hence it is the occasion for teachers to determine themselves to deal with normal as well as special children in an inclusive setting of a class room. In turn it is the response of the teacher educators to nurture required competent skills to in and pre service teachers. Tuning to this learning autonomy is to be ensured in the teaching learning process when ever optimum output is required. Considering all the present attempt has been made by the researcher and developed self instructional modules for in and pre service teachers to overcome behavior disorders in students with proper validations. It is suggested the forthcoming researchers may taken these modules in field experimentation for knowing the effectiveness.

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Developed and Validated Modules
Module: A novel way of Self Learning

This book written in the form of a module aims to provide the necessary information and guidance to the parents, teachers and all those involved in the education of children with behavioral disorders. It is presented in the form of a module since module is a self contained, suitably tested, auto instructional material which provides a strategy for the teacher and the learner to mutually share the responsibility for learning. The teacher becomes a facilitator of learning, rather than the traditional way. It is self contained in the sense that everything is self explanatory. It is a self instructional package because each module has a set objectives and it fulfils in developing the expected skills in the learner. Since it is an individualized instructional material, the learner can take his own time to complete the material. It is not time but achievement that is the criterion in a module. In addition it will help a learner to develop learning autonomy, ensure achievement of an expected standard, provide remedial instruction and the embedded tests and objectives help the learner to classify things. This module has been prepared incorporating the elements like a title or topic designation, a list of major concepts to be learnt , the rationale for studying the module, a pre- assessment activity, objectives, guidelines, learning sequence and assessment activities. This book includes the main components essential for an Instructional Module like entry test, pre test, objectives, Introduction, Development of learning material for objectives embedded test, Summary/Conclusion, Case study, Post test, Key to questions, References and Projects/Guidelines for further action.

The following are the special features of this module:

1. Validated/tested material
2. Mass produced for use in Institutions/for learning different subjects
3. Participation of learner explicit
4. Specially suited for individual's self learning

The first page depicts the main unit and the single conceptual sub unit covered in the module. It also reflects the components of the learning modules, i.e. development or construction pattern of the module. The second page gives necessary instruction as to how to use the module. This is followed by an entry test which consists of objective type items on the preliminary knowledge required for learning the module. If the learner fails to attain minimum level achievement, he/she may not understand the module and so he should not go through the learning module unless his entering behavior is strengthened. The pre-test follows the entry test. The pre-test is also an objective type test, which helps to self evaluate the student's status when he proceeds with the module. It is followed by introduction of the topic. General objectives and specific objectives are listed out. Then the relevant learning materials will be presented for the objectives stated. Immediately after the presentation of the subject for each objective, it is suitably recapitulated. Provision is made for formative evaluation in the course of the module in the form of an embedded test. After all the learning materials are presented, a post-test is given. This post-test is also of objective type but the items are different from that of the pre-test.

This learning module was subjected to critical appraisal of both structure and content. Critical appraisal was done in the following seven areas:

1. Objectives
2. Subject matter
3. Design characteristics
4. Learning activities
5. Adaptability
6. Validity, and
7. Evaluation.

MODULE – I**A LEARNING MODULE ON THE ATTENTION DEFICIT HYPERACTIVITY DISORDER IN STUDENTS****ENTRY TEST**

The learner is expected to take the entry test. Each correct answer carries one score. Only if the trainee scores a minimum of five scores, he / she can go through the learning module. Otherwise, he / she have to read and equip him / her by reading the previous module before continuing this module. Responses may be entered on a separate sheet and be scored separately as per keys given:

1. 'Attention' means action of
 - a) Viewing
 - b) Emotion
 - c) Controlling Feelings
 - d) apply one's mind to a subject or thing
2. Hyperactivity is behaviour of being
 - a) Non-cooperative
 - b) Excessive motor activity
 - c) Irresponsible
 - d) Irritable
3. 'Impulsivity' refers to
 - a) Non-cooperative behaviour
 - b) Action without thinking
 - c) Irresponsible behaviour
 - d) Irritable behaviour
4. 'Fidgety' is related to behaviour involving
 - a) Showing craziness
 - b) Showing unhappiness
 - c) Showing laziness
 - d) Showing impatience
5. 'Squirm' is related to behaviour involving
 - a) Floating the body
 - b) Twisting the body
 - c) Fully covering the body
 - d) none of the three
6. Wiggle is related to behaviour involving
 - a) Rapid movement
 - b) Keeping still
 - c) Slower movement
 - d) none of the three
7. Brain dysfunction is due to
 - a) Family stagnation
 - b) Peer stagnation
 - c) Brain stagnation
 - d) none of the three
8. Parental malaise is a condition of
 - a) Divorce between parents
 - b) Uneasiness between parents
 - c) Quarrel between parents
 - d) none of the three
9. Reinforcement refers to
 - a) Weakening
 - b) Strengthening and weakening
 - c) Strengthening
 - d) none of the three
10. 'Counselling' is
 - a) Advising
 - b) Dictating
 - c) Threatening
 - d) none of the three

Background information

Attention deficit hyperactivity disorder is a pattern of inattention or hyperactivity, impulsivity that is more frequent and severe. This causes impairment in children and may manifest in academic, occupational or social situations. Such children may make careless mistakes in school work or other tasks. They have difficulties in organising task and activities. Hyperactivity may be manifested by fidgetiness or squirming, by excessive running in situation where it is inappropriate. Impulsivity which refers to inhibitive behaviour may manifest as impatient behaviour or cause difficulty in delaying responses. Fidgeting refers to that behaviour that exhibit unhappiness. Squirming and wiggling refers to twisting of the body and showing fast movements. The causes of ADHD may be biological and psychosocial. In the biological sense it may be due to brain dysfunction where there is damage in the frontal lobe of the brain. In the Psychosocial aspect, Children with ADHD may have mothers who are negative,

quarrelsome and unrewarding. Even parental malaise where there is uneasiness between parents may also be a contributing factor.

PRE-TEST

Below are given multiple choice and true or false items on the attention deficit hyperactivity disorder. The learner is expected to take the pre test before he / she reads the module. Each item carries one mark for correct answer. Scoring key is given at the end of module. After the pre test is taken, score the responses and find out your score in the pre test.

1. Students with behaviour disorder never sit still and listen continuously in the classroom. True / False
2. Watching television while studying at home is leading to
 - a) Tension
 - b) Happiness
 - c) Inattention
 - d) Sadness
3. Attention deficit hyperactivity disorder is also said to be
 - a) Defect of moral control
 - b) Defect of economic control
 - c) Defect of desire control
 - d) None of the three
4. Fidgety and Squirm are the characteristics of
 - a) Hyperactivity
 - b) Obsession
 - c) Impulsivity
 - d) None of the three
5. Heedlessly engaged in dangerous activities is called
 - a) Conduct disorder
 - b) Impulsivity disorder
 - c) Hyperactivity disorder
 - d) None of the three
6. Children with attention deficit hyperactivity keep friends always
 - a) Positively
 - b) Negatively
 - c) Neutrally
 - d) None of the three
7. Attention deficit hyperactivity co-exists with conduct disorders. True / False
8. Low weight at birth causes hyperactivity / impulsivity. True / False
9. Semi structured interview is the appropriate technique for assessing attention deficit hyperactivity in students. True / False
10. The execution of behavioural intervention should not be in child's natural environment. True / False

Objectives of the Modules

1. To enable the learner to understand the concept, meaning and definition of Attention deficit hyperactivity disorder (ADHD).
2. To help the learner to understand the characteristics of students with attention deficit hyperactivity disorder.
3. To enable the learner to know the factors associated with attention deficit hyperactivity in students.
4. To enable the learner to understand the identification and assessment of students with attention deficit hyperactivity.
5. To enable the learner to know the strategies to overcome attention deficit hyperactivity in students.

Specific Instructional Objectives

On completion of this module the learner will be able to :

1. Understand the concept, meaning and definition of attention deficit hyperactivity in students.
2. Know the characteristics of students with attention deficit hyperactivity.
3. Know the factors associated with attention deficit hyperactivity in students.
4. Understand the identification and assessment of students with attention deficit hyperactivity.
5. Know the strategies to overcome attention deficit hyperactivity in students.

Learning Material for Objective - 1**CONCEPT, MEANING AND DEFINITIONS OF ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)**

He never sits still; he's always at something.

She doesn't pay attention to what I say.

He doesn't think before he acts.

In school, she's up and out of her seat in a flash.

He's not doing well in school and is behind his peers.

These kinds of concern voiced by parents and teachers are the main problems for children who receive the diagnosis of attention deficit hyperactivity disorder (ADHD). Most of the public have at least a passing knowledge of the disorder referred to as 'attention deficit disorder' or 'hyperactivity'.

Early conceptualization emphasised the over activity or motor restlessness of the children, and the terms 'hyperkinesias', 'hyper kinetic reaction' and 'hyper kinetic syndrome' were variously applied (Berkley, 1989): Today we are inclined to use the term 'hyperactivity' to refer to excessive motor activity. Attention deficit hyperactivity could be different mixes of inattention, hyperactivity and impulsivity. That is attention deficit hyperactivity is viewed as uni-dimensional and included brain damage, minimal brain damage and to a lesser extent, environmental influences.

Classification of Attention Deficit Hyperactivity

Attention deficit hyperactivity disorder is caused by two factors namely inattention and hyperactivity / impulsivity (DSM-IV, 1994). These two factors consist of three subtypes: predominantly inattentive, predominantly hyperactivity / impulsive and a combined type. Diagnosis of Attention deficit hyperactivity demands onset before age seven and display symptoms for at least six months.

Some children appear pervasively inattentive, hyperactive and impulsive with parents, teachers, or peers and others, appear to be in disturbed behaviour only in one setting and are said to show situational attention deficit hyperactivity.

Inattention

Parents and teachers report that the children, compared with most of their peers skip rapidly from one activity to another, do not pay attention to what is said to them, are easily distracted, do not concentrate, do not stick to a task, and are engaged in day dream or lose things. Such poor cognitive performance could be due to inattention or lack of motivation.

Early studies indicate that the introduction of irrelevant stimuli does distract children with attention deficit hyperactivity (Leung and Connolly, 1996). Distraction also occurs likely when the tasks are boring, distasteful or difficult. Deficit in sustained attention would lead to worsening of performance as the length of the task increases.

Hyperactivity and Impulsivity**a) Hyperactivity**

Children with attention deficit hyperactivity often are described as always on the run, restless, fidgety and unable to sit still. These children squirm, wiggle, tap their fingers and elbow their classmates (Greenhill 1991: Whalen, 1989). Hyperactivity children appear to have difficulty in regulating their actions according to the wishes of others or to the demands of the particular situation. Hyperactivity means, the quality of the motion often seems different from ordinary activity being excessively energetic, haphazard, disorganised and lacking in goals.

b) Impulsivity

The essence of impulsivity is a deficiency in inhibiting behaviour, which appears to be 'action without thinking'. In short, there is an inability to hold back, inhibit and control behaviour. This kind of behaviour in the child is described as careless, irresponsible, immature, lazy or rude (Barkley, 1998).

Embedded Test - (i)

1. "Ram doesn't pay attention to what I say", is the problem with _____.
2. Attention deficit hyperactivity is related to _____, _____ and _____.
3. The three subtypes of attention deficit hyperactivity are _____, _____ and _____.
4. 'Defect in moral control' is the problem of _____.
5. Distracted children with attention deficit hyperactivity is said to be _____.
6. Quality of the motion often seems to be different is called _____.
7. 'Acting without thinking' is called _____.
8. 'Hyperkinesias', 'Hyperkinetic Reaction' and 'Hyperkinetic Syndrome' are referred to _____.
9. Hyperactivity is also called _____.

10. "The introduction of irrelevant stimuli does distract children with attention deficit hyperactivity" says _____.
11. The characteristics of impulsivity are _____ and _____.

Learning Material for Objective – 2

CHARACTERISTICS OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

The characteristics of attention deficit hyperactivity disorder are presented in three categories such as: Inattention, Hyperactivity and Impulsivity.

A. Characteristics of Students with Inattention

The students with Inattention:

- Fail to attend to default or make careless mistakes in schoolwork or other activities
- Have difficulty in sustaining attention
- Do not seem to listen when spoken to them
- Do not follow the instructions or duties
- Avoid and dislike task requiring sustained mental effort
- Often lose things necessarily for tasks or activities
- Are distracted by external stimuli
- Are forgetful in daily activities
- Skip rapidly from one activity to another
- Do not concentrate
- Do not stick on to a task
- Engage in daydream
- Do not pay attention to what is said to them.

B. Characteristics of Students with Hyperactivity

- Fidgeting with hands or feet or squirms
- Leaving seat inappropriately
- Running about or climbing inappropriately
- Having difficulty playing quietly or in quiet activities
- Often 'on the go' as if 'driven by a motor'
- Talking instantly
- Being restless, unable to sit still, as always on the run
- Being wiggle, minor mishap
- Tapping their fingers, and elbowing their friends
- Spilling drinks and knocking over objects

C. Characteristics of Students with Impulsivity

- Blurting out answers before questions completed
- Having difficulty in awaiting turn
- Interrupting or intruding on others
- Jumping in and trying to solve a problem before figuring out first step
- Heedlessly engaging in dangerous activities
- Cutting in line in front of others, or taking short cuts when performing tasks
- Using hurtful verbalizations, carelessness, irresponsible, immature, lazy and rude

Embedded Test (ii)

1. 'Often losing things' is one of the characteristics of _____.
2. The characteristics of attention deficit hyperactivity are classified into _____, _____ and _____.
3. Minor mishaps of children are the characteristic of _____.
4. Irresponsible and immature behaviour are the characteristics of _____.
5. Skipping rapidly from one activity to another happens because of _____.
6. Students do not concentrate is the problem of inattention True / False
7. Climbing inappropriately is the characteristic feature of impulsivity True / False
8. Heedlessly engaging in dangerous activity is said to be Impulsivity of a student True / False

Learning Material for Objective - 3

FACTORS ASSOCIATED WITH ATTENTION DEFICIT HYPERACTIVITY IN STUDENTS

In addition to the core characteristics of attention deficit hyperactivity, students are reported to experience more in diverse areas of factors. They are: Intelligence, learning disabilities, academic problems, social and conduct problems, accidents and injury, motivational deficits, deficits in self-regulation, inhibition and co-occurring disorders.

1. Intelligence and Learning Disabilities: Children with Attention deficit hyperactivity perform slightly lower on general intelligence (Barkley, 1998). Intellectual impairment has been linked to hyperactivity in children (Sonuga-Barke, 1994).

2. Academic Problems: Academic failure is striking among students with Attention deficit hyperactivity. Children with Attention deficit hyperactivity often do not appear to achieve what they seem capable of learning (Barkley 1998a).

3. Social and Conduct Problems: Children with attention deficit hyperactivity have high social impact. They are talkative and socially busy. They tend to be louder, faster and forceful than peers. Their behaviour is often bothersome, intractable, disruptive, non-compliant and disagreeable. Children with attention deficit hyperactivity too often get into 'trouble' and disrupt the normal flow of social interaction.

a) Peers and Teachers: Children with attention deficit hyperactivity are trouble making in keeping friends and are often judged negatively. They tend to dislike and reject them.

b) Family Relationships: The children suffer from attention deficit hyperactivity whenever their mothers are particularly negative, quarrelsome and unrewarding, especially with sons. There is also good evidence for attention deficit hyperactivity in children due to the following: (Berkley, 1998a, Hetchman, 1991)

1. Negative mother-child interaction in child's pre-school years.
2. Conflicts are strongly associated with the child being oppositional.
3. Negative interactions with older children, become reciprocal.
4. Father-child interactions are less problematic but still affected.
5. Sibling-child interactions are in high conflict.

4. Accidents and Injury: Children with attention deficit hyperactivity suffer more accidental injury compared with normal children.

5. Motivational Deficits: Due to lack of motivational deficits the students expressed disappointment when performed poorly and often corrected them selves when the task allowed for correction.

6. Deficits in Self-Regulation and Inhibition: Central to Self-regulation is deficits in inhibition, problems in modulating arousal and typical responses to the consequences of behaviour with Attention deficit hyperactivity.

7. Attention deficit hyperactivity and Co-occurring Disorders: Attention deficit hyperactivity co-exists with the following other behavioural disorders:

- a) Learning disabilities
- b) Oppositional defiant disorders
- c) Conduct disorders
- d) Anxiety disorders and Mood disorders

Causes of Attention deficit hyperactivity Disorder

The causes of attention deficit hyperactivity implicates with several variables such as: 1. Biological factors
2. Psychosocial factors

I. Biological Factors: The biological factors that are causing attention deficit hyperactivity are:

a) Brain Damage or Injury and Dysfunction: Damage to the frontal lobe of brain has long been associated with the symptoms found in ADHD. The most consistent and telling abnormally is the smaller than average size of the right frontal area, the caudate nucleus, and globus pallidus of brain (Barkley, 1998; Tannock, 1998). Brain scans show that children with ADHD have decreased blood flow and decreased galucote utilization which are signs of under activity (Sermrud-Clikeman et al., 1994).

b) Genetic Factors: The children or adolescent inherit hyperactivity from their parent or perhaps from some of other relatives (Tanhock, 1998).

c) Pregnancy and Birth Complications:

- Children born premature and with very low weight at birth indicate risk for attention problems and hyperactivity/impulsivity (Sykeys, 1997).
- Prenatal maternal alcohol consumption and tobacco smoking also put children at risk (Streissguth, 1995).

d) Role of Diet in Attention Deficit Hyperactivity

The overall evidence suggests that diet especially sugar intake does not play a strong role in the etiology of attention deficit hyperactivity but may affect a small number of children, most likely those who are intolerant to certain foods (Prinz and Riddle, 1986).

II. Psycho-social Factors

Associated attention deficit hyperactivity behaviours with severe adverse family variables include parental malaise, marital discord, coldness to the child, and criticism of the child (Stevenson, 1989). Family dysfunction, single parenting and urban status – have also been also associated with attention deficit hyperactivity (Mcgee et al., 1991 & Zentall, 1995).

Hyperactivity school-student indicates that their parents are less consistent, more impatient and more authoritarian. Boys with attention deficit hyperactivity with or without antisocial behaviour have mothers with a history of depression and/or anxiety disorders and fathers with a childhood history of attention deficit hyperactivity (Nigg and Hinshaw, 1988)

Embedded Test - (iii)

1. Intellectual _____ is linked to hyperactivity in students.
2. Talkative and being louder are the characteristics associated with attention deficit hyperactivity under the category of _____ and _____.
3. Students with attention deficit hyperactivity tend to _____ and _____ by their peers and teachers.
4. Negative interaction with older child leads to _____ problem.
5. Students with lack of motivational deficits express _____.
6. Attention deficit hyperactivity in students leads to _____, _____, _____ and _____.
7. "Attention deficit hyperactivity often does not appear to achieve what they seem capable of learning" as viewed by _____.
8. Children with attention deficit hyperactivity are keeping friends often _____.
9. Children with attention deficit hyperactivity suffer from other disorders such as _____, _____, _____ and _____.
10. The factors that causes attention deficit hyperactivity are _____ and _____.
11. Pregnancy and childbirth complication comes under _____ variable.
12. Children or adolescent inherit hyperactivity from their _____.
13. _____, _____ and _____ parental practices are causing hyperactivity in children.
14. Boys with attention deficit hyperactivity have mother with _____ disorders.

Learning Material for Objective – 4

IDENTIFICATION AND ASSESSMENT OF STUDENTS WITH ATTENTION DEFICIT HYPERACTIVITY

Identification of attention deficit hyperactivity in students is possible only when the characteristics are exhibited by the students and observed by parents, peers and teachers. Diagnosis of attention deficit hyperactivity demands onset before age seven and the display of characteristics for at least six month. In addition, symptoms must be pervasive that is, occur in at least two settings in home and school.

To identify the characteristics of attention deficit hyperactivity in students, the sound assessment techniques can be used. Whether the purpose of assessment is diagnosis planning for treatment or both, interviews, rating scales and direct observations are major assessment procedures for students with attention deficit hyperactivity.

1. Interviews: Parents are the chief source of information in most cases of attention deficit hyperactivity. Standard structured or semi-structured interviews can be used. Information needs to be obtained about the child and family history, the school and the student's behavioural problems and strengths. Questions are asked about what the child does, how the parents respond, and how often problems occur in situations such as overall interactions-play alone, play with others, meal times, dressing time, washing and bathing, visitors at home, visiting other's home, in public place, while mother is occupied, fathers at home, chores, bed time and other situations.

Teacher interviews are of consequence because next to parents, teachers probably spend most of their time with students and can directly address difficulties in the school setting. The focus is on learning and academic problems and on peer interaction. In addition, information about parent-school interaction and co-operation as well as school services can be obtained.

In direct interview with students of attention deficit hyperactivity, the nature and length of interview should depend on the age and ability of the student. The interview may simply be a time for getting acquainted, establishing rapport and observing child's appearance and behaviour.

2. Rating Scales: Parent and teacher rating scales and checklists which are popular tools for assessing attention deficit hyperactivity can provide much information with relatively little time and effort. The Child Behaviour Check-List (CBCL) is an example of a widely used broadband instrument. Parent and teacher versions are available for several of these instruments and are some self versions useful particularly for adolescents. Many of the rating scales are good in quality, but their appropriateness, reliability and validity must always be examined.

3. Direct Observations: Direct observation can be extremely useful in assessing attention deficit hyperactivity, but it is time-consuming and expensive. Observations have typically focused on interpersonal and school functioning. At home, compliance and stimulus-consequence patterns are important.

4. Other Procedures: Additional assessment methods are often necessary and/or useful among them is the standardised tests of intelligence, academic achievement and adaptive behaviour. Medical examinations such as neurological examination and EEG or brain scan do not usually identify attention deficit hyperactivity, but it can be worthwhile when biological factors are highly suspected.

Embedded Test (iv)

1. Diagnosis of attention deficit hyperactivity demands onset before the age of _____ years.
2. _____ are chief source of information in case of attention deficit hyperactivity.
3. Major assessment procedure for students with attention deficit hyperactivity is _____, _____ and _____.
4. The expansion of CBCL is _____.
5. Direct observation method is extremely useful but it is _____ and _____.
6. Additional assessment methods for assessing students with attention deficit hyperactivity are _____, _____ and _____.
7. _____ Interviews are more consequential next to parental interviews.

Learning Material for Objective - 5

STRATEGIES TO OVERCOME ATTENTION DEFICIT HYPERACTIVITY IN STUDENTS

A variety of treatments have been applied to attention deficit hyperactivity. They include individual counselling, parent training, academic remediation, cognitive therapy, and social skill training and insight therapies. Pharmacotherapy (medicines) and behavioural interventions are treatments of choice.

A. Behavioural Intervention Strategy

Behaviour modification is a technique wherein environmental events are arranged so as to produce a specific change in observable behaviour (Ullmann and Krasner, 1965). ADHD students often exhibit undesirable behaviour and sometimes they lack desirable behaviour. Behaviour modification strategy / intervention should find an important place in the educational programme designed for them. It makes ADHD children to exhibit socially acceptable behaviour. Target behaviour is set and behaviour modification therapy is provided to modify that behaviour. Target behaviour is the behaviour we wish to modify. To properly apply behavioural approaches, it is important to plan and specify contingencies in advance.

Undesirable behaviour should be reduced or eliminated by positive reinforcement of desirable behaviour, shaping, the use of contracts, token reinforcement systems, modelling. All of them are effective depending upon the situation.

Aversion Therapy is used to extinguish the pleasant feelings associated with an undesirable behaviour. This is achieved by repeatedly pairing an unpleasant stimulus with the undesirable behaviour until it eventually elicits an unpleasant response. **Behaviour Therapy** involves emotional responses as well as observable behaviours. It is based on operant condition and is aimed directly at observable behaviours: When the reinforces that maintain undesirable / maladaptive behaviour have been identified, the environment is restructured so that they are no longer reinforced. Undesirable behaviour can be extinguished by removing the reinforces that maintain them. Alternatively, aversive stimuli can be used to punish the behaviours. Making positive reinforcement contingent on voluntary behaviours being performed can increase desirable behaviours. **Punishment** by electric shock has been used to treat self-mutilating behaviour. However, punishment only suppresses an undesirable behaviour that will resurface unless substituted by a behaviour that is reinforced. Punishment also raises ethical issues, particularly when used to treat children. **Behavioural shaping and Token economy** can be used as for positive reinforcement to change the behaviour. This is more effective in eliciting and maintaining desired behaviours. However, they are limited by a lack of generalisation beyond the therapeutic setting. Token economy, for example, can lead 'token learning'. To avoid lack of generalisation, therapists try to work in environments that are as representatives of real life as possible.

Behavioural interventions have been conducted in special settings such as special classrooms or in the clinic. It can be argued that most effective treatments are conducted in the child's natural environment and many behavioural interventions are conducted at home or school or with parents or teachers who are directly involved with the child.

1. Parent Training

Parent training programme is making aware of the causes of defiant behaviour with child and parent characteristics. They are also trained in paying attention to children, increasing compliance and independent play, praising and rewarding ways, anticipating problems, managing in public places improving school behaviour, handling future behaviour problems and booster session and follow-up meeting.

Patterson et al. (1973) applied the behavioural techniques to the treatment of hyperactive behaviour. They developed a treatment package that involved primarily training to the parents of the hyperactive children. Firstly, both parents have to read semi-programmed text explaining the principles of behaviour modification. Parents showed evidence of understanding them by passing a multiple-choice test were they allowed going on to the second stage. It involved project staff teaching, the parents to pinpoint behaviours of concern and to collect appropriate data on them. Once they had successfully collected sufficient data they moved onto stage three.

Third stage involved joining a small parent-training group containing of 4 sets of parents. These groups met weekly and modelling and role-playing procedures were used to teach appropriate techniques. The programmes which parents devised were monitored and any alternations necessary were worked out in collaboration with the professionals. Fourthly, if little or no change was apparent after 10 to 12 weeks home visits were arranged and more intensive analysis of problems were undertaken. On average, each treatment programme lasted about 3 to 4 months. This was discovered that gains made at home did not generalize to the schools. A separate, parallel treatment packages was developed for use in school settings (Patterson, Cobb and Ray, 1972).

2. Classroom Management

School-based behavioural intervention is effective in producing improvement with regard to attention deficit hyperactivity and academic performance; most commonly the teacher administers the intervention. The procedures include token reinforcement, punishment and contingency contracting. Teachers typically receive training and consultation to conduct these programmes.

3. Cognitive-Behavioural Intervention and Self-Regulation

Central to this approach is enhancement of self-control or self-regulation, which would seem a natural target in treating attention deficit hyperactivity disorder. Several techniques such as self-monitoring (individuals learn to observe and record their own behaviours) and self-instruction (children being trained to make statements by themselves to help focus and guide their behaviour on a task) can be employed to enhance self-regulation.

The achievement place project (Clarke and Cornish, 1976) largely concerned with behaviour disordered students. The achievement place is a community-based, family-style, behaviour modification; group home for six to eight disordered students from 12 through 15 years old. The task of training the boys is entrusted to a couple that are specially trained to act as house parents. For good reasons, they are called 'teaching parents'. They live in on the job, 24 hours a day, just like parents. Their job is to make full use of every opportunity to teach appropriate skills to the boys in their care. Since it is a family style unit, there are no outside domestics. All the boys co-operative in domestic chores. There are four main aspects to the achievement place treatment package: motivational system, self-government system, and comprehensive behavioural skill training curriculum and relationship between youths and teaching parents.

B. Pharmacological Treatment

Many pharmacological agents like stimulant, anti depressant and anticonvulsant drugs have been used for ADHD. The most common medication for ADHD are: Stimulants – Ritalin (methylphenidate) Dexedrun (Dextroamphetamine), Cylar (Pemoline) and Adderall (combined Amphetamine and Dextroamphetamine); Antidepressants – Tricyclics (Desitramine & Imipramine) and less used medicines (Anticonvulsants, Anthihypertensives and Antipsychotics).

C. Combined and Multimodal

Pharmacological mediators are effective in bringing about short-term improvements in ADHD. They have their own drawbacks. Similarly, behavioural intervention, through they are successful, pose an intense demand for caretakers. No single approach offers long-term effects or complete in itself. Hence the least thrive is for the combination of the two treatments as well as for multimodal intervention that would include a wider range of therapies.

Embedded Test - (v)

1. Strategies to overcome attention deficit hyperactivity are _____.
2. _____ programme is making the parents aware of the causes of attention deficit

- hyperactivity in children.
3. _____ strategy is improving academic performance of students with Attention deficit hyperactivity.
 4. _____ and _____ strategies can be used to improve self regulation skills in attention deficit hyperactivity students.
 5. Combined and multimodal strategies are the combination of _____ and _____.
 6. Pharmacotherapy means treatment through _____.
 7. Effective treatment can be given to ADHD children in their _____.
 8. By _____ the ADHD children can change their behaviours.
 9. _____ is the technique used to train children to help and guide their behaviours.
 10. _____ developed a treatment package which involves training to parents of aggressive children.
 11. _____ and _____ techniques can be used to teach parents in treatment package training.
 12. The four main aspects of achievement place treatment package _____, _____, _____ and _____.
 13. _____ therapy is used to extinguish the pleasant feelings associates with an undesirable behaviour.
 14. _____ can be used as positive reinforcement to change the undesirable behaviour.
 15. _____ can be used cautiously particularly when it is used to treat children.
 16. _____ Stimulant drug used for treating ADHD in students.
-

POST TEST

1. The subtypes of attention deficit hyperactivity are
 - a) 1
 - b) 3
 - c) 2
 - d) 5
2. Introduction of irrelevant stimuli with Attention deficit hyperactivity causes
 - a) Hyperactivity
 - b) Impulsivity
 - c) Inattention
 - d) Hyperactivity/Impulsivity
3. Pick out the odd characteristic, which is not related to Attention deficit hyperactivity
 - a) Forgetful
 - b) Careless
 - c) Day Dream
 - d) Restless
4. 'Laziness' is the characteristic of
 - a) Impulsivity
 - b) Inattention
 - c) Hyper-activity
 - d) none of the three
5. Factor related to students with attention deficit hyperactivity is
 - a) Mother-Child Negative Interaction
 - b) Father-Child Negative Interaction
 - c) Teacher-Child Negative Interaction
 - d) None of the three
6. The general intelligence of children with Attention deficit hyperactivity is
 - a) Lower
 - b) Slightly Lower
 - c) Good
 - d) Average
7. The Biological factor associated with attention deficit hyperactivity is
 - a) Marital discord
 - b) Migration
 - c) Family Dysfunction
 - d) Brain dysfunction
8. Suitable method for assessing attention deficit hyperactivity problems in students is
 - a) Interviews
 - b) Direct observations
 - c) Rating scales
 - d) Standardised Tests
9. Enhancement of self-control or self-regulation is the strategy is used in
 - a) Cognitive Behavioural Intervention
 - b) Classroom Management
 - c) Parent Training
 - d) Combined and Multimodal Strategy
10. Medical treatment of students with attention deficit hyperactivity is done with the help of
 - a) Rating Scales
 - b) EEG
 - c) Teacher Interview
 - d) None of the three

Books to be referred for further learning

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KEYS TO:**1. ENTRY TEST**

- | | |
|--|----------------------------------|
| 1. d) Apply one's mind to a subject or thing | 2. b) Excessive motor activity |
| 3. b) Action without thinking | 4. b) Showing unhappiness |
| 5. b) Twisting the body | 6. a) Rapid Movement |
| 7. c) Brain Stagnation | 8. b) Uneasiness between parents |
| 9. d) None of the three | 10.a) Advising |

2. PRE TEST

- | | |
|-------------------------------|---------------------|
| 1. True | 2. c) Inattention |
| 3. a) Defect of Moral Control | 4. a) Hyperactivity |
| 5. b) Impulsivity disorder | 6. b) Negatively |
| 7. True | 8. True |
| 9. True | 10. False |

3. EMBEDDED TEST**No. (i)**

- | | |
|---|---|
| 1. Attention deficit hyperactivity | 2. Inattention, Hyperactivity and Impulsivity |
| 3. Inattentive, Hyperactivity/ Impulsivity and combined | 4. ADHD |
| 5. Boring / distasteful | 6. Hyperactivity |
| 7. Impulsivity | 8. Over activity of restlessness |
| 9. Excessive motor activity | 10. Leing and Connolly |
| 11. Careless and Lazy | |

No. (ii)

- | | |
|-------------------------|--|
| 1. Attention | 2. Inattention Hyperactivity and Impulsivity |
| 3. Hyperactivity | 4. Impulsivity |
| 5. Impulsivity disorder | 6. True |
| 7. False | 8. True |

No. (iii)

- | | |
|-----------------------|---|
| 1. Impairment | 2. Social and Conduct Problem |
| 3. Dislike and reject | 4. ADHD |
| 5. Disappointment | 6. Learning disabilities, Academic problems, Conduct problems and Self-regulation |
| 7. Barkers | 8. Negatively |

- | | |
|--|---|
| 9. Learning disability, oppositional disorder, Anxiety disorders and Mood disorder | 10. Biological and Psychosocial Factors |
| 11. Biological factor | 12. Parents and some relatives |
| 13. Less consistent, more impatient and more authoritarian | 14. Depression / Anxiety disorders |

No. (iv)

- | | |
|--|--|
| 1. Seven | 2. Parents |
| 3. Interviews, rating scales and Direct observations | 4. Child behaviour check -list |
| 5. Time-consuming and expensive | 6. Neurological examinations, EEG, Brain scans |
| 7. Teacher | |

No. (v)

- | | |
|--|---|
| 1. Behavioural Intervention and Combined multimodel | 2. Parent Training |
| 3. Classroom management | 4. Self-monitoring and self-instruction |
| 5. Medication and behavioural interventions | 6. Medicines |
| 7. Child's natural environment | 8. Self-monitoring |
| 9. Self-instruction | 10. Patterson et al. |
| 11. Modelling and role playing | |
| 12. Motivational system, self-government system, comprehensive behavioural skill-training curriculum and relationship between youth and the teaching parents | |
| 13. Aversion | 14. Token economy |
| 15. Punishments | 16. Ritalin |

4. POST-TEST

- | | |
|---|--------------------------|
| 1. c) 2 | 2. c) Inattention |
| 3. d) Restless | 4. a) Impulsivity |
| 5. a) Mother-child negative interaction | 6. b) Slightly lower |
| 7. d) Brain dysfunction | 8. b) Direct observation |
| 9. a) Cognitive behavioral intervention | 10. b) Teacher interview |

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MOUDLE – II***A Learning Moudle On Conduct Disorders – Oppositional Defiant Disorders And Disorders In Students*****ENTRY TEST**

The learners are expected to take the entry test. Each correct answer carries one score. Only if the learner scores a minimum of five scores, he/she can go through the learning module. Otherwise, he/she has to read and equip him/himself by reading the previous module before continuing this module. Responses may be entered on a separate sheet and be scored separately as per keys given:

- 1) ‘Show-off behavior’ means
 - a) Pompous Display
 - b) Acting
 - c) Hot tempered
 - c) Swearing
- 2) ‘Aggressive-anti social behavior’ is referred as
 - a) Mood/depressive disorder
 - b) Personality disorder
 - c) Conduct disorder
 - d) Mental retardation
- 3) Aggression is treated as
 - a) Tense behavior
 - b) Timid behavior
 - c) Hostile behavior
 - d) Complex behavior
- 4) Delinquency refers to
 - a) Crime by adults
 - b) Crime by woman
 - c) Minor crime by youngsters
 - d) None of the three
- 5) Vindictiveness is behavior of showing
 - a) Inferiority complex
 - b) Desire for taking revenge
 - c) Superiority complex
 - d) Shyness
- 6) Marital discord is a condition of
 - a) Divorce
 - b) quarrelling between couples
 - c) Loss of parents
 - d) None of the three
- 7) Interview is a
 - a) Teaching method
 - b) Learning method
 - c) Assessment method
 - d) none of the three
- 8) In observation technique a child is
 - a) Carefully and closely watched
 - b) Carefully refused
 - c) Casually watched
 - d) none of the three
- 9) Reform schools is meant for children who are
 - a) Normal
 - b) Handicapped
 - c) Delinquents
 - d) Mentally retarded
- 10) Annoy causes
 - a) Harm to others
 - b) Anger to others
 - c) Harass to others
 - d) None of the three \

Background Information for Module III

We see certain children exhibiting strange persisting behaviour like fighting, lying, stealing, insubordination, bullying others which cause disturbances in their personal and social relationships. These are labelled as conduct disorders. So, in other words Aggressive anti social behaviour is referred to as conduct disorder. It may be exhibited through aggression which is a hostile behaviour and such children may also become delinquents or juvenile where they tend to commits crime. Such children also develop inductiveness which refers to the innate desire to take revenge on others. Frequent parental quarrelling known as marital discord and improper natural setting may be the causes. Such children may be assessed through interviews, observations and effective treatment may be done through cognitive problem solving and skill training.

Pre-Test

Below are given multiple choice and True or False items on Conduct Disorders Oppositional Defiant Disorders and Disruptive Disorders. The teacher trainees are expected in take the pre-test before he/she reads the

module. Each item carried for correct answer. Scoring key is given at the end of module. After the pre-test is taken score the responses find out your scorer in the pre-test.

- 1) Students with non-complaint and antisocial behavior are said to exhibit
 - a) Conduct disorder
 - b) Personality disorder
 - c) Mood disorder
 - d) None of the three
- 2) Causing physical harm to human beings or animals is a symptom of non- aggressive..... conduct disorder. True/False
- 3) Initiating physical fights and bullies become the characteristics of conduct disorders. True/False
- 4) ‘Show-off’ and ‘Temper tantrums’ are the characteristics of
 - a) Aggressive behavior
 - b) Non aggressive behavior
 - c) Delinquent behavior
 - d) Oppositional defiant behavior
- 5) Law violators are known as having possessed a distinct physic at birth. True/False
- 6) Financial problems may not lead to conduct disorders. True/False
- 7) Student behavior inventory is to be completed by
 - a) Parents
 - b) Teachers
 - c) Students
 - d) Peers
- 8) The name of the inventory for the identification and assessment of conduct disorder and Oppositional Defiant Disorder in clinic, home school environment is
 - a) Child behavior inventory
 - b) Behavioral Observations
 - c) Child behavior checklist
 - d) None of the three
- 9) Training to parent will reduce antisocial and aggressive behavior of delinquent students. True/False
- 10) Reformative schools are meant for the treatment of
 - a) Physically handicapped students
 - b) Delinquents
 - c) Normal students
 - d) mentally retarded students

Objectives

- 1 To enable the learner to understand the concept, meaning and definition of conduct, oppositional defiant and disruptive disorders.
- 2 To help the learner to understand the characteristics of conduct, oppositional defiant and disruptive disorders in students.
- 3 To enable the learner to know the factors associated with conduct, oppositional defiant and disruptive disorders in students.
- 4 To enable the learner to understand the identification and assessment of students with conduct, oppositional defiant and disruptive disorders.
- 5 To enable the learner to understand the strategies to overcome conduct disorders, oppositional defiant and disruptive disorders.

Specific Instructional Objectives

On completion of this module the learner will be able to :

- 1 Understand the concept, meaning and definition of conduct, oppositional defiant and disruptive disorders.
- 2 Know the characteristics of students with conduct, oppositional defiant and disruptive disorders.
- 3 Know the factors associated with conduct, oppositional defiant and disruptive disorders in students.
- 4 Understand the identification and assessment of students with conduct, oppositional defiant and disruptive disorders.
- 5 Know the strategies to overcome conduct, oppositional defiant and disruptive disorders in students.

Learning material for Objective – 1

CONCEPT, MEANING AND DEFINITION OF CONDUCT OPPOSITIONAL DEFIANT AND DISRUPTIVE DISORDERS

Concerns for students with noncompliant, aggressive and antisocial behaviour are voiced by parents, peers and teachers. Most parents take problems whenever their child nature is found to be fighting, lying, destroying property, or repeatedly failing to follow directions.

All the more, extreme and persistent forms of such behavior cause a degree of disturbance and destruction well beyond any body's common experience. Hence they are of serious concern not only of the family but also of institutions such as the school and of society at large.

The persistence of these behaviors seems to prevail over a period of time in the same individuals – perhaps from early childhood to adulthood. The complexity and heterogeneity of the disruptive, negative and antisocial behaviors exhibited by children and adolescents are increasingly being appreciated.

Among disruptive behavior problems of students a distinction has often been made between inattention, hyperactivity and impulsivity on one hand, and aggression, oppositional behaviors and more serious conduct problem on the other (Waldman, Lillienfeld and Lahey, 1995) the positional and conduct disordered behaviors of the grouping are considered as “conduct disorder”. The severe levels of this general group of aggressive and antisocial behaviors, is also a “conduct disorder”.

The other terms employed to describe such behavior are ‘acting out’, ‘disruptive’, ‘externalizing’, ‘under controlled’, ‘oppositional’, ‘antisocial’, and ‘delinquent’. The term “conduct disorder” is used to describe severe levels of aggressive antisocial behavior

Conduct Disorder

Conduct disorder is repetitive and persistent pattern of behavior that violates the basic rights of others as well as the major age-appropriate societal norms. These behaviour fall into four categories:

- 1 Aggressive Conduct- causing or threatening physical harm to other people or animals.
- 2 Non-aggressive Conduct – causing damage to properties
- 3 Deceitfulness or Theft
- 4 Serious violation of rules

Oppositional Defiant Disorder (ODD)

The essential feature of oppositional Defiant Disorder is a recurrent pattern of negativistic, defiant, disobedient, and hostile behaviour towards authority figures and it is characterized by the frequent occurrence of at least four of the following behaviours:

- 1) Losing temper
- 2) Arguing with adults
- 3) Actively defying or refusing to comply with the requests or rules of adults
- 4) Deliberately doing things that will hurt other people
- 5) Blaming others for his or her own mistakes or misbehavior
- 6) Being spiteful or vindictive
- 7) Being touchy or easily annoyed by others
- 8) Being angrily and resentful.

Negativistic and defiant behaviors are expressed by persistent stubbornness, resistance to directions, and unwillingness to compromise, give up or negotiate with adults or peers. Defiance may also include deliberate or persistent testing of limits, usually by ignoring orders, arguing and failing to accept blame of misdeeds.

Disruptive Behavior Disorders (DBD)

This category of disorder is characterized by conduct or oppositional defiant behaviors that do not meet the criteria for conduct disorder or Oppositional Defiant Disorder.

Embedded Test : (i)

- 1 Violating rights of others and society is said to _____ disorder.
- 2 Conduct disorders fall under _____ and _____ categories.
- 3 Being negativistic, defiant, disobedient and hostile are the essential features of _____
- 4 Being easily annoyed and becoming angry are the co-occurring characteristics of _____
- 5 Disruptive Behavior Disorder is a type of disorder characterized by _____ and that do not meet the criteria of conduct disorder or ODD.
- 6 The oppositional and conduct disordered behavior of the grouping is considered as _____
- 7 The term conduct disorder is used to describe severe levels of behavior _____.

Learning Material for Objective – 2

CHARACTERISTICS OF CONDUCT OPPOSITIONAL DEFIANT AND DISRUPTIVE DISORDERS

The characteristics of conduct disorders and oppositional defiant behaviours are listed below:

1. Characteristics of Conduct Disorders

1. Aggression towards people and animals.

Bullying, threatening or intimidating, initiate physical fights, using a weapon to cause physical cruel either to people, or to animals, stealing while confronting a victim, forcing someone into immoral activity.

2. Destruction of property

Deliberately destroying other's property, deliberately engaging in fire setting with the intention of causing serious damage.

3. Deceitfulness or Theft

Breaking the house, building or car, often lying to obtain goods or favors or avoid obligations, eating items of nontrivial value without confronting a victim.

4. Serious Violations of Rules

Staying out at nights despite of parental prohibitions before even completing the age of thirteen, running away from home overnight at least twice or once, without returning for a lengthy period often truanting from school before thirteen years of age.

Some of the other qualities related to under aggressive and delinquent characteristics conduct disorders' are:

Aggression involving argues, drags, mean to others, demands attention, destroy own and others things, disobedient at school, jealous, fights, screams, showoff, irritable, talks too much, teases, temper tantrums, loud, explosive and easily frustrated.

Delinquent involving lack guilt, bad companions, lies, prefers older kids, runs away from home, swearing, obscenity, truancy, vandalism, tardy.

II. Characteristics of Oppositional Defiant Behaviour Disorders (ODBD)

The characteristics of ODBD are listed below:

Loss of temper, argues with adults, actively defies or refuses to comply with adult requests or rules, deliberately annoys others, blames others for own mistakes or misbehaviour, is touchily or easily annoyed, is angry and resentful and spiteful or vindictive.

The characteristics of conduct disorders as identified by Achenbach (1993) are;

1. Aggressive Behaviour

- Argues, drags, mean to others
- Demand for attention
- Destroy own things and other things'
- Disobedient at school and home
- Jealous, fights and attacks people
- Screams, show off, stubborn and irritable
- Sudden change of moods
- Too much of talk
- Teases and temper tantrums
- Threatens, loud, defiant and disturb to others
- Talks out of turn
- Disturb once to class
- Explosive and easily frustrated

2. Delinquent Behaviour

- lack of guilt, bad companions
- Lies, preference to older kids
- Runs away from home, set fires
- Steals at home and outside
- Swearing, obscenity, truancy
- Alcohol, drugs, vandalism and tardy

Embedded test : (ii)

1. Being Aggressive to people and animals is said to be _____ .
2. Often truant from school is _____ disorder under _____ category.
3. Swearing, vandalism and having bad companies are the characteristics of _____ .
4. Vindictive, misbehaviour and loses temper are the characteristics of _____ disorders.
5. Achenbach (1993) identified characteristics of _____ and _____ .
6. Characteristic of conduct disorder is classified under _____ categories.

Learning material for Objective –

FACTORS ASSOCIATED WITH CONDUCT, OPPOSITIONAL DEFIANT AND DISRUPTIVE DISORDERS IN STUDENTS.

The factors associated with conduct disorder, oppositional defiant and disruptive disorders are grouped under the following biological, neurological, physiological and psycho-social headings.

1. Biological Factors

The idea is that antisocial and criminal behaviour has strong biological roots Italian physician Lambrose wrote that law violators were disturbed persons with a distinct physical type at birth and with distinct physical features.

Genetics: Contemporary versions of genetic contributions to antisocial behaviour do exist starting the fact that lesser genetic component is the adolescent delinquency than for adult criminal behaviour (Sulman,1993).

Half of the variability in antisocial behaviour and depressive disorders was due to genetic influences and that shared and non-shared environmental influences were also significant. An increased genetic component in antisocial behaviour persists from childhood to adulthood (Rutter et al 1999).

Extra family stresses such as daily hassles, negative life events, financial problems, family health problems cause the conduct disorders. Poor parenting practices and faulty parenting practices, parent is less involvement are associated with conduct disorders.

Eaves et al (1997) and Hewitt et al (1997) have examined adolescent behavioural development and have found out that there was evidence for a considerable genetic influence on conduct disorders.

The non-shared Environment and Adolescent Project (Deafer Decard et.al., 1997) found that there was evidence for moderate genetic influence on externalizing behaviours and also provide evidences about the impact of shared environment.

Rosenthal's (1975) found that what is inherited is certain characteristics such as body built and sensitivity to alcohol issue making an individual prone to antisocial behaviour in response to environmental pressures.

II. Neurophysiological Factors

Raine and Venables (1984) have observed that lower resting heart rate is found among antisocial youths. Deficits in neuropsychological functioning have also been viewed to have caused conduct disorders. The ideas that brain dysfunction are among the causes of antisocial behavior is not new, but the scientific investigation on their influence is relatively recent.

Psycho physiological variables are also frequently been hypothesized to be related to antisocial behavior. The antisocial personality is developed whenever an individual with chronic under arousal who is thus motivated to provide additional arousal. Deficits in neuropsychological' functioning have also been suggested as contributing to the cause of conduct disorders. Brain dysfunction is caused by antisocial behavior. Early differences in the infant nervous system due to factors such as prenatal or postnatal exposure to toxic agents cause antisocial behaviors.

III. Psycho-socio Factors

1. **Aggression:** Aggression plays central part in definition conduct disordered behaviour of learning or observation to aggression students tend to demonstrate aggression, under the influences parents who physically punish their children serve as models for aggressive behaviour. Children exhibiting excessive aggressive or antisocial behaviours are likely to have siblings, fathers and even grandparents with records of aggressive and criminal behaviour. Aggression is also ubiquitous in television programmes, cinema and other media.
2. **Family Influences:** The family environment can be a principal arena for learning aggressive behaviour. Hence conduct disorder children may be a part of defiant family system. Numerous family variables have been implicated, including family socio-economic status, family size, marital disruption and parental psychopathology. Lack of parents interaction with their children contributes to the genesis of conduct disordered behaviour.
3. **Marital Discord:** Parental conflict and divorce have frequently been cited in homes of delinquents and children with conduct disorders.
4. **Peer Relations:** Peer relation play a role in the development and maintenance of aggressive and antisocial behaviour. Aggressive children are frequently rejected by their peers. Not all aggressive children are rejected and not all rejected children are aggressive. The rejected aggressive children turn to be with delinquency, adult criminality, educational failure and maladjustment.

Deviant peer associations play a role in the initiation and maintenance of antisocial behaviors.

Embedded Test: (iii)

1. Antisocial and criminal behavior has strong _____ roots.
2. Less _____ component is found in adolescent delinquency than in adult criminal behavior.
3. _____ is central part of the definition of conduct disorders.
4. The _____ environment can be a principal arena for learning aggressive behaviour.
5. Aggressive children frequently _____ by their peers.
6. _____ found that lesser genetic component for Adolescent.

7. “An increased genetic component in antisocial behaviour persists from childhood to adulthood” says

Learning Material for Objective – 4

IDENTIFICATION AND ASSESSMENT OF STUDENTS WITH CONDUCT OPPOSITIONAL DEFIANT AND DISRUPTIVE BEHAVIOUR DISORDER

Assessment of conduct disordered behaviour is likely to be a complex and multifaceted process. Multiple informants, including the students, parents, other family members, teachers and peers are likely to be valuable sources of information. Given the appreciable involvement of family peers and school, these environments and individuals also need to be evaluated further more.

1. Interviews: A general clinical interview with the parents is typically conducted and older children and adolescents themselves can be interviewed. An interview with the entire family may also provide valuable information. In addition, an interview with the teacher or school personnel is frequently forms part of the assessment process and can provide important information about certain spheres of functioning. For the purpose of diagnosis structured interviews with the students and parents are often to be conducted.

1. Behaviour Rating Scales:

Behaviour rating scales have been recommended for use among students with conduct problems. Achenbach (1991-a) instruments – Child Behaviour Check List (CBCL), Youth Self Report (YSR) and Teacher Report Form (TRF) can provide information about a broad array of problem areas. The Behavioural Assessment System for Children (BASC- Reynolds and Kamphaus 1992) is another behaviour rating scale system that allows assessment of a broad array of problems through the reports of multiple informants. Behavioral rating scales that focus more specifically on conduct problems are Eyberg Child Behaviour Inventory (ECBI), 1992) and the Sutter-Eyberg Student Behavior Inventory (SESBI, 1992),. The ECBI is completed by parents and can be used for students aging from two to sixteen. The Self-Report Delinquency Scale (SRD-Eliot et al 1985) is probably the most widely used youth self-report measure of conduct problems. Self-report measures are less commonly used with younger children because their lower ability to report conduct problem accurately.

2. Behavioral Observations

Behavioral observation system has (Mc Mohan and Estes, 1997) has long been a part of the assessment of conduct problems. There are a large number of systems designed for use in clinic, home and school settings. Some of the observational systems have been employed in more than one setting. The Behavioral Coding System (1981) developed by Forehand and the Dyadic Parent Child Interaction Coding System (1981) developed by Forehand and the Dyadic Parent Child Interaction in the clinic. Inter Personal Process Code (Rusby et al 1991) is another observational system designed for clinic, home and school use with peers, teachers etc. Likewise, parent Daily Report (PDR – Chamberlain and Reid 1987) is widely used measure of conduct disorders.

Embedded Test: (iv)

1. Assessment of conduct disorder behavior is likely to be a _____ and _____
2. YSR was constructed by _____ .
3. The expansion of TRF is _____ .
4. SRD is need for measuring _____.
5. _____ is widely used to measure conduct disorder.
- 6 For the purpose of diagnosis of conduct disorder interviews are often conducted..... _____ with the students and parents are often conducted.
7. _____ assess broad array of problem through the multiple informants.
8. ECBI is completed by _____ .
9. SESBI developed by _____.
10. Forehand has developed _____ system.
11. Ruby et.al. have developed _____ code.

Learning Material for Objective – 5

STRATEGIES TO OVERCOME CONDUCT, OPPOSITIONAL DEFIANT AND DISRUPTIVE BEHAVIOUR DISORDER IN STUDENTS

Many different treatments have been attempted with conduct-disordered children.

They are:

Parent Training: Parent training is the most successful approach in reducing antisocial and aggressive behaviours in students. These parent training programmes have a number of features in common. (Kazdin, 1997)

1. Treatments are conducted primarily with the parents.
2. New ways of identifying, defining and observing behavioural problems are taught.

3. Social learning principles and procedures that follow from them are also taught.
4. Treatment sessions provide an opportunity to see how techniques are implemented and to practice using techniques.

Webster-Stratton et al. (1994) have developed a videotape/group discussion programme for children with conduct disorders and ODD. A standard package of videotaped programmes on modeled parenting skills has been developed. This video includes examples of parents interacting with their children in both appropriate and inappropriate ways. They are shown to groups of parents. Following each episode there is a therapist-led discussion of the relevant interactions.

Cognitive Problem-Solving Skills Training: Parent training approaches focus on family aspects associated with conduct disorder behaviour. Other treatments focus more specifically on aspects of the child's functioning. These interventions address social-cognitive deficiencies and distortions among conduct disorder youngsters. The features are:

1. The emphasis is on the thought process involved in the child's approach to interpersonal situations.
2. Solutions (behaviours) that are selected.
3. Through structured topics are such as games, academic activities and stories use is made of structured topics to teach cognitive problem-solving skills.
4. Therapists usually play an active role.
5. Treatment usually combines several different procedures including modeling and practice role playing and consequences for the skills displayed. (Kazdin, 1997)

Different interventions are applied to youngster age up from seven to thirteen who were referred as severely antisocial in their behaviour: A cognitive Problem Solving Skills Treatment (Kazdin, Siegal and Boss, 1992) like those described above, a Parent Management Training (PMT), modeled PSST and PMT conditions all led to significant improvement in functioning at home, school and in the community.

Functional Family Therapy: A treatment programme for delinquents and their families called Functional Family Therapy has been developed by Alexander and his colleagues (1988). The FFT integrates behavioural-social learning, cognitive-behavioural and family perspectives. The goals of FFT are to improve the communication skills of families: modify cognitive sets, expectations, attitudes and affective reactions and establish new interpretations and meaning of behaviour. Treatment session focuses on directly altering communication patterns in the family.

Community Based Programmes: Institutionalization might be considered as traditional perhaps viewed to be an obvious approach to intervention with delinquents. Reform a five schools, training schools and detention centers may include some therapeutic, educative or rehabilitative programming and may provide only custodial care. The Teaching Family Model (TFM,1967) developed at achievement place is an oft-cited example of a community-based programme for delinquent and an example for many behaviorally based interventions. Adolescents who have legally been declared delinquent or who are dependent on neglect cases live in a house with two trained teaching parents. The youths attend school during the day and also have regular work responsibilities. Defaults on youths are corrected through modeling, practice, instruction and feedback. Teaching to parents help the natural parents or guardians to structure a programme in order to maintain gains made at achievement place.

Multi Systemic Therapy: Multi systemic Therapy (MST) (Henggeler et.al.1990) is a family system-based approach: however, the child is considered to like under a number of systems including family, peers, school, neighborhood and community – a social ecology. It uses treatment strategies derived from family system therapy and from behaviour therapy for treating serious juvenile offenders and their families. The approach seeks to preserve the family and to maintain the youth in their homes. MST address not only to the family system but also to skills of the offender and extra familial influences.

Embedded Test : (v)

1. Parent-training approaches focus on _____ aspects of conduct disorder behaviour in students.
2. Cognitive problem solving training focuses more specifically on aspects of _____.
3. Webster-Stratton et al, has developed a _____ programme for children with conduct and opposition defiant disorder.
4. _____ and _____ uses are made to teach conduct disorder solving skills.
5. The expansion of PMT is _____.
6. Treatment programme for delinquent and their family is _____.
7. Teaching family model is an oft-used example of _____.
8. Multi-systematic Therapy employs _____ approach.
9. Alexander and his colleagues have developed _____.

10 Multi Systematic Therapy address not only to the family system but also to skills of the _____ and influences.

Post-test

1. Conduct disorders are classified into
 - a) Three
 - b) Four
 - c) Two
 - d) One
2. The characteristic not related to oppositional defiant disorder is
 - a) losing temper
 - b) misbehave
 - c) vindictive
 - d) dislike
3. Characteristics related to conduct disorder are
 - a) Aggression and delinquent
 - b) Aggression only
 - c) Delinquent only
 - d) none of the three
4. The characteristic, not failing under the oppositional defiant behaviour disorders is
 - a) annoy others
 - b) refusal
 - c) show-off
 - d) vindictive
5. The irrelevant psycho-social factor of conduct disorder
 - a) Aggression
 - b) family influences
 - c) peer relations
 - d) Neuro physiological dis function
6. Aggressive children are frequently rejected by their
 - a) Peers
 - b) parents
 - c) Teachers
 - d) none of the three
7. Achenback (1991-a) has developed
 - a) CBCL
 - b) ECBI
 - c) SRD
 - d) PDR
8. Behavioural Assessment System for Children is developed by
 - a) Achenbach
 - b) Eliot et al
 - c) Reynolds and kamphais
 - d) Sutter-Eyberg
9. Games are used as treatment for reducing conduct disorder problems in
 - a) parent training
 - b) Functional Family Therapy
 - c) Multi Systematic Therapy
 - d) Cognitive Problem Solving Skill Training
10. Family system based approach is
 - a) Multi-Systemic Therapy
 - b) parent Training
 - c) Functional Family Therapy
 - d) None of the three

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KEYS To:

1. ENTRY TEST

1.a 2.c 3.c 4.c 5.b 6.b 7.d 8.a 9.c 10.c

2. PRE TEST

1. a 2. True 3. True 4. a 5. True 6. False 7. a 8. b 9. True 10. b

3. EMBEDDED TEST

No.(i)

- | | |
|-------------------------------------|--|
| 1. Conduct | 2 Aggressive, Non-aggressive, Deceitfulness and serious violation of rules |
| 3. Oppositional Defiant Disorder | 4. Oppositional Defiant Disorder |
| 5. Conduct and Oppositional Defiant | 6. Conduct disorder |
| 7. Aggressive – Antisocial | |

No.(ii)

- | | |
|------------------------------|---|
| 1. Conduct Disorder | 2. Conduct, Serious violations of rules |
| 3. Delinquent | 4. Oppositional Defiant behaviour |
| 5. Aggressive and Delinquent | 6. Five |

No. (iii)

- | | | |
|---------------|-------------|----------------------------|
| 1. Biological | 2. Genetic | 3. Aggression |
| 4. Family | 5. Rejected | 6. Susman 7. Rutter et.al. |

No.(iv)

- | | | |
|---------------------------|-----------------------|--------------------------|
| 1. Complex and multifaced | 2. Achanbach | 3. Teacher Report Form |
| 4. Conduct | 5. SRD | 6. Structured interviews |
| 7. BASC | 8. Parents | 9. Sutter- Eybers |
| 10. Behavioural Coding | 11. Internal personal | |

No.(v)

- | | | |
|------------------------------|-------------------------------|---------------------------------|
| 1. Aggressive and antisocial | 2. Family | 3. Videotape / group discussion |
| 4. PSST and PMT | 5. parent management Training | |
| 6. Functional Family Therapy | 7. Community based programmes | |
| 8. Family system based | 9. Functional Family Therapy | |
| 10. Ender and extra familial | | |

- 4. POST -TEST** 1.c 2.d 3.a 4.b 5.d 6.a 7.a 8.c 9.d 10.a

Globalization Into Glocalization On Building Creative Industry Through Design Management

Community, Culture, Globalization and Internationalization

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ABSTRACT

Indonesia's population increases every year. It can actually be seen as a very attractive business opportunity. This because of population growth is directly proportional to the needs of people. As one of the most important needs, clothing can hardly be separated from them, because clothes are necessary to sustain human life. In addition, many Indonesia people adjust their clothing with an existing trend.

Distribution Store, or here, known as *Distro*, now highly developed in Indonesia as a business that was created on basis of this background. They provide various brands of local clothing company that manufactures its own products. Thus, *Distro* referred as a form of creative industries. Creative industry is an industry that is relatively new, with creativity and creations as the main tool of its development. In Indonesia, fashion is the most developed form. Here, many local clothing companies that joined *Distro* had already gone International.

In connection with the creative industries which is also one of the effects of globalization, in *Distro* there is glocalization. With globalization, a country no longer specializes in one product line with its potential, because they should be conditional in the market with social cultural background similar to other countries. So that, glocalization is so indispensable.

Responding the glocalization, *Distro* producers in Indonesia have to create the image that has own characteristics of the products in a globalized world. In this research, author will do a study of how to create a new design that contains of local contents but can still be shot by the global market.

INTRODUCTION

Globalization creates the changing of habit and culture of the people who live in one country. This development not only gives the positive impact and benefits for the people of their country but also the negative ones.

One of big impacts of globalization here, is everyone is vying to build the creative industry. Creative industry becomes very popular lately because of the globalization. It is an industry with ideas and creativity as the main tool of its development. And fashion industry is one of creative industry that is most popular in Indonesia. Distribution Store, or here, known as *Distro*, now highly developed in Indonesia as one of creative industries. They provide various brands of local clothing company that manufactures its own products, which on average is t-shirt.

In connection with the creative industries which is also one of the effects of globalization, in *Distro* there is glocalization. Glocalization is a term to the individual or groups which can be “think global, act local”. With globalization, a country no longer specializes in one product line with its potential, because they should be conditional in the market with social cultural background similar to other countries. So that, glocalization is so indispensable.

Responding the glocalization, *Distro* producers in Indonesia have to create the image that has own characteristics of the products in a globalized world. We can see that is something local can be connected with the global things. Then how?

METHODS

Authors took samples of three brands of local clothing company that incorporated in the *Distro* to be studied. In addition to doing business, the founders are in one mission on building their products, which is to introduce Indonesia through T-shirt. As we know, t-shirt is a good media campaign. So it is appropriate if t-shirt is used as an educational medium to encourage foreigner to know what is Indonesia and what is there. The three brands are:

1. Damn! I Love Indonesia / damniloveindonesia.com
2. I Love RI / hiduplahindonesiaraya.com
3. Maldevis Indonesia / maldevisindonesia.com

Three types of research data were collected.

- Literature Study
- Observations: Authors found out about how they create design elements into every shirts they made.
- Interviews: Semi-structured interviews with these brands' founder about their brand.

LITERATURE REVIEW

BUSINESS STRATEGY

As written in McGraw-Hill presentation slide, *Strategies for Competing in Foreign Markets Localized*, multi country strategies divided into three,

- ***Think local, act local*** —A company varies its product offerings and basic competitive strategy from country to country.
- ***Think global, act global*** —Strategic moves are integrated and coordinated worldwide, emphasis on building a global brand name.
- ***Think global, act local*** —Utilizes a common strategic approach (low-cost, differentiation, focus, best costs), but allowing some country-to-country customization to fit local market conditions.

And from these explanations above, we can see that the three brands use **Think global, act local** strategy as the their tool. So they can be regarded as a business that puts glocalization into them.

DESAIN ELEMENTS

Color

As Suriyanto Rustan, S.Sn said in his book *Mendesain Logo*, “Choosing a color is a very important process in designing.” Colors can represent emotions of a work, so the message of the work can be more easily accepted by the audience.

In theory Bewster, color distribution divided into four;

1. Primary Colors

The basic color is not a mixture of other colors. The colors included in the primary colors are red, blue, and yellow.

2. Secondary Colors

Is the result of mixing primary colors with a proportion of 1:1. For example orange color is the result of a mixture of red with yellow, green is a mixture of blue and yellow, and purple is a mixture of red and blue.

3. Tertiary Colors

Is a mixture of one primary color with one secondary color. For example, yellowish orange color obtained from the mixing of yellow and orange.

4. Neutral Colors

Neutral color is the result of three primary colors mixed in the proportion 1:1:1. These colors often appear as balancing contrasting colors in nature. Usually the result of the right mix will lead to black.

Symbol

Symbol is a concept of communication which represents an idea, a physical entity or a process. It can be interpreted as something that is used to refer to something else, according to the consensus group or community. Here can be seen, that the relationship between the symbol as a marker with something that is signified, or the sign is conventional.

Typography

Type is a visual form that is sounded as the need for verbal communication. Typography is the science that studies about the type and use letters in visual communication design applications.

Composition

Sanyoto said in his book, Composition is simply interpreted as a way of arranging the elements in the picture, these elements include line, shape, form, color,

light and dark. Composition greatly affects the aesthetics of a work. In the composition there are certain things that we find;

1. Parity
2. Rhythm & Pressure
3. Scale & Proportion
4. Unity & Harmony

LANGUAGE

As Wikipedia said, Language may refer either to the specifically human capacity for acquiring and using complex systems of communication, or to a specific instance of such a system of complex communication. Humans use language as a way of signaling identity with one cultural group and difference from others.

OBSERVATION REVIEW

In a study of these three brands, we took the best-selling t-shirt design on the market from each of those brands. They are:

Damn! I Love Indonesia



photos : damniloveindonesia.com

I Love RI



photos : hiduplahindonesiaraya.com

Maldevis Indonesia



photos : maldevisindonesia.com

COMPARISON TABLE

	Damn! I Love Indonesia	I Love RI	Maldevis Indonesia
Symbol	Indonesian Flag	Indonesian Symbol (Garuda)	-
Typography	Serif	Serif	San Serif
Color	Neutral Colors (Black, White, Red)	Neutral Colors (Black, White, Red)	Neutral Colors (White, Red)
Composition	Regular & Simple	Regular & Simple	Regular & Simple
Language	English “Damn! I Love Indonesia”	English “I {garuda} RI” RI: Republic of Indonesia	English “Indonesiaunite”

PRELIMINARY FINDINGS

Data analysis is still ongoing. The following is a summary of authors' preliminary findings:

To make local products to be marketed to a global market, manufacturers must pay attention to the trends that are currently underway in the world market. From explanation above, authors see that minimalist trend is a rising trend in the clothing world. In today's world we see many people wearing t-shirt with simple designs, with regular composition, neutral colors, and straightforward typography.

To do “think global, act local”, here we can lift the local products using the world language. We do not need to eliminate the characteristics of Indonesia, but combine these elements with global elements. So the products easily understood by foreign tourists and citizens of Indonesia itself.

Analysis will proceed with how to create new designs that will further raise local products to be marketed on global market using elements that have been studied.

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Reflections on the final year learning experience – designing a capstone experience

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Abstract

Cross-sector educational reform to be implemented in 2012 in Hong Kong (HK) is intended principally to prepare students for the future workplace. One of the explicit requirements for the new four-year undergraduate curriculum is the inclusion of a capstone course for final year students. This paper explores the uptake and reported effect of the capstone- liked final year project using participating students' experience (voice) in existing undergraduate study programmes in the Chinese University of Hong Kong (CUHK). Semi-structured interviews were used to collect student feedback, with findings revealing considerations in terms of the core design elements highlighted in literature. The paper highlights students' lack of readiness to successful transition into the workplace, linked to the current academic focus of projects. A framework that includes learning activities preferred by students is proposed for the final year learning experience. Findings from this study will be useful for curriculum development and evaluation of the final-year curriculum.

Reflections on the final year learning experience – designing a capstone experience

Introduction

Hong Kong's 3+3+4 education reform that introduced cross-sector changes to both the secondary and undergraduate (Ug) systems, has several important goals. These include increased exposure to non-academic learning experiences; expanding whole person capacity; supporting a close linkage to workplace; increasing students' adaptability given rapid changes in society; and preparing students for a knowledge-based society (Education Commission, 2000). This reform, commenced in 2009 at the secondary school level, will extend in 2012 into the tertiary sector with universities introducing a normative 4-year undergraduate curriculum. One of the explicit requirements for this new curriculum is the inclusion of a capstone course for final year students. These dramatic changes in an academic structure require a careful look at the current curriculum, especially on students' final year, when students can expect to leave a relatively safe and comfortable environment and move into the workplace. In this new environment, as The Higher Education Academy (2006) noted in relation to learning and employability, performance in disciplinary subjects is not a crucial factor, rather it is capacity and achievement in a range of soft skills (such as interpersonal skills, communication skills, and presentation skills etc.) that will most impress potential employers.

This paper reviews the final year project (FYP), the de-facto capstone-type course in a local Hong Kong university. The aim, using the students' voice, is to understand if the FYP implemented as a capstone in the new curriculum will support the development of desired attributes necessary to support graduate employability. Consistent with an outcome-based approach to education, the focus should be on authentic learning opportunities in the final year in order that students may exercise and enhance their soft skills before stepping into future careers. In other words, higher education institutions should not simply produce discipline-based outstanding graduates, but a multi-faceted graduate able to meet the needs of the society.

Education reform in HK

According to the Reform proposals for the Education System in Hong Kong (Education Commission, 2000), Hong Kong education reform started in late 1990s with the goal of promoting lifelong learning and all-round student development. Consistent with, a public consultation process was initiated to determine the objectives for education in the 21st Century for Hong Kong. The results showed that higher education should facilitate students' learning, develop their abilities in effective communication and expand their capacity for creativity and sense of commitment to their communities. Moreover, in any fast-changing society, the requirement of multi-faceted talents was favoured over specialised talents.

Reflecting these concerns, a report by University Grants Committee (UGC) a non-governmental body that advises the Government of Hong Kong on the development and funding needs of higher education institutions (HEI), noted institutions should provide students with interdisciplinary learning experiences that can equip them with an expanded scope of knowledge and foresight for a globalised society (UGC, 2010). The subsequent comprehensive cross-sector educational reform process initiated in 2009 in secondary schools and extending in 2012 to the Ug sector echoes these broad objectives for higher education.

The new Ug curriculum and the capstone course

The Chinese University of Hong Kong (CUHK), where this study is situated, is one of the premier research-intensive institutions in Asia. As advocated by the UGC, an outcomes based approach has been integrated into the design of the new curriculum. Another feature of the new curriculum is a common Faculty Package for first-year students, with core components of the curriculum strengthened by the inclusion of General Education, languages, information technology and physical education units. Another feature of the four-year curriculum, consistent also with the objectives of the education reform, is the systematic inclusion of a capstone course as the culmination of the undergraduate experience (CUHK, 2011). Different capstone experiences are being designed to suit the nature of each discipline, however, as the new four-year curriculum states, the capstone course targets the synthesis of subject knowledge, as well as independent enquiry (e.g. research) or execution (e.g. creative design in Fine Arts or Architecture, engineering design, fieldwork or internship both involving reflection and evaluation) (CUHK, 2011).

As the University has noted, previous experience and pilot courses with Final Year Projects have demonstrated benefit in terms of the development of student capabilities. At present, CUHK has eight faculties offering 62 undergraduate programmes; of these some twenty-four programmes have a compulsory FYP as a graduation requirement and thirty-eight programmes offer a FYP in the form of an elective. As a note of caution, however, it is worth noting that the majority of FYPs are operated as academic research.

The Capstone Experience

In general a capstone course is intended to integrate a body of relatively fragmented knowledge into a unified whole (Atchison, 1993; Durel, 1993). This integrating activity, allows students the opportunity to look back or reflect over their undergraduate curriculum in an effort to make sense of that experience. It should also allow students to *look forward* in order to transition into working life by building on that experience (Durel, 1993; Henscheid, 2008).

The issue of looking forward is crucial given the realisation in the 1970s and 1980s of a gap between academic study and the real world (workplace). As a consequence, some universities moved to develop a course that could bridge this gap (Schroetter & Wendler, 2008). The resultant course(s) evolved into what is referred to today as a capstone course and that some describe as the “crowning achievement” in an undergraduate programme (Atchison, 1993, cited in Schroetter & Wendler, 2008). The National Survey of Senior Seminars and Capstone, a study in the United States, recorded the importance, even critical nature of this course (Chickering and Schlossberg, 1998; Henscheid & Barnicoat, 2001). As this study also noted, it is often difficult for student to leave their comfort zones and move into a new environment, and educators need to make an effort to help student move on after graduation.

Chickering and Schlossberg (1998) reported three issues for educators assisting students to successful transition: first, make a career connection, second, help them identify their new roles after university; and third, create a life-long perspective. Educators should treat this facilitative role as equally important as helping student transition into university as freshmen. Progressive design features of a transition-focused capstone include a foundation component, needed to provide student basic knowledge and skills. These foundations are provided by the formative courses students complete in the first three years of university study. A second

component is what can be termed as a pre-capstone component completed towards the end of year 3 and the beginning of year 4, the capstone year. This component is intended to help student learn advanced research techniques and like skills in preparation for their final year study. The final component is the actual capstone course, that some also describe as an 'experience' in recognition that the capstone objectives are likely to be satisfied better by a composite range of activities (Hauhart & Grahe, 2010). Reflecting the diverse needs of the student body and the transition needs, as one institution (Copenhaver, 2011) has determined, the capstone experience is made up of a varied set of options so that students are able to choose their personal capstone experience according to their abilities and future needs.

Design Characteristics

Literature identifies two broad types of capstone, a developmental capstone and an assessment capstone. In this paper, the focus of the capstone course is developmental, because this form of capstone tends to be the common approach in higher education. Reflecting this focus, there are four broad design characteristic of a capstone activity or course. These are:

- To encourage *integration* and synthesis of previously acquired knowledge and skills (Bailey, Oliver & Townsend, 2007; Cuseo, 1998; Jervis & Hartley, 2005). Others state the integrative focus as students being given a chance to make connections between course content, acquired skills and application in a wider context (Holdsworth, Watty & Davies, 2009; Huber & Hutchings, 2004; Rowles, Koch, Hundley, & Hamilton, 2004).
- To facilitate some form of *transition*, such as from university to professional/working life (Bailey et al., 2007; Cuseo, 1998; Henscheid, 2000; Schroetter & Wendler, 2008; Wood, 2007). This characteristic includes the encouragement of useful connections between study majors and work experiences, such as those acquired via internships and exchanges; an awareness of personal development necessary to transition from undergraduate to post university life; and preparation for career or postgraduate education through professional development (Henscheid, 2000; Jervis & Hartley, 2005). Importantly, as Rosenberry & Vicker (2006) noted, when capstone activities address career issues, students are reported to have a better understanding of the relevance of what they have learnt and how it can be applied.
- To assist students to *reflect* on and demonstrate on what they have learnt over their undergraduate studies (Holdsworth et al., 2009; Kerka, 2001). Reflective practice is a fundamental skill of life-long learners and being able to reflect on one's performance can also help achieve higher goals. Hence, reflection is a vital component of capstone experience (Kift, Field & Wells, 2008) that involves both course content in their academic major and more generally across courses, as well as an inner, personal reflection by students on their aims, personal strengths and future plans (Brooks, Benton-Kupper & Slayton, 2004; Henscheid, 2008).
- Finally, being placed in the final year of an undergraduate degree, a capstone activity represents a culminating experience (Holdsworth et al., 2009) that arguably offers students a chance for *closure* (Rowles et al, 2004; Schrotter & Wendler, 2008; Schubert, 2009). This is the last opportunity to ensure students graduate with the knowledge, skills and attitudes they need to meet the growing demands of professional practice (Rowles et al., 2004). The process of closure, which includes recognition of accomplishments, pulls

together all the ideas presented in different units and helps construct some sorts of integrated, meaningful whole experience (Heinemann, 1997).

Figure 1 below illustrates a developmental capstone designed to support generic skills and high-level thinking applicable in the workplace. The central learning outcome of this course therefore is encapsulated by graduate competence. The focus for students is not on acquiring new knowledge, but on integrating, reflecting and extending knowledge that they have already acquired (Bailey et al, 2007; Cuseo, 1998).

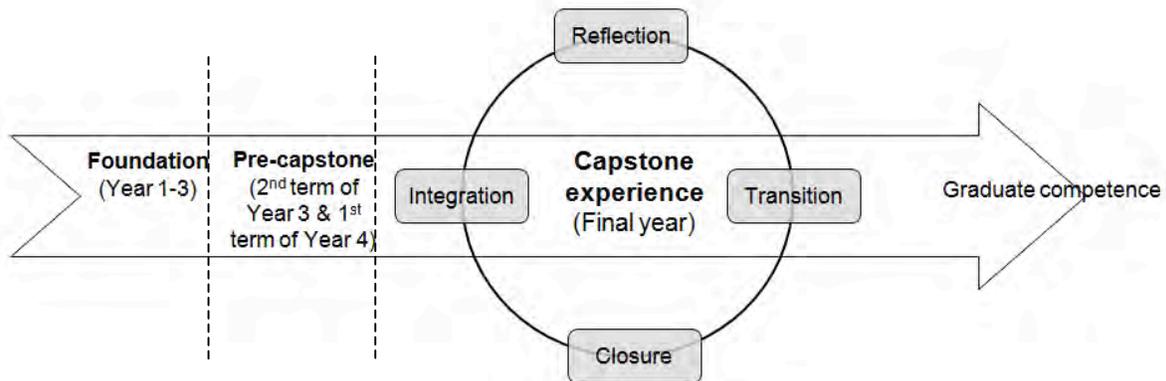


Fig. 1 A conceptual illustration of a developmental capstone

Methodology

The final year project (FYP), a de-facto capstone in the current three-year curriculum was examined in order to understand the difference, if any, between current practice and the ideal capstone design experience. The FYP is significant to a student's final year because, for some disciplines anyway, it was a compulsory course and students were expected to devote most of their time to complete this project as it is regarded as an important milestone in their undergraduate studies.

This investigation adopted a qualitative approach, because it provides a rich pathway to collect insights and practices through interviews and personal conversations (Brewerton & Millward, 2006; Heppner & Heppner, 2004). As suggested by Brewerton and Millward (2006), a qualitative approach using semi-structured interviews allowed interviewees to offer their own experiences in a fluid and unrestricted manner, still within the context of the target research area. The research framework proposed for this study is based on the earlier defined four design characteristics for a capstone experience, and a survey done on 300+ graduates.

Eighteen students from thirteen programmes across the Science, Engineering and Humanities disciplines participated in interviews on a voluntary basis. During the interview, students were asked if the FYP helped them in developing their future and whether the FYP completed met the four capstone characteristics evidenced in literature. Participants were also encouraged to articulate their expectations and opinions on a capstone experience. Interviews were recorded and then analysed using thematic analysis, with significant comments and expectations among students sorted by supporting argument.

Reported findings: Relative importance of the design characteristics

Based on accumulated responses, all participants agreed that the four characteristics are essential to the final year of study. However, among the four characteristics, transition received most attention. Students said it is important to help them understand the workplace environment, provide chances to put theories into practice, and better determine a career path. At the final stage of undergraduate life, students suggested that knowing specific workplace requirements and preparing to face unexpected real life challenges were the important reasons for a “transition” component in the final year. Students also acknowledged knowing the real world practice as very necessary in order for a smooth transition. For example, a Science student, who spends 16 hours a day in the library to study, expected he would face many problems in effective communication when he applies for jobs. According to him, if he had been given a chance to know the workplace environment and the relationship between Science and the outside world, then this would have been most helpful to his future employment.

Another factor highlighted by students as supporting better transition, was the chance to execute and apply what they have learnt in class in their final year. Application of integrated knowledge serves as an experience for students to evaluate their performance and abilities to manage hands-on tasks. As several students mentioned:

‘[the opportunity to] use acquired theories to apply into the real world, after such practical use of theories, I will never forget these theories, because they transformed into my experience’ (Humanities student).

‘Something you may only have come across in one course, then forget, but by doing FYP you recall your memory and apply it.’ ‘Because you can apply what you have learnt [in final year] and after graduation, you can perform better transition to the real world, you won’t get lost after graduation’ (Science student).

It is clear that application of knowledge is important to students and for this reason, authentic assessment is also a crucial element of the study experience. Authentic assessment involves worthy intellectual challenges, presented as an array of tasks that are likely to be encountered in the workplace (problem identification, research, analysis, problem resolution and presentation) and which requires full application of acquired knowledge in realistic settings. To illustrate, a written test, for example, is not a useful basis to infer driving ability. An authentic test would include some demonstration of ability, as well as an opportunity to improve their performance. In all, students endorsed the importance of a final year learning experience based on the four design characteristics, with a particular emphasis on transition. However it is problematic whether students found their FYP experience actually satisfied these characteristics.

Reported findings: Evaluate the FYP

Of the four design characteristics identified in literature, two characteristics, reflection and closure, were reported as being commonly evident in the FYP. However, integration and transition were not commonly reported. Examining the student feedback, themes related to *integration* are categorised under curriculum design, while comments related to *transition* aspects are categorised in terms of the focus of capstone. Comments linked to *reflection* and *closure* is grouped within the broad theme of developing graduate capabilities. The following

discussion on student voice is in terms of these three categories (Table 1 is a summary of key points noted by participants).

1. Curriculum design

Curriculum design is crucial to a successful implementation of a capstone experience. The study before the final year, i.e. the foundation and pre-capstone, is also critical for preparing the student to reflect and integrate during their final year study. According to the student voice, there are both positive and negative feedback on the FYP. Most positive feedback was gained from the closure and reflection aspects. Student reported that they could reflect on their performance in soft-skills and personal goals through FYP.

‘I know how to conduct a study effectively and efficiently’ (Humanities student).

A science student said because her FYP is to create a new product, so she needed to use her previous knowledge to serve as the base of reference:

‘I have to use previous knowledge in my FYP, in order to produce something new [a new flavor candy]. I can also apply what I have learnt in my minor [marketing studies], as I have to conduct marketing research for my new product’ (Student from Science).

‘FYP reminds me of what I have learnt in year 1, for example some formula, and I manage to apply them in the project’ (Student from Engineering).

However, this experience was not a common one among other students; more commonly, students reported that only a limited amount of knowledge was useful to their FYP. These students, therefore, thought that the FYP did not help them to integrate what they have learnt in their University life.

‘This topic is from a year 3 course [final year course], not quite related to year 1 & 2 courses’ (Science student).

‘I don’t think FYP can integrate previous knowledge, in these 3 years, only one course talks about cultural conservation. Many necessary materials are not being mentioned in previous years; they are new to me and I have to find them by myself’ (Humanities student).

‘Many of them are new theories; it seems like taking an extra course rather than consolidating previous knowledge’ (Engineering student).

Notwithstanding the fact that students in the FYP could not consolidate what was otherwise informative knowledge, students found that research skills learned in previous years were essential to their FYP. As one humanities student noted:

‘My discipline emphasizes fieldwork a lot in course-based projects, so in my FYP, I can integrate the skills of fieldwork methodology.’

Based on this feedback, it is reasonable to infer that curriculum design and learning activity are important when implementing a capstone. To illustrate, without an adequate foundation a capstone experience would become meaningless. Similarly, without authentic assessment, a course or project would not help consolidate desired capabilities and confirm the ability to successfully apply acquired knowledge in realistic settings, as well as afford some opportunity to improve performance.

2. Focus of the FYP

The focus of the FYP affects the reported learning outcomes of students. based on student feedback, the current approach to FYPs appears to be academic in –focus and as such students found the experience unable to cater for their needs and abilities. Conversely, students who were interested in postgraduate studies reported the FYP as most beneficial to their transition.

‘I have learnt different theories, more algorithms and more capable of doing [computer] programming’ (Science student).

‘[the] FYP cannot prepare me for [the] workplace, but it prepares me for postgraduate study. For example, I know how to do research and [have] discover[ed] that being a MPhil student is to do research consistently, then write a thesis’ (Science student).

These students reflected that FYP helped them understand the process of academic study. In this case, the FYP gave final year students a sense of closure and offered them a chance to reflect what they have learned over the period of their university life. When asked about whether the FYP helped them integrate previous knowledge and skills, most students mentioned integration in terms of research skills, but not the consolidation of knowledge and skills. One issue with integration is that students noted the courses offered in the previous years were too diverse. Another issue, given the FYP was focused on academic research and so narrowed down to a specific topic, is that the approach allowed very limited inferences from previous studies.

The sum effect is that the focus of the FYP is academic research and as a result viewed as offering limited opportunity for programme-level knowledge integration. Moreover, with this academic focus, the FYP also offers little opportunity for the development on soft skills, such as independent problem solving, self-management, communication and teamwork. These and other workplace capabilities, including technological awareness and initiative and enterprise are important graduate capabilities (Kember & Leung, 2005). However, while students questioned the usefulness of an academic paper and a research-focus in a competitive business world, not surprisingly given its academic-focus, the FYP was seen as useful for transition into graduate school and postgraduate studies. Some representative comments on the utility of the FYP in terms of student’s expectation in the final year study include:

‘After doing this FYP, I realize I don’t want to stay in the academic field’ (Humanities student).

‘I wonder how an academic thesis is considered to be helpful in a business world’(Humanities student).

‘FYP is not useful to me, because I am not staying in the academic world’(Humanities student).

‘My FYP cannot support my transition to workplace, it is too concentrated and I cannot learn anything from other fields.’ (Science student)

‘FYP is unhelpful in my transition, because I think I probably won’t stay in the same field anymore’ (Engineering student).

Highlighting the limited practical utility of their FYP, students reported their experience as supporting successful job application, but not workplace transition. As one student noted:

'I expect my degree is to be used for job application, but my research type FYP cannot assist transition [into the workplace]. If my FYP was to develop a software application [for smart phone], I think it would help my transition' (Engineering student).

However, although the majority of students viewed their FYP as unsuitable in terms of transition characteristics, some students acknowledged a transition component to their FYP because it is not purely academic research work.

'The compulsory placement at a primary school [allowed me the opportunity to] demonstrate my competence as a social worker' (Humanities student).

The above findings reveal a tendency for a rigid approach to the FYP; the issue calls for better curriculum design where the experience supports students' acquire workplace-based competence. The responses also provide support for the design approach by UCLA that allows for varied study options, based on capabilities and interests – a student-oriented capstone activity.

3. *Developing graduate capabilities*

The core objective of a capstone activity is in essence to equip students with graduate capabilities suitable for their future development. Reflecting on the broad impact of the four design characteristics, students commonly reported presentation skills as having improved because presentation is a compulsory aspects of most FYPs.

'I think my presentation skills [have] become better because there are some chances to practice throughout the FYP' (Engineering student).

'You won't write on your job application form claiming that you have completed a FYP, unless the organization you are applying for is also concerned about your FYP topic, if not FYP is just a 6-credit course without further implication' (Humanities student).

While students reported their presentation skills were improved as a result of the compulsory assessment requirement, in general students doubted the significance of completing the FYP as a way to demonstrate their abilities to the prospective employers. One aspect that appears less appreciated is the development of written communications; perhaps a capability that does not appear as immediately relevant, but this is still a key graduate capability (Kember & Leung, 2005). Overall, Table 1 is a summary of developmental themes as raised by student voice. As the table shows, integration and transition are reported variable, depending on the focus of the FYP, academic or workplace transition. There is in contrast a general appreciation of the development of graduate capabilities, most notably presentation skills and the capacity to conduct an investigative study.

Table 1: Summary of student voice by development theme	
1. Curriculum design	
Integration (+ve)	My discipline emphasizes fieldwork a lot in any course-based projects → can integrate the skills of fieldwork methodology. Have to use previous knowledge in order to produce something new → can also apply what I have learnt in my minor FYP reminds me of what I have learnt in year 1 → apply them in the project.
Integration (-)	FYP cannot integrate previous knowledge.

ve)	Many necessary materials are new FYP topic is not related to year 1 & 2 courses. New theories →feel like taking an extra course rather than consolidating previous knowledge
2. Focus of the FYP	
Transition (+ve)	Cannot prepare me for workplace, but postgraduate study Compulsory placement demonstrates my competence
Transition (-ve)	Not useful →not planning to stay in the academic world. Wonder how an academic thesis is considered to be helpful in a business world. FYP no use for job application→ just a 6-credit course Research type FYP cannot help job application Cannot support my transition to workplace, it is too concentrated→cannot learn anything from other fields. Won't stay in the same field →FYP is unhelpful
3. The graduate capabilities	
Reflection and Closure (+ve)	Know how to conduct a study effectively and efficiently. Learnt different theories and became more capable. Presentation skills become better because of there are few chances to practice throughout the FYP.

Summary of analysis

The findings suggest that the current approach to the FYP appears to address two design characteristics, closure and reflection, quite adequately. However, the FYP does not appear to address integration and transition. Based on the data, all final year students identify the four characteristics as necessary in a capstone experience, but all students emphasized transition as most important. In contrast to the emphasis on transition, the overt focus of the FYP is academic, with most departments requiring a thesis or a research-like projects that neither allows for a varied approach, nor does it relate to workplace matters. Students concerned about seeking work upon graduation, do not value the undoubted development of research skills and discipline knowledge from the FYP. What students appear to want most are chances to apply their knowledge and improve their soft skills. The desired type of activities could be broadly described as needing to be authentic and practical in nature. However, for some students, those aiming for further studies, the FYP helps realize the general goal of undertaking real academic research. However, this group was a minority in the final year student body and the FYP as currently conceived can only be seen as a limited capstone experience, and one without the four design characteristics.

From the findings, it appears that curriculum design affects successful integration of knowledge. Some students thought that their previous studies were practical enough and sufficient to help them through the process of the FYP, while others thought the curriculum was not coherent enough and that they were unable to apply what they have learnt in the previous years. However, the academic focus of a FYP facilitated a smooth transition for the postgraduate students. Table 2 below outlines a design framework that identifies development aspects, learning activities and assessment strategies for a capstone experience.

Table 2: Design framework to support a capstone activity						
Integration** (I)	Reflection (R)	Closure (C)	Transition (T)			
Integrate knowledge and skills	Reflect on development - academically, socially and personally.	Close undergraduate student life	Transition from undergraduate studies to being self-autonomous learners.			
Choose the activities and assessment						
What are we developing/ or assessing (Indicative)	How (Authentic learning activities) (Indicative)	Authentic assessment methods (Indicative)	Design Characteristics			
			(I)	(R)	(C)	(T)
University community	Project work, service	Group project, self reflection	✓	✓	✓	✓
Discipline knowledge	Project work, group presentation, simulation, thesis	Presentation, peer assessment, group projects, reflections	✓	✓	✓	✓
Academic skills, self-directed learning e.g. research, collaboration	Group presentation/case analysis/ Simulation/ Lab experiment report	Presentation, participation, peer assessment	✓	✓		✓
Self awareness	Reflection journal / Blog	Reflection; Pass/Fail	✓	✓		
Leadership skills/ Teamwork/ Interpersonal skills	Group project, team-based activities, Career planning	Group project, peer assessment, reflection, presentation	✓	✓	✓	✓
Problem-solving skills	Case analysis/ Group/ Research project/ Simulation	Group project, peer assessment, reflection	✓	✓		
Citizenship	Service learning	Not assessed			✓	✓

Table 2. Suggested framework of a capstone experience

The suggested learning activities in Table 2 are similar to the preferred learning activities extracted from the findings of the student voice. The most welcomed learning activities were group work, presentations and fieldwork. These activities were important in the development of interpersonal skills, communication skills, presentation skills and the practical skills that nearly all employers are looking for. For the majority aiming to start a career right on graduation, an internship to gain a real working experience is most valued. Generally, these students also wanted a smaller class size, as this enabled richer classroom interactions. Alternatively, students who planned to pursue further studies wanted more seminars and more teaching assistants available to offer them support and study assistance during their final year.

Conclusion

If higher education is aiming at producing multifaceted graduates who are both confident and competent in the future workplace, it seems that the current final year project (FYP) is not adequate in preparing the way. This study reveals the research-oriented FYP is the sole option

for final year students and this activity is limited, failing to provide an integrated experience that is able to satisfy the expectations of the majority concerned with finding employment. The current FYP is, based on student feedback, only able to meet the needs for research students by facilitating their transition into graduate study. The capstone design framework illustrate stages that can help programme designers match student capabilities and learning experience to better assist knowledge integration and successful transition. Students with higher academic capabilities may be interested in and capable of handling a demanding research thesis. This would most likely suit those students more interested in staying in the academic field and continuing to graduate school. For students less interested in academic studies, the opportunity to choose projects or an internships or group-based projects will help them attain better transition.

In summary, this study illustrates the idea that students should not be limited to knowing things, but should also be given a chance to reflect on knowledge and to apply what they have learnt in their studies for their future workplace. The capstone design dimension of transition captures this concept. The limitation of this research is that it was conducted only in CUHK; the study may however reveal what is happening in a wider education sector. The essentiality of the four components in a capstone experience conveys an important message the student voice appears to be saying: that integration and transition aspects are not being emphasized under the current 3-year curriculum. In other words, students are stuck within the academic world, and the chances to widen their horizons are thus being limited. For the 4-year curriculum, careful consideration should be taken in design of the new curriculum that culminates theoretically with a capstone experience. There is a deep yearning to improve students' capabilities towards realizing their life-long goals. There are also some yet unrealised pitfalls from an academics viewpoint, such as finding suitable topics, marking thesis and providing feedback. These deserve further inquiry.

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Title: Teaching and Learning of the Intercultural Training Program Using Information and Communication Technology in Higher Education in Japan

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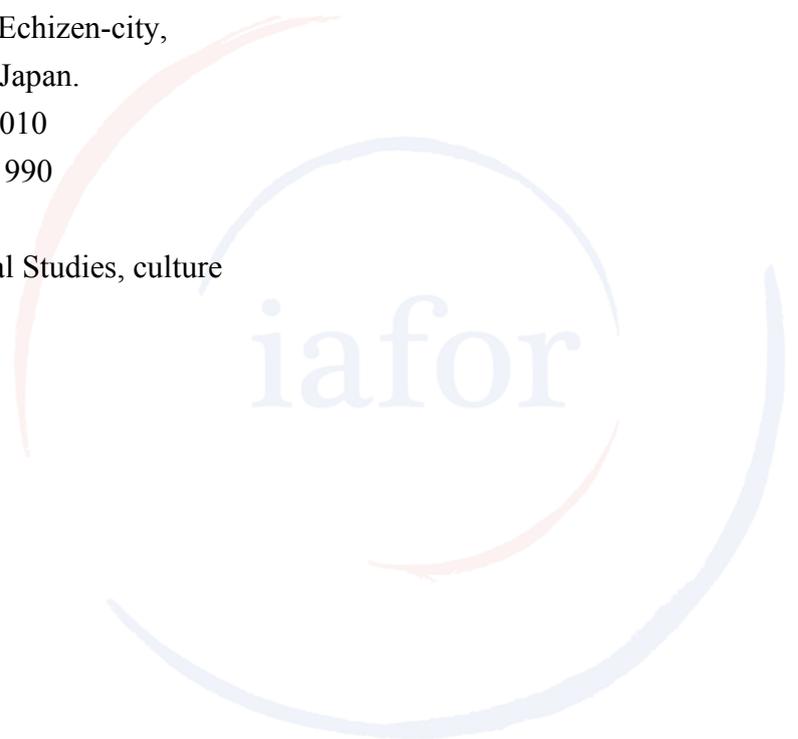
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The logo for the International Association for Educational Research (IAFOR) is centered on the page. It features the word "iafor" in a lowercase, sans-serif font. The text is overlaid on a large, stylized circular graphic composed of two overlapping arcs: a light blue outer arc and a light red inner arc, creating a sense of motion or a globe.

Teaching and Learning of the Intercultural Training Program Using Information and Communication Technology in Higher Education in Japan

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Abstract

This study aims at clarifying some characteristics of teaching and learning methods of the Intercultural Training program using Information and Communication Technology (ICT) in higher education in Japan. Intercultural Training is said that to be one of the effective ways to promote cultural awareness, and the researcher developed an original intercultural training program using ICT. An intercultural training program using ICT was developed as an educational support tool for the Japanese students who had few opportunities to communicate with foreign people. Since it was clear that teaching and learning methods using ICT were different from those in the textbooks, more profound research was necessary. In order to clarify some characteristics of the program, the researcher asked five skilled facilitators and researchers to try the original Intercultural Training program using ICT in the UK, the US, and Japan. Findings from interviews with these facilitators showed that this original program should be implemented with a hybrid teaching and learning method. Additionally, it was suggested that teachers need to monitor students' learning constantly; set and explain the aim of the program more precisely; and use both objective tests and assessment for evaluation. In the paper, the results of the interviews will be shown. This study is supported by Grant-in-Aid for Young Scientists (B) by the Japan Society of the Promotion of Science.

1. Outline of the Intercultural Training program using ICT

The researcher has developed an Intercultural Training (IT) program as an educational support tool using Information and Communication Technology (ICT). This original program aims to cultivate students' intercultural understanding in higher education in Japan. In addition, this original educational support system has a self-learning function with game elements. These two characteristics are not found in LMS like Moodle and the training programs for company profits.

IT has been studied in the USA to develop intercultural competence which enables people to accomplish their aims, to act and relate effectively, and to have a meaningful life in various cultural contexts. IT puts an emphasis on developing realistic skills through empirical studies. Focusing on cultural backgrounds of different people, it uses empirical learning styles such as

role-playing and simulations.

When implementing an IT program, facilitators should consider rather practical aspects such as backgrounds of participants, their needs and purposes, their familiar learning styles, the length of training and a budget (Mizuta, 1989). The content of the IT program, therefore, varies in accordance with these factors (Koike, 2000).

Although IT has been already implemented in higher education in Japan, some problems, such as difficulties in evaluation, lack of time and skilled facilitators, are reported (Kato, 2009). Those problems made it difficult to conduct some academic research on the effects of IT. Our program, therefore, also intends to help teachers to overcome some of the above problems and to make IT more widespread.

IT in this program was developed for the Japanese students in higher education. Following the four goals of IT clarified by Brislin and Yoshida (1994), the program set its aim to promote an awareness of cultural differences, focusing on understanding at the cognitive level. Since it would be used as an introduction to the cultural studies, the content focused primarily on general studies of different cultures.

Those who take the program will answer quizzes, learning about key issues concerning intercultural understanding such as different values and beliefs, stereotypes, high- and low-contexts, verbal and nonverbal communication styles. A learning flow of IT in the program which was created so far is shown in Table 1:

Table 1: A learning flow of the Intercultural Training program

1. Quizzes	Simple quizzes, multiple-choice questions, fill-in-the-blank questions, and description questions are prepared.
2. Description of different opinions	Students can see other respondents' opinions immediately.
3. Forums and twitters	Students can share their opinions with the others.
4. Evaluation	After finishing quizzes, their evaluation for intercultural understanding is shown.

In order to understand the advantages and disadvantages of the program more clearly, a trial program was implemented with Japanese university students in 2010 (Kato, et al. 2010). The findings showed that 1) the online program can promote the respondents' interest in intercultural understanding, and 2) it can help to solve implementation problems of IT mentioned in the above. According to the opinions of the respondents, the program was revised as follows:

Table 2: Revisions to the Intercultural Training program

1. Changes in the contents	
1.	In the introduction, adding a description of the purpose of the program with animation
2.	Changing the order of the content in order to start with familiar common sense to more academic cultural issues (Before) culture – culture shock – values – prejudice – stereotypes – ethnocentrism (After) common sense – values – prejudice – stereotype – culture shock – ethnocentrism – culture
2. Changes in the questions	
1.	More simple quizzes and cloze questions than descriptive questions are used.
2.	The maximum number of questions which is 5 in each section.
3.	More plain explanations in conversational style are used.
4.	Extended explanations will be partly hidden and shown in a linking screen.

2. The experiment of the original IT program using ICT

2.1 Methodology

After making the above revisions, it was necessary to collect more detailed opinions from teachers. Therefore, in-depth interviews were conducted with five professionals. The respondents were one Japanese facilitator, two American professors who specialize in intercultural communication and two British professors who specialize in educational studies. The interview with Japanese facilitator was conducted in Tokyo in 2010, while the interviews with the American professors were conducted at the Intercultural Communication Institution in the US in 2010. In 2011, the last interviews with the British professors were conducted in the UK. The researcher carefully explained the purpose of this research and guided the respondents in how to use the program. All interviews were recorded with permission of the respondents. After going through the program, the respondents were asked the following key questions:

1. Do you think the program can promote the respondents' interest in intercultural understanding?
2. Do you know any similar IT programs using ICT in your country?
3. Do you have any ideas about the evaluating methods of IT in this program?

2.2 Analysis

Firstly, all respondents agreed about the benefits of this program in promoting cultural diversity. Further, they supported the use of video and animation technology to catch student interest. One

respondent said, “the content of the program effectively attracts many students to the study of intercultural understanding and to promote students’ motivations.”

Secondly, as for the question types, all agreed that a quiz form was easy to work through the entire program. In addition, one respondent made the comment, “it is very good to begin the quiz with local issues in daily lives.” These indicate that the revision after the first experiment with the students was effective.

In the interviews, facilitators were questioned about their knowledge of similar training programs. The Japanese facilitator answered that she had never used on-line intercultural training before. Although the two American researchers carried out the online activities using the blackboard, they both mentioned that they had not seen this kind of program in the United States so far. The British professors suggested workshops to raise awareness of intercultural understanding for instructors who support overseas students in their University would be beneficial. Nevertheless, they answered that they did not have a system like this as far as was know. Before reaching a conclusion, further research should be conducted. However, it is fair to say that these remarks showed the uniqueness of the system.

Thirdly, opinions about a design of the system were provided. It was noted that cultural differences are reflected in designs of the homepages on the Web (SIIC, 2010). The respondents in the US and the UK keenly noted that drawing style of the animation in the program typically represents Japanese animations which were very popular among children around the world. They also found that the design was very simple and easy to navigate.

Lastly, interviewees were questioned about the evaluation. Three of the interviewees mentioned that it is very important to set a clear goal of the course and announce it to students thoroughly for proper evaluation. One of them gave an example saying, “I usually set the evaluation based on students’ cognitive understanding of intercultural communication in my course.” These opinions showed that setting a clear goal with thorough explanation to the students are quite important for proper evaluation. In the meantime, one respondent showed her concern with numerical evaluation of intercultural understanding. This opinion was related with the fundamentally tricky issue of assessing the degree of intercultural understanding. Therefore, we arranged that the results will be shown only to teachers who manage the program, while students will get a perfect score if they finish the program thoroughly. However, further consideration of evaluation practices is needed.

3. Further Discussion on Teaching and Learning Methods of IT using ICT

3.1 Clarifying the Aim of IT using ICT as an Introductory Study

The efficacy of the program to promote students' intercultural understanding is tied to the clarity of presentation. That is the program has been deemed useful so long as the aim of the program is clearly outlined for participants.

In accordance with the ARCS model (Keller and Suzuki, 1988), this program is designed to stimulate students' curiosity and avoid boredom during participation. Judging from the findings, it is clear that the program was effective and fully achieved the original purpose in respect to raising students' motivation to learn intercultural communication.

However, the contents of the quizzes are generally simple. For this reason, it was quite difficult to direct students to more profound studies through the program. This indicates that the program should be used as an introduction, and teachers need to consider other methods in order to extend the knowledge and cognitive understanding of intercultural communication studies.

As mentioned above, it is important to describe the purpose of the system to students. After quizzes, students know there are varieties of different values and customs. However, in order to cement knowledge of intercultural understanding for students, teachers must prepare follow-up activities to continue students' development of intercultural understanding.

3.2 Conducting a hybrid teaching method

As for a teaching method, the findings show a certain direction. This original educational support system has a self-learning function, and the previous research with students showed that the program was simple enough to be used without any guidance from teachers (Kato, et al, 2010). However, opinions from the researchers suggest that all tasks of teachers cannot be included in the program: teachers are required to motivate students to learn through the program.

For instance, setting forum and twitter functions where students can express and exchange their opinions with others will not be enough, according to one of the interviewees. Teachers need to make students stick to the program, by monitoring their learning and emphasizing the significance of learning through the program.

In order to accomplish this task, all respondents agreed to implement teaching in a blended (hybrid) method, using both online and face-to-face lectures.

Accordingly, the researcher made the following chart demonstrates how to incorporate the IT program with a hybrid teaching framework:

Table 3: Teaching methods, contents and other supports

	Students reading intercultural communication studies	Other students
Teaching methods	Hybrid	System only
Contents to learn	All	One quiz for one subject
Tasks for students	Given tasks at the lecture	None
Supports by e-mails	None	Yes
Intervention in the Forum	One subject of discussion will be given at the Forum in each topic.	

3.3 Evaluation and Further Empirical Research

If we are premised on implementing the program in a hybrid teaching method, evaluation would mainly rely on assessment given in the face-to-face lessons. In that case, participation in the program should be required as a part of the evaluation.

In addition, it is necessary to conduct empirical research examining the effect of the program. The empirical research will be conducted by interviews, questionnaires and some tests which are generally considered as numerical evaluation of intercultural understanding, such as Intercultural Adjustment Potential Scale (ICAPS).

However, it must be noted that measuring the degree of comprehension achieved by IT is quite difficult. In fact, there are many psychological tests which are similar to ICAPS and these tests need further research to assess whether or not they are appropriate assessment tools for the IT program. Since those academic studies are related to the rational research about the purpose, the definitions of IT and intercultural competence, more time will be needed before conclusions can be drawn. This current situation implies that it is not appropriate to judge students' intercultural understanding solely by ICAPS. Therefore, empirical research appropriate at the present stage should use both objective tests like ICAPS and assessment and evaluation of teachers in the lesson.

4. Conclusion

In conclusion, the findings from the interviews show that the program successfully promotes students' awareness of intercultural understanding. In addition, opinions suggested the need for a more effective method to implement IT using ICT. According to the opinions of professionals, we found that IT using ICT needs implementing in a hybrid teaching method. It is also mentioned that teachers need to monitor students to aid them in learning through ICT; to set and explain the aim of the program more precisely; to use both objective tests and assessment in lessons for

evaluation.

It also became clear that there are limits to using ICT for studies of intercultural understanding. The developed program was effective when used as an introduction to the studies of intercultural understanding. As mentioned above, teachers need to lead students for more profound thinking about the topic. For further study, empirical research of IT using ICT in higher education should be implemented based on the findings of this study.

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Supporting Professional Development through Reflection: A Case Study of Six Student Teachers

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Supporting Professional Development through Reflection: A Case Study of Six Student Teachers

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1. Introduction

The idea that teachers should be reflective is not new. Teachers can shape their professional growth by effective self-reflection: consciously viewing their present situation with perspectives from their past experiences. This enhances their capacity for practice, develops their self-confidence and other personal qualities, and encourages supportive relationships with others involved in the reflective processes. Empowered in this way, the teachers become both independent learners and autonomous leaders, able to practice individualized responsive teaching.

It is impossible to prepare prospective teachers for each and every type of situation they may be confronted with during their careers. More importantly, the children they will teach also need to be prepared for lifelong learning (Korthagen et al, 2008, p. 48). Therefore, the goal of the teacher education program is to develop both a starting competence and a growth competence.¹

However, professional development through reflective practices does not take place automatically and is very difficult, especially for preservice teachers. Prior to enrolment, they will already have had personal experiences with education, and they may have formed biases based on these experiences and may tend to make snap judgments. Lavosky (1994) clearly describes this as follows:

People come to us with strongly held views about education that may or may not be sensibly derived or consciously tested. This tendency to make snap judgments on the basis of personal experience presents a significant barrier to growth- to the learning of new ideas (p. 9).

In addition, they may avoid confronting their failures and may show reluctance and resistance even to looking back on the scene. While exploring teaching through field experiences and reflective practices is the core in teacher education program, not all field experiences are necessarily educative in their professional development. Five common difficulties for student teachers trying to reflect on their practices adequately and sufficiently are as follows (Korthagen

¹ Each of these competences consists of a variety of competencies (Korthagen et al, 2008, p.47).

et al, 2008, pp. 208-9):

Student teachers

- expect their teacher educators to simply tell them what they are doing right and what they are doing wrong and to offer the appropriate solutions and guidelines.
- go off in searching of a solution before they have a clear understanding of the problem.
- are extremely self-centered.
- are happy to find one solution to a problem.
- have very little continuity in the learning process.

This longitudinal qualitative research explores learning through reflection based on a study of six student teachers who studied and are certified in the teacher education program of a private university in northern part of Japan. There are three motivations of this study: to explore how the selected six pre-service teachers reflect on their practices; how their reflection connected to their professional development; and last, to identify what factors (if any) undermine their reflection. Data was gathered from reflective journals, lesson plans, group discussions, post-teaching/observation group discussions, and reflective essays. Such exploration gives teacher educators opportunities to share ideas and to develop their practices. In other words, it becomes a mirror to reflect our own practices.

2. Reflection

According to Dewey (1910), reflective thought can be described as “Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends, constitutes reflective thought” (p. 6). Schön (1986) provides an approach, reflection-in-action and reflection-on-action: Reflection in action; the thinking of what they are doing while they are doing it (p. xi) Reflection-on-action; what is done after the encounter and it “enables us to spend time exploring why we acted as we did, what was happening in a group and so on” (Smith, 2008, p.9).

Korthagen et al (2008) describe the ideal process of experimental learning as an alteration between action and reflection. Korthagen (1985) claims a generic and cyclical process of reflection, termed “ALACT,” named after the first letter of its five stages: (a) action; (b) looking back on the action; (c) awareness of essential aspects; (d) creating alternative methods of action; and (e) trial, which is also the action in the next cycle. In addition, he mentioned the sensory perception of human beings working in accordance with both sides of the brain. He wrote a tentative framework of two modes of reflection: “non-rational” and “rational,” or “right-hemisphere” and “left-hemisphere” (Korthagen, 1993, p. 318). The difference between rational and non-rational reflective practice is in the right hemisphere: “the principle of the

integration of experience is dominant over the principle of logical ordering, while in the left hemisphere the reverse is the case” (p. 319).

While the definition of reflection varies between different researchers, I define it as follows:

through the process of problem solving, to structure and restructure oneself and their teaching with multiple perspectives, organically connecting between their past experiences, current environment, theories and insights, based on professional identity in the duality of human consciousness (Saito, 2009).

3. Teaching Practicum

The practicum comprised of two parts: the Seminar for Future Teachers and mandatory student teaching. Those enrolling in the seminar mainly cultivate their perception of teaching in the first semester (April to July). In the second semester, they observe the lessons and practice their micro-teaching (5-20 minutes) and 50 minutes teaching about once a week (September to March). All the students completed their three-week mandatory student teaching, which is a required course to become licensed. They worked full-time, five days a week, for three weeks.

The length of student practicum was varied in accordance with individual student teachers. Regarding the seminar course, Students A, B, E, F took the seminar course twice (two school years) while Students C and D took it once (one school year). Student B had an additional week of mandatory student teaching, and Student F² had his mandatory student teaching twice – the first teaching for two weeks and the second one for three weeks – because he did not plan to take both junior and high school teaching certificates.

Korthagen et al (2008) mentions three basic principles in professional learning: a teacher’s professional learning will be more effective when directed by an internal need in the learner; a teacher’s professional learning will be more effective when rooted in the learner’s own experiences; and a teacher’s professional learning will be more effective when the learner reflects in detail on his or her experiences (p. 71).

In order to promote this kind of reflection, the university teacher employed Korthagen’s strategy of gradualness and safety (1985, p. 13). He was ready at any time to provide his support for these students with face-to-face and/or e-mail consultation. In addition, he tried his best to reward student teachers for their actions. He never denied but encouraged and challenged student teachers’ autonomous actions, comments and remarks. Instead, all student teachers were expected to act sincerely as a student teacher (e.g., not to be late for appointments with school teachers) and to prepare for their practical training (e.g., to make their lesson plans before they observe the

² Student F spent one more year to get licensed as a part-time student after his graduation.

lessons of their advisory teachers).

In accordance with their practicums, reflective seminars were held. The university teacher prepared important questions for phase two, three and four: “What was the best or worst moment during your lesson?” (looking back); “What was the essential aspect in the moment?” (awareness of essential aspects); and “What would you do if you should have the same moment?” (creating alternative methods of action).

4. Research Methods

A seminar for future teachers provides an inquiry-oriented approach – reflective journals, reflective journals, lesson plans, group discussions, post-teaching/observation conferences, and reflective essays – which became the basis for the student’s reflections.

5. Reflection and Learning of Six Student Teachers

All the student teachers showed their professional development throughout their practicum. However, while there were correlations between reflection and the professional development of Student Teachers A, B, and C, they were not found in the learning of Student Teachers D, E and F.

For example, at the end of the first week of her mandatory student teaching, Student A spent time reflecting on her instruction in a class activities, which led to her overcoming her fear of students. She had been afraid of students for almost two years. On the first day of her practicum, when she was a sophomore, a couple of female students had apparently chatted about her appearance and made fun of her. This bitter experience had become her trauma. When she was a junior, she was assigned as the third teacher of team teaching, but she was so afraid of the students that she could not get close to them nor speak to them at all. She had stayed in the back of classroom and only taken memos for 40 minutes of a 50-minute lesson. The university teacher had said to her, “You didn’t do anything for the students today.”

When she was a senior, in the first week of her mandatory student teaching, she felt an insurmountable wall between herself and the students, and she “could not do anything to students.” She only spoke to her students “artificially.” The mentor teacher said to her not to take it easy to teach in the classroom. While she skipped the phase of awareness of essential aspects, she did create a method of action, which was to say “hello” to students. She was determined to do this no matter what. On the following Monday, she started doing so. After her trial, her communication with students had become active. She reports that by the end of her practicum, one student said to her, “Don’t go back [and become our teacher].” Her reflection pushed her one step ahead, which

was a big step for her professional growth as a future teacher.

Student teacher B also overcame his fear of students. When he was in high school, he had regarded student teachers as good for nothing; thus, he had a one-sided assumption that his students also thought of him in the same manner. During the after-lesson conference of his mandatory student teaching, he said, “During lunch breaks, I never stepped into the classroom in which I just finished my lessons.” This attitude was transformed in the middle of the teaching practicum of the Seminar for Future Teachers. One day, as soon as he stood in front of students, he forgot a question for the introduction connected to the lesson theme. He instantly said, “Hold on for five seconds.” Then students started counting down: “Five ... four ...” and the other students started giggling. “... three ... two ... one ... zero!” The other students burst out laughing, and Student Teacher B also laughed and became relaxed because of this support from the students. In the after-lesson conference, through reflective discussions, the mentor teacher said, “Students helped you today. They seemingly accept you.” The university teacher and his peer student teachers also agreed. This reflective discussion made him more relaxed and improved his reflection.

One day, three months later, he felt he had given the students only information mentioned in the textbook in one-sided manner. He recognized that his understanding of the unit was too shallow to teach his students. He studied the unit harder, found the theme of the lesson and created an alternative method of action, which was to prepare the key question, “What did Edo Shogunate do to control the country?” Two weeks later, in his last student teaching, he used this reflection to prepare a key question about the four feudal classes: “Why did Edo Shogunate set the strict distinction among classes?” In the after-lesson conference, this question was highly appreciated by his mentor teacher, university teacher, and peer student teachers. Reflective discussions had provided him with a way to overcome his fear of students, which made him relaxed enough to improve his reflection.

Student Teacher C, on the other hand, developed his perception of lesson with reflection. At first, under the influence of his high school teacher, he thought teaching was just to impart knowledge on a subject matter and thought that having insightful knowledge led students to follow their teachers. He gradually got some influence from his mentor teacher who often used casual conversations during his lesson. Student Teacher A’s teaching perception that dialogues with students were necessary for lesson success also transformed his idea of teaching.

In his first five minutes of student teaching, he showed his students two pictures. However, he recognized that the students only looked at the pictures and showed no interest. He skipped the phase of the awareness of essential aspects and created an alternative method of action. He said, “I should have asked students something like ‘What picture is this?’ [to draw students’ interest].”

He recognized that only showing pictures did not work and that it was necessary to ask students questions in order to draw their attention.

In the after-lesson conference, he mentioned that every teacher had their own personality and that by utilizing this, their lessons could be more interesting for students. He had kept himself away from student teaching for two months,³ but in his next lesson, he prepared a worksheet with some blanks in order to create some opportunities to talk with students. His reflection provided the hint he needed to transform his perception of lessons.

However, it cannot be said that the reflection performed by Student Teacher D, E and F was connected to their professional development. Student Teacher D enrolled in the Seminar for Future Teachers and did her student teaching when she was a sophomore. In her first micro-teaching, her casual conversations made the lesson lively. However, one day, she suddenly became afraid of students: "As a whole, students showed little response. I should think how to draw their interest [in the content of the lesson]." Because of this bitter experience, she kept herself away from student teaching. Two months later, in the next teaching, she suddenly gave up teaching and asked Student Teacher A (who had been observing her lesson) to teach Asia-Pacific Economic Cooperation (APEC) in her place, because she felt she could not explain it well enough. In the after-lesson conference, she said, "I did not have enough time to prepare for the lesson because I had a paper whose due date was yesterday." "To say honestly, because of last time, I felt students wouldn't show me any response. So I supposed only telling the information about the subject matter of today's lesson was enough."

Student Teacher E also showed a half-hearted manner in regard to his preparation. When he was a junior, he had reflected his lessons as follows: "It is difficult to understand the content [for students]. I used a riddle, and mentioned [Mr.] Higashikokubaru [then Governor of Miyazaki prefecture] to facilitate students' interest." Looking back on the scene, he said, "Regarding the action, I think I could get students' attention. But [I] neither organize before and after nor summarize the part and [each part of the lesson was] completely separated." He recognized that without organizing the lesson, students could become confused about what they had been learning. He went on to describe the phase of creating alternative methods of action: "In this lesson plan, I should have put a quiz in the beginning of lesson set and I should have more organized lesson plan in my mind." The university teacher analyzed his reflection as ad hoc, because Student Teacher E did not consider how he could not organize his lesson.

³ Student Teacher C felt that no matter how hard he studied, he could not get a teaching position because of the very competitive situation of the teacher employment exam, especially in Hokkaido. The acceptance ratio of Hokkaido Public School employment exam (2008) is 1 in 20.8 for a junior high school social studies teacher and 1 in 83.8 for a high school social studies teacher.

Student Teacher F also had troubles in his reflection. His talks were frequently off-topic, and the learning of his post-teaching group discussions was often undermined. One day, he looked back on his teaching and said, “It looked as though students didn’t know [the name of the founder] when I asked the question, ‘Who founded Buddhism?’ It was like they were grinning a little.” The university teacher asked him, “How did they feel and why did they give you such a response?” He answered, “I should have adopted flexible measures.”

In another scene, a student-teacher peer asked him, “Was your lesson plan suited to your students?” He answered, “This was a bad lesson plan.” Student Teacher F was not aware what was asked of him nor what was told to him. Group discussions about his lessons were always held in this way, so the learning of student teachers did not develop at all.

6. Discussion

There were apparently three common elements in promoting the learning of the six student teachers through teaching practicum: autonomous action and some success; interactions and human relationships with students; and finding some fun in teaching. They are all linked with the sense of efficacy of student teachers. Especially, interactions and human relationships with students were crucial. These were, for the student teachers, the source of their motivation to become a teacher. Student Teacher E especially got his confidence as a teacher from cheerful conversations with students. However, Student Teacher D, E, and F did not receive learning and support from peer student teachers and thus they were unable to improve on their ability to reflect. The three student teachers lost the confidence of other peer student teachers. This deprived them of their opportunities to develop through reflection.

It was clear that Student Teachers A, B and C learned ideas and perspectives from peer student teachers. Student Teacher A was apparently influenced by Student Teacher C. First, she thought that teaching social studies was just to lead students to memorize information about the subject matter and thought that it was enough to know the contents of the textbook. But Student Teacher C looked at the lesson from the opposite point of view and believed that the more knowledge a teacher had on the subject, the more the students would follow them. She had come to pay attention to what was the main objective of the lesson. Student Teacher C was also somewhat influenced by Student Teacher A. He came to put greater importance on interactive communication with students during lessons.

Due to a lack of knowledge regarding subject matter, she had a sense of inferiority around other prospective teachers. Those around her knew this and suggested that she should have given up becoming a teacher in the beginning. However, thanks to her endless efforts, she gradually acquired their confidence and support. Overcoming her fear of students also helped to change the

cynical feeling among others around her. A friend who gave up becoming a teacher said to her, “Only 1 in 40 passes the employment exam; you should be the one.” It was apparent that she had received a lot of support and learning from others.

Regarding Student Teacher B, the other five student teachers observed him teaching in school and gave some comments and remarks on his performance. He once used “a public execution” as a metaphor for lesson study. This showed that he felt vulnerable. But he made his best efforts to improve his lessons based on such remarks and comments. The last lesson of Student Teacher B was well appreciated by his peer student teachers, which apparently gave him some confidence in his teaching.

On the other hand, Student Teacher D’s half-hearted manner drew criticism from other student teachers. In the discussion after the APEC lesson she gave up teaching, Student Teacher B said, “You didn’t take any responsibility as a student teacher!” She was interested in studying Japanese⁴ and not in learning to be a teacher. She took the teacher education program in order to develop herself through using Japanese. Thus, she lost her motivation when she felt she was not gaining anything good from student teaching. Her logs in her reflective journals were very shallow; furthermore, she did not submit her journals by the due date. This attitude led other student teachers to feel she was not serious about becoming a teacher and that therefore providing her with comments and supports was no longer a meaningful exercise.

Student Teacher E clearly showed no interest in learning from the literature or from others, especially not his peer student teachers. First, he thought that teaching was just enlivening the atmosphere of students; in his point of view, it was not necessary to learn to teach. When he was a junior, for example, he attended classes of “Pedagogy of Social Studies”⁵ only 6 times and was late for the class as many as 15 times. Whenever the university teacher asked him to refer to the literature to write some papers, he went to the library and borrowed some books but did not read them at all. The university teacher set the due date for the final paper of “Student Teaching 1” as January 12, but he submitted it on March 2. He showed such attitudes not only in the university teacher’s courses but also in other faculty members’ courses. According to other professors and peer student teachers, he was frequently late for classes and fell asleep in the middle of lessons. A professor stopped by the office of the university teacher and said to him, “Is it OK that such a student is going to be a teacher” Another professor told the university teacher, “I can’t accept only [Student Teacher] E [because of his dishonest attitude].”

In addition, Student Teacher E also had too much of a sense of rivalry with his peers; for example, he told the university teachers, “My teaching is much better than theirs” “I don’t let them say ‘I

⁴ Student Teacher D was an international student from South Korea.

⁵ The course consists of 30 an hour and a half morning sessions.

have been learning in teacher education program' if they can't say anything about their perception of education and teaching." Because of this, he hardly listened up others' advice. While the university teacher defended him and believed that his experiences of student teaching would give him the opportunity to explore and develop himself, his peer student teachers gradually felt reluctant to say anything about his student teaching. In addition, such a half-hearted manner even kept him away from micro-teaching. Thus, he always thought of his lesson within his "small world," without enough experiences, subject matter knowledge nor pedagogy to reflect his practices.

Student teacher E was also too obsessed in expressing himself. He depended on expressing himself and gaining positive responses from students to feel that he was capable. He had very strong, complicated feelings about school, because, according to him, he had been bullied and ignored in high school, even by a teacher. The university teacher assumed that becoming a teacher was a tool to make up for his sense of deficiency. To become a teacher was his challenge to find his self-esteem. There were some student teachers who welcomed his remarks, but others kept themselves away from him. One student teacher said to the university teacher, "It is difficult to get along with him."

In regard to Student Teacher F, the university teacher was not able to see how Student Teacher F reflected, or whether he did it at all, because what he talked about was so often off-topic. When the university teacher or other peer student teachers asked questions about his performances and ideas, he often did not see what to say. Then, they changed questions and asked easier ones, but his answers were again off-topic. Sometimes, when relaxed, Student Teacher F spoke to himself in a kidding tone, saying for example, "(I) got perplexed and perplexed. How should I say?" Then his next answer would again be off-topic. When he was nervous, he stared the questioner and said nothing. He seemingly halted his thinking. The university teacher thus assumed he had an Asperger syndrome. Because of this communication, other peer student teachers became cool to the idea of participating in the after-lesson conferences of Student Teacher F. One day, the university teacher met another student teacher, and asked her to observe his lesson. She responded the university teachers that she felt attending the after- lesson conferences was waste of time. The university teacher tried to find a way to bridge the gap between Student Teacher F and the other peer student teachers, but his actions did not work.

Student Teacher F had also had the experience of being harshly bullied for a year in junior high school. According to him, such bitter experiences had kept him away from others in his high school and college days. He told the university teacher, "I told you I don't like to examine myself, didn't I." From this, the university teacher wondered if reflection could give him some mental damage. In the view of the university teacher, Student Teacher F was also becoming a teacher to overcome his bitter experiences of junior high school. For the three student teachers, especially E

and F, the teacher education program was not a learning community.

7. Implications

In this study, three student teachers who had good relationships with their peer student teachers used reflection to promote their professional development, while those who didn't have good relationships did not use reflection well enough to develop themselves professionally. Their recognition of the nature of teaching and education also remained less developed. Korthagen (1985) mentioned the term "safety" and emphasized acceptance, empathy and genuineness of university teachers. This idea should be extended to their peer student teachers. It is very crucial to create communities in which student teachers can accept each other, have some empathy and show genuineness with each other. Professional development through reflection is not done alone and should be supported by others, especially by peer student teachers as generally they should be able to relate better than university and school teachers. They could share experiences, uncertainties, worries and pleasures as fellow student teachers. This is the positive experiences of learning and becomes the foundations of self-learning.

However, teacher educators have to cope with people from a variety of different personal backgrounds and early educational experiences. How to take care of those who are disrespectful to others and who could be excluded by peer student teachers still remains a big matter. Student Teachers D, E, and F, for example, did not feel their internal need of reflection and their professional development while they pursue acceptance from others. They were not aware this was a fatal blow to their professional growth.

Frequently, elementary and secondary schools are very reluctant to accept student teachers, especially those who behave like these three student teachers. University teachers are also indirectly responsible for students in cooperating schools, so it is reasonable that they should ask such student teachers to find another career before their going to student teaching. The university teacher also wrote:

I cannot accept their half-hearted manners in lesson preparation and reflection. They not only undermined their learning but also other students' learning. Rather, they should not have been qualified as a student teacher, because it is rude to send such student teachers to cooperating schools (and it is possible for such student teachers to undermine the quality of education for students in these schools).

However, this perspective is a double edged sword in the field of clinical education. Student teaching created huge opportunities for their individual development. Saito (1969) strongly believes "it is the foundation of education that any person has the unlimited possibility and the

desire to foster, develop and transform themselves to be richer and is capable of it (p. 4).” Teaching is a creative work of constant exploration. Teacher educators should not give up any student teacher because they are not able to make their best efforts. Being able to do one’s best is a norm of school culture in another view. It is time we review the school culture and grow out of “ableism.”⁶ Indeed, finding ways to support teachers such as Student Teachers D, E, and F can be a litmus test for discovering good teacher-educators.

Acknowledgement

I am very grateful to the six student teachers who have given me many learning opportunities and helped cultivate my perception of teacher education.



⁶ Yoshii (2006) points out the discriminatory aspect that people praise and encourage “being able” while they regard “not being able” as inferior in accordance with their norms.

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AN INCLUSIVE SPORT CURRICULUM AND FRAMEWORK

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Abstract

An inclusive experience is both humane and an individual right (UN Convention on the Rights of Persons with Disabilities, 1993). The United Nations and organizations such as Inclusion International provide global contexts for the human needs of individuals with disabilities. The United Nations Economic and Social Council's (2010) report on social development and integration highlight the continued disparities in our communities. History illustrates to humankind the altruistic need to sufficiently address the individual and communal human experiences within a society to ensure positive outcomes for the most vulnerable. Current local policies communicate the humanitarian value of inclusion; however, community efforts beyond the classroom's inclusive experiences are warranted (Wise, 2001). Individuals with disabilities have a right to enjoy a full life. Inclusion has many avenues for implementation, including those in their communities and beyond the education classroom.

Ebesugawa, Wensley, and Murphy-Sims (2010) examined a community program that provides inclusive experiences for children with and without disabilities. The results showed that 95% of children in the program benefited in some aspect of their development. Exceptional Karate (E-Karate) is rooted in common basic principles from three forms of Karate: Wado Ryu, Kyokushin, and Taekwondo. E-Karate employs an inclusive curriculum for all children based upon the principles of altruism, respect, learning, development, and inclusion of all members of the community. Bandura's social learning theory (1977) and Vygotsky's scaffolding concepts (1978) predict this model of learning sports would be advantageous for most students. Presented here is a case study in the underlying principles and theory of the E-Karate curriculum and foundations.

Inclusion has been discussed both internationally and locally as a worthy goal, a human right, and an altruistic action. Implementation of inclusive education programs has been mandated in the U.S. (IDEA, 1975, 2004). Community programs that were exclusively for people with disabilities began soon thereafter. However, very few community inclusion programs were founded until 2000 (Young, 2001; Wise, 2001). The Exceptional Sports Program was set up in 2000 to provide sports activities for all children in a California Bay Area community. Our study looked at the E-Karate sport program's inclusive curriculum and its foundations in altruism and volunteerism.

The UN Convention on the Rights of Persons with Disabilities in 1993 defined inclusion as humane but also as an individual human right. The 2010 report from the United Nations Economic and Social Council highlighted the continued inequities in our communities when it examined social development and integration. Inclusion International, an international group of organizations dedicated to advocating for the inclusion of individuals with disabilities into the community, works to provide advocacy for inclusion and accessibility in 114 countries. They have also documented the global lack of such inclusive programs in our communities.

Through the strivings of individuals with and without disabilities to be treated as equal under the law, United States federal law (IDEA, 1975, 2004) required school districts that receive federal grants for education must include children with disabilities in the least restrictive classroom environment to meet their educational needs. This was the beginning of implementing inclusion in the educational system in the United States.

Nonetheless, inclusive community activities in the U.S. were almost non-existent (Wise, 2001), even though many community activities such as the Special Olympics (Chicago Tribune, 1968) were exclusively created for people with special needs. However, these programs only work through the efforts of many volunteers who value community and service to others. Exceptional Sports, a volunteer-based program, was one of the first United States programs to incorporate inclusive educational curriculum strategies into their communities through sports (Ebesugawa, Wensley, Murphy-Sims 2010).

Learning can take place in many environments: school, home and the community. Vygotsky observed that "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers" (1978 pg 86) was a zone of proximal development. Psychologists like Bruner and scientists such as Hoffmeyer (Wood, Bruner, Ross, 1976; Ivic, 1994) have coined the word, "scaffolding," which can be described as just enough physical support or encouragement and/or physical demonstration as a bridge or a temporary scaffold to learning a new skill.

This type of support encourages growth and learning in the child. It is a natural and intrinsically available skill that can be adapted to any learning experience where children participate. It is not doing it for the child, instead it is enabling the child with a scaffold to do it for themselves. Scaffolding also embodies an intrinsic quality of altruism, the helping of another for that person's gain (Haski-Leventhal, 2009). Rogers (1951) also studied this kind of support from the point of view of psychotherapy and how to help clients become emotionally healthy individuals.

Through his studies he created a highly influential approach that he eventually called person-centered. He applied this approach to education in 1951, and fully expanded the theory in 1969 in his book, *Freedom to Learn*. The essential theoretical underpinning is one of unconditional warmth and acceptance given to the person who would like to change, grow or learn something new by the teacher in the same way the therapist could do it in the psychotherapeutic relationship.

Bandura's social learning theory (Bandura and Walters, 1963, Bandura, 1977) informs the discussion of inclusive education or learning because children with special needs who imitate the actions of others, who are typical in their development, can learn intrinsically what they are supposed to learn: social skills, communication, language, and other skills such as Karate. This is experiential learning at its best. The children are socially rewarded through inclusion in a group (Watkinson, 2010), whether it is in their family, a group of friends, or a classroom. Australians also looked at inclusion in sports. One program for a community-based football (soccer) team was studied. Maynard, et.al (2009) found that the football team could be used as non-clinical, community-based occupational therapy because it was so beneficial to the participants.

Being socially ostracized has been shown to be very painful (Harlow, 1958) and deleterious (Neurons to Neighborhoods, 2000). Being allowed the chance to imitate others over and over until you attain your goal of being able to do the action or master the skill is considered a rare opportunity in the community right now, especially in sports like martial arts. Rao (2008) showed that the sensei's ability to challenge ideas about who could or couldn't belong in the dojo (place of practice and study), a focus on the competence of the student, plus his perspective on teaching were important to creating a community at the dojo that was welcoming to all students. A sensei is the black belted (Highest Degree of mastery) teacher or master of Karate who instructs at the dojo.

Inclusion team sports programs can be underutilized as children age (Liu, 2009). E-Karate allows for continued participation into adulthood. It also allows parents to join the class along with their children. Lantz (2002) studied family development and how various martial arts programs were perceived to enhance family development. He found several themes identifying enhancement including self-defense, self-confidence, physical vitality, concentration, respect, friendship, moral development, spirit, training for life, grades, and respect for life.

Inclusive sports team programs in England and Wales were examined and it was found that certain themes emerged: sports for all, social cohesion, a pathway to work, and giving voice (Kelly, 2010). Even though these programs had varying degrees of success in relations to these themes, Kelly discussed the risk that the programs could have limited impact on exclusionary processes. Another study found symptoms of social anxiety lessened by team sport activities in primary school age children (Schumacher Dimech, Seiler, 2011).

Studying E-Sports programs such as E-Karate has shed light on the benefits to all children (Ebesugawa, Wensley, Murphy-Sims, 2010). 95% of the children in the study showed through validated standardized test measures to have benefited in one way or another from participating

in the E-Karate inclusive community sports program. These kinds of inclusive sports programs could lead to having inclusion become an expected method of learning (King-Sears, 1997).

Method

The founding principles and curriculum of E-Karate were examined. Our research question was, “What are the underlying principles and theory of the E- Karate curriculum and foundations?” The method was a phenomenological study of just one case, the founding of the E-Karate program. The two founding sensei were interviewed using a semi-structured interview. The interviews were taped and then transcribed verbatim. The data was coded by two coders and found to have several themes. The themes that emerged from the data will be discussed in the following section of the article. Limitations to this study included a small sample size, two E-Karate Sensei. This limitation was addressed by using a case study qualitative data collection technique. Case studies provided in-depth information and can explain a phenomenon well. Inter-rater reliability of themes was the second technique used to address the second limitation, the Halo Effect. Both researchers reviewed the data to explore common themes within the data. The following is a summary of the results, which were gathered.

Results

Structured like a Tree

The sensei chose to structure the learning like a tree. The following quote describes this well.

You can think of kind of a tree, as it gets higher and higher you got different limbs branching off from the base of the tree. If you think of a hybrid that’s sort of the picture you can think of in your mind. Where you might learn different techniques, different ones that I was trained in Kyo ku shin which is full contact sparring or fighting,. I might be able to teach the advanced students some of those techniques. The other Sensei’s style, Wado Ryu might be able to teach the advanced students techniques from his training, so that might be specific to each in the short term. Who has reached a black belt and is component to teach. (Sensei 2)

The Sensei described how the program started with the foundations of Karate. The basic katas, then added more complex movements and sequences, then add more rigorous skills to a finer degree with the fruition of the values of community service, mastery of a skill, inclusion in the community, and just plain having fun. This is just like how the trunk first becomes branches with twigs, then bears leaves, and then lastly produces delicious fruit.

Different Styles

E-Karate is a unique blend of three styles of Karate: Wado Ryu, Kyo ku shin, and Tae kwon do. The idea of inclusion was first implemented at the level of decisions about what to teach from the styles of all instructors or sensei. The basic kata have many variations and some were chosen from each style. Another way that inclusion was implemented was requesting input from other professional’s input such as Occupational and Physical Therapists as well as Educational

specialists so that different styles of therapy were also incorporated into the E-Karate method. Sensei 2 eloquently describes this unique blend here.

In martial arts there are things that are pretty consistent, amongst most, across different styles. For example, for Kyo ku shin, Wado Ryu and Tae Kwon Do you have kata. Pre arranged movements that are done in a sequence. There are a limited number of them for each kata. Basically we have some similarities in the kata that each of us do. The basic thing like blocks, like high, middle or low. The basic punch and basic stance. There's a similarity between our kata that were similar that we could teach them without conflicting or crossing over into each other's styles without confusing people. So that's essentially what we did trying to find the similarities of what we taught [...] we did that at several different points over developing the course. So like occupational therapist or physical therapist come into class and work with a student. At different times it may have been a parent, who might have learned something from a physical therapy session that would be helpful including in class, like a balance board. Just over the course we have tried to use different professionals to makes suggestions or observations that would be helpful.

Differentiated Instruction

Used in E-Karate, the concept of scaffolding was incorporated into several parts of the program. Sensei 1 illustrates how the E-Karate program accomplishes this in the following quote.

You would get a variety of movement that wouldn't look exactly like what the instructor was asking them to do and over a time if the movement wasn't corrected then the wrong movement might be trained into the student. It was important for an instructor to move an arm and a hand into position the body in the correct direction, just to make an adjustment to make sure the student understood what the movement needed to look like and how to move progressively.

A place for scaffolding in E-Karate is in this adaptation of the Kata, a basic sequence of approximately 20 movements specific to all three forms of Karate used in E-Karate. The Kata adaptation is for children to approximate the movement. E-Karate sensei decided to change and adapt movements to allow each child to be able to be as successful as they could. Instruction was tailored to each child's needs. They used methods such as hand over hand instruction to demonstrate the movement.

These children may have conditions such as Cerebral Palsy or Ataxia or a Regulatory Disorder (D-C 0-3, 2000). This scaffold allows the child to feel successful and continue to strive to get closer and closer to the actual movement expected. Over time they do become able to do the Kata and go on to lead the group like a Sensei, which is scaffolding for another skill, leadership. Sensei 1 stated the following.

They were able to perform the movement that was no different than one of their typical peers. They were able to master the form at that level enough to be able to lead a group. [...] So the students who come to the E-Karate program, they have the ability to have leadership skills too. That's kind of encouraged too. We want them not to be afraid to get

up in front of a group and to lead an exercise, a kata, something, so they learn how to do that early on.

He explained clearly how children can become caring and leaders in their communities.

the goal of our program is really to develop the child and help them be successful. Not just in doing karate movement, but more to develop their character and to also learn how to become social with other children. I think one of the things we discovered as we were teaching this class. Not all of the kids are going to continue a become black belt people. They are going at different points do different things in their lives. So if we can give them a foundation on how to be able to care about your fellow student in class that can help them develop to care about their fellow man or woman as they grow up. Also a desire to care about other people.

Another scaffolding approach was when children are paired off to stretch. The Sensei instructs them to take care not to hurt each other in the process and be self-aware so they can communicate with their partner. They are expected to communicate with each other and help each other. Typical children are paired with children with special needs. Each helps the other as the need for a partner to stretch sets up the mutual “win-win” situation and an opportunity to learn communication, social skills, leadership, self-awareness, self-control, and altruism in a safe non-overwhelming group size. One can be a leader if they know what to do while the other can have an opportunity to experience a child with special needs that are different from their own.

If they are working for example in the beginning of the class in partner stretching, they have to learn how to talk to each other in order to help each other. It would be bad for one child to be pulled really hard during a stretch and possibly hurt his partner. But if they are told to gently pull. That will be reciprocated to the other child. They will see I pull gently and the other person will pull me gently. But if I jerk at them hard, they are going to do that to me and that will not be as fun for me. So they will also have the coaches monitoring that and if they need assistance in how to do this they will get the instruction. Or the coaches will perform the exercises with the pair. (Sensei 1)

Providing a coach as needed for specific practice of a section of a Kata sequence is an aspect of the E-Karate program and one more way that scaffolding is incorporated into this inclusive community sports program. The coach can be a more experienced child with a higher degree of mastery or a volunteer adult or parent who does the coaching. This allows one-on-one learning, where scaffolding for leadership happens for the child coach and scaffolding for learning Karate happens for the child with special needs.

Altruism and Volunteerism

As mentioned before, children and parents or other adults as coaches and the sensei are volunteers who instruct others in Karate. The value of service to others is built into the program’s structure. Also more experienced peers help each other to stretch and practice sparring. These values are also talked about and acknowledged when the sensei instruct the children and others who participate in the community class.

The coaches their background and what they bring to the program and respecting what the class and what the students bring. They are there to learn but over the years, I think this has been true for me. I've learned quite a bit from the students. For however long they were in the program, they have taught me different things. It's hard to put into words what that does, when you are teaching a child that has severe learning delays or if you are teaching someone that has teaching delays or is hyperactive. Then after maybe a couple of sessions and you notice a marked difference or you notice marked difference in their actions or how they relate to the other students, to their family. [...] We also have some kids who are volunteers. They have been in the program. We usually ask if they will peer coach helpers. They are assigned to a group where they will be helping out 1 or 2 other children. They usually have a couple of years in E-Karate before they will do that.

(Sensei 1)

Respect and Self Control

Self-respect and respect for others is learned in both the instructions by the Sensei and in modeling by the Sensei. Bowing is class. The children are shown and expected to do this along with those who attend the class. It is also an acknowledgement of the Sensei, peer or coach if someone is about to engage in Kumite, a test of fighting skills between two opponents; also called sparring. Thus modeling and group participation are important components of E-achieved by honoring the person with a new belt or a stripe on a belt.

I think we want to bring in an element of the E-Karate culture in there being primarily being respect. Having a deep respect for each other student and the teacher, and just as much we want there to be an aspect or relationship of family, feeling like they belong. They belong to the relationships and they are personal to them. Its not just a place they go to defend themselves, its more than that. (Sensei 2)

I think it's because of the entire philosophy, that we're working to teach kids with different learning style that its critical as instructors that we help one another. In order to teach kids, we're going to have to help each other, and in order to do that, it's counter-productive to have the mindset that say that your style is superior. The driving force behind that is that there has to be a collaborative expectation that if you are going to be an instructor teaching E-karate that you are going to have to collaborate and learn as well as teach. (Sensei 1)

Self-Control fosters the education of social and emotional skills. In the E-Karate the Sensei's, coaches, peer coaches, parent helpers, and the children who participate in E-Karate model self-control. Leadership opportunities in E-Karate encourage community leaders. Self-control has helped children become leaders. Even Autistic children and children with significant delays have the opportunity to lead. The process of teaching self-control and respect includes becoming a leader.

Process

The E-Karate program developed over several years. The directors and instructors engaged in a process to develop the program they have today. This process is continual. Sensei 1 describes the paradigm shift he had to make in order to assist in developing the E-Karate program.

I think one of the things I felt challenged with was I was going to not just be teaching a style, of which I got a 2nd degree certificate and black belt from, but I would be taking and allowing myself to learn another style, and I think my instructor was not in agreement with it when I first told him.”....”I think one of the things is, when I told him the good we were doing with the kids and how much I was enjoying doing the E-Karate program together with you and he could see that that was a difference. So I think that at that point he saw that that was what I was going to do now. (Sensei 1)

The two directors described how they had to collaborate together to create the E-Karate Program. Sensei 1 expressed, “I think there is a lot of creativity that goes into this, there wasn’t a system in place.” Sensei 2 stated. “We just kind of set up this system of teaching. Two different instructors were from two different styles. We had to do a lot of collaborating and creativity.” The children participate also in a process by learning how to engage in an inclusive E-Karate program

If you were at any martial arts school you would see the children do warm up exercises that consist of doing some stretching. This is one of the things we teach in our class too. Also some exercises to help build muscle or muscle strength in the lower and upper body. We have stretches, which are specifically to help the students engage with each other. And the students will often become partnered if you are a typical child you would be partnered with a special needs child. And this is so they can get used to being around one another and also to help them start to foster and start to begin a relationship or friendship. (Sensei 1)

Family

The last theme that emerged included that the E-Karate program encourages the children and families to engage together beyond a physical sports activity. They facilitate the building of family and inspire the children to have fun. Sensei 2 summarized his thoughts by expressing the following.

I think with Ekarate that the students have a philosophy. The program is driven by the students, and a setting or atmosphere of family and relationships. Making the setting the class engaging for the students and fun for the students. (Sensei 2)

Summary

The themes, which emerged from this research effort included, the tree metaphor, differentiated instruction, different styles of karate, altruism and volunteerism, respect and self-control, process, and the family building. The use of qualitative case study techniques through interviews provided a rich description of the E-Karate programs, inclusive framework, theory and philosophy.

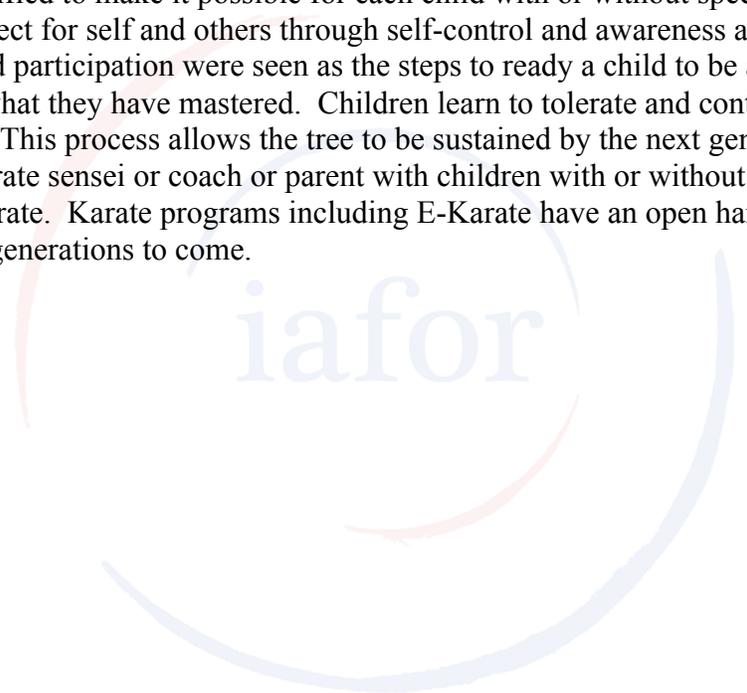
Discussion

Inclusion of the community’s most vulnerable in community sports programs has been shown to be beneficial in many ways. Having inclusion become Best Practice for all programs would be

an excellent outcome from our research. The founding principles and the curriculum formation for the E-Karate community sports program was examined. We were interested to understand in depth the principles and curriculum decisions of E-Karate.

What was found was volunteerism and altruism were the key themes that began the Exceptional Sports Program and that E-Karate was like a tree that now has fruit. Different styles of Karate were included as a model of inclusion itself. Differentiated instruction was the key theme for curriculum formation. Curriculum strategies were learned from outside therapists and specialists and then included in the formation of the curriculum. This was another way that inclusion was modeled.

Inside the curriculum, decisions were made to make sure each child was successful and respected for their abilities and their efforts. The standards were not lowered, but the way to get to the standards was modified to make it possible for each child with or without special needs to attain the standard. Respect for self and others through self-control and awareness along with communication and participation were seen as the steps to ready a child to be a leader teaching or demonstrating what they have mastered. Children learn to tolerate and control stress through the entire process. This process allows the tree to be sustained by the next generation of students becoming an E-Karate sensei or coach or parent with children with or without special needs that participate in E-Karate. Karate programs including E-Karate have an open hand philosophy, which can benefit generations to come.

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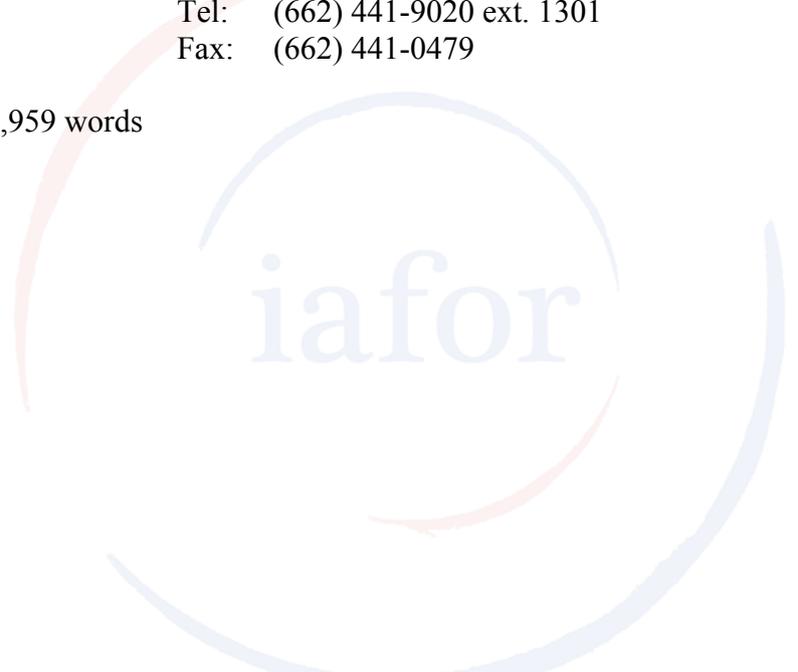
Title: Using a Handheld Device to Enhance Undergraduate Students' Understanding of Spectrophotometry Principle

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Using a Handheld Device to Enhance Undergraduate Students' Understanding of Spectrophotometry Principle

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Abstract:

Spectrophotometry is a technique frequently used in chemical and biochemical analyses. For this reason, it is covered in undergraduate science course. However, many students have only a weak understanding of spectrophotometry principle and its application. One reason is that the instrument used is perceived by the students as a “black box. Therefore, a simple device was developed to demonstrate what is going on in the instrument. It is implemented to second year university in introductory biochemistry laboratory course. After learning through a learning-cycle based laboratory using this device, students' conceptual understanding of spectrophotometry was statistically increased after completing this laboratory class. Also the achievement scores of students in the intervention class were significant higher than that of students in the conventional class.

Keywords: inquiry, learning-cycle, spectrophotometry, undergraduate laboratory

Introduction

Spectrophotometry is a technique frequently used in chemical and biochemical analyses (Bacon, Mattley & DeFrece, 2004). This technique involves the use of a spectrophotometer to measure the relative light intensity as a function of the colored, or more specifically, wavelength of light. The power of spectrophotometer is that it gives absorption spectrum light absorption as a function of wavelength) that is possible to identify the substance. As the intensity of the absorption can be related to the concentration of the substance in the sample, it therefore, allows the determination of the amount of the substance in a solution. For instant, undergraduate science curriculum devotes a substantial amount of lecture time on spectroscopy and there is a laboratory session on spectroscopy.

Usually the topics relative to spectrophotometry are introduced by explaining handling and operation of spectrophotometers and by introducing the Beer-Lambert law (Fialho, Rocha & Mello, 1999; Lema, Aljinovic & Lozano, 2002). It was found that the spectrophotometer is perceived by the students as “a black box”; samples are introduced into one end and the desired data simply appear at the other (Carbó, Adelantado & Reig, 2010; Thal & Samide, 2011). Therefore, after year of teaching, students have a weak understanding of the basic spectrophotometer concepts (Otto et al., 2005). They poorly understand the relationship between intensity of color and absorbance resulting in unable to use the spectrophotometer to further quantify substances (Fialho, Rocha & Mello, 1999). Therefore, an effective teaching strategy that makes students easily understand spectrophotometry principle is required.

Research studies have shown that the learning cycle is an effective approach to engage students in meaningful inquiry and promote students understanding of scientific concepts as

well as create positive student attitudes towards laboratory (Keeraticahmroen et al., 2010; Sriwattanothai et al., 2009). This approach may be suitable for enhancing students understanding spectrophotometry principle. However, not only an effective teaching strategy but also instruments influence students understanding of the concepts and their attitude toward learning (Malina & Nakhleh, 2003). Thus, a simple device that helps students visualize what is going on in the spectrophotometer is also needed.

In this research, we developed a simple handheld device using various colors of light to demonstrate absorption and transmission of light by a substance as occurs in the spectrophotometer. This device was integrated with the laboratory-based learning cycle to challenge undergraduate students to construct knowledge, conceptualize the key spectrophotometry concept, and be able to apply that concept to quantify other substances.

Literature Review

The Learning Cycle Approach

The learning cycle approach was first developed by Robert Karplus (Karplus, 1977, 1980). It is based on constructivist epistemology of learning science in which scientific knowledge is seen to be actively constructed by the learner rather than discovered (Duit & Treagust, 1998), and is socially validated by the scientific community and goes beyond descriptive accounts of the natural world. Scientific knowledge cannot, therefore, be learnt from sensory experience alone (Leach & Scott, 2003). Consequently, the best teaching in science is learning driven, and occurs when students have more time to explore and experiment with phenomena and hence encourages learners to develop new knowledge schemes that are better adapted to experience. The experiments or practical work, according to the learning cycle approach, are considered to be used as experience for new concepts and insights to interact with the students' own initial conceptions, and then to apply the concepts to a new situation. In such a class individuals are actively engaged with others in attempting to understand and interpret phenomena for themselves, and social interaction in groups provides the stimulus of differing perspectives for reflection. The teacher's role is to provide the physical experiences and act as facilitator for student construction of knowledge, and help students learn meaningfully, to achieve quality over quantity and meaning over memorization.

The learning cycle is, as Lawson (1986) notes, an inquiry-based teaching approach comprising three distinct phases of instruction that are exploration, term or concept introduction, and concept application. In Phase 1 (exploration), students are given an opportunity to make observations, perform experiments, collect, examine, and analyze data or information, and investigate relationships dealing with the topics being introduced in the classrooms. In Phase 2 (term or concept introduction), students organize and analyze data obtained from the first phase, and the teacher introduces new terminology. In Phase 3 (concept application), students are encouraged to apply those concepts to solve new problems. A key element of the learning cycle approach is that the exploration must precede invention and discovery, so the students could explore and experiment in order to allow more time for new concepts and insights to interact with their own initial conceptions (Lindgren & Bleicher, 2005; Renner & Lawson, 1973).

The researchers believe that the learning cycle approach is best addressed to engage students in meaningful inquiries and to help students construct meaningful concepts. This is because the learning cycle approach provides students with experiences in generating both declarative

and procedural knowledge (Lawson, 2001; 2003) and has been reported in science education research to be an effective method that promotes students understanding of scientific concepts, reduces misconceptions (Lawson, 2001), improves student's thinking and reasoning abilities (Musheno & Lawson, 1999; Lawson, 1986; 2001), as well as creating positive student attitudes towards sciences and scientific inquiry (Bevevino, Dengel & Adams 1999).

Research Questions

This study was conducted to investigate the effectiveness of newly developed learning cycle on teaching spectrophotometry principle to second year undergraduate students taken biochemistry course. The following research questions framed this study:

1. Can the newly developed learning cycle activity promote students' understanding of basic spectrophotometry concepts?
2. What are the student perceptions toward the laboratory unit?

Methodology and Method

Development of a simple device as a part of spectrophotometry laboratory

The device composed of two main parts: light source and sample holder. Different light emitting diodes were used as a light source to demonstrate the relative light intensity as a function of the color (see Figure 1). When a test tube containing a sample was placed in a sample holder of the device, and the colored light was selected. The ray light passed through the sample was clearly seen.



Figure 1. A device used to demonstrate the colored light which was absorbed by the different colored solutions.

Integration of the developed simple device with a learning cycle approach

A laboratory unit on spectrophotometry principle was designed for a 3-h laboratory class based on Lawson's learning cycle (Lawson, 1986).

The laboratory unit consisted of three phases: exploration, concept introduction, and concept application. In the exploration phase, the students used a simple device to observe light absorption by a different colored substance and then compare the results with data (absorbance value at a certain colored light) obtained from the colorimeter. They were asked to choose an appropriate wavelength of light with their peers to measure a particular colored substance at different concentrations and then plot a graph to represent the relation between absorption and concentration. In the second phase, concept introduction, the students were

asked to share and discuss their results among small groups. Also they were challenge to think on the application of spectrophotometer. After students' discussion, the instructor introduced the concepts of Beer-Lambert law. In the last phase, concept application, the students were allowed to design the experiment to determine the amount of substance in a sample. After that they were left themselves to perform their own experiment using a spectrophotometer that was normally used in the laboratory. Their results were share and discuss in the whole class at the end of this laboratory session.

Participants and Experimental Condition

One hundred and ten second year undergraduate students undertaken biochemistry course were volunteered to be participated in this study. Normally, in this course, they learned together in the lecture class and they were separated into two sections for the laboratory class. Therefore, one group was randomized to be an experimental group.

Research Design

Experimental group

The experimental group (62 students) attended a newly developed spectrophotometry-based learning cycle. At the beginning, they were tested for prior knowledge (pretest). Then they were allowed to do the learning cycle activities as detailed above. At the end of the laboratory session they were tested for conceptual understanding (posttest). After that the students completed an open-ended questionnaire that sought their views on their experiences in the newly laboratory designed as well as their attitude toward the simple device. Moreover, six students were selected for interview to ascertain their views on the newly laboratory-based learning cycle in more depth. These interviews were audiotaped.

Control group

The control group (48 students) attended a 3-h spectrophotometry laboratory class following the traditional way of teaching. They were tested for prior knowledge at the beginning of the laboratory (pretest). The students then performed the practical work. First, the students measured the absorbance of a substance at different wavelength to obtain the spectrum by following the procedure in the lab manual. Second, they used fixed wavelength that already identified in the lab manual to measure the absorption of a substance at different concentrations as well as to measure the absorption of a sample with unknown concentration. Then they were asked to plot a graph to represents the relation between absorption and concentration (this graph was a standard curve used to determine the amount of substance in a sample). After that, the students were asked to determine the substance concentration in a sample by reading from their own prepared standard curve. After finishing these activities, the students were tested for conceptual understanding (posttest).

Data Analysis

Analysis of students' pretest and posttest scores

The difference between pretest and posttest scores was calculated to determine student' knowledge gain. The percentages of knowledge gain were then categorized into substantial gain (30% and above), moderate gain (20-29%), little gain (10-19%), and negligible or no

gain (0-9%). The difference between knowledge gain in experimental and control students were compared to determine student achievement in learning for understanding of spectrophotometry principle.

Analysis of the questionnaire responses

The students' responses on an open-ended questionnaire were categorized to identify themes and interpret the findings.

Analysis of interview responses

The interviews were transcribed, and then they were analyzed by using thematic approach to discover students' perceptions toward the newly designed spectrophotometry laboratory. These data were used corroboratively with the findings from questionnaire.

Results and Discussion

Students' knowledge gained

Table 1 shows the difference in percentage knowledge gain between pretest and posttest of both control and experimental students. Knowledge scores for all concepts in both control and experimental groups increased from pretest to posttest. As expected, the percentage knowledge gains of experimental group were higher than those of control group.

Table 1. The percentage knowledge gain between pretest and posttest of students in both control and experimental groups

Concepts	Control group		Experimental group	
	Percentage knowledge gain	Meaning	Percentage knowledge gain	Meaning
Key components of a visible spectrophotometer	5.83	Negligible	8.24	Negligible
How visible spectrophotometer functions	13.95	Little gain	22.76	Moderate gain
The relations between absorption and transmission	6.27	Negligible	33.34	Substantial gain
The relations between light intensity (or absorbance) and concentration of a substance	15.78	Little gain	39.93	Substantial gain
Application of Beer-Lambert Law	11.28	Little gain	28.97	Moderate gain
Quantify the amount of a substance by using a simple visible spectrophotometer	16.56	Little gain	29.26	Moderate gain

The percentage knowledge gains of students in control group ranged from 5.83 to 16.56. The data in Table 1 reveals that they did not gain knowledge on two concepts; the key components

of spectrophotometer (5.83) and the relations between absorption and transmission. They gained little knowledge in four concepts; how spectrophotometer functions (13.93), the relations between light intensity and concentration of a substance (15.78), application of Beer-Lambert Law (11.28) and quantify the amount of a substance by using a simple spectrophotometer (16.56).

For the students in experimental group, their percentage knowledge gains ranged from 8.24 to 39.93. They did not gain knowledge on the key components of spectrophotometer (8.24). In contrast to the control group, the experimental students gained moderate knowledge on how spectrophotometer functions (22.76), application of Beer-Lambert Law (28.97), and quantify the amount of a substance by using a simple visible spectrophotometer (29.26). Moreover, the students in experimental group gained substantial concepts in these two concepts; the relations between absorption and transmission (33.34) and the relations between light intensity and concentration of a substance (39.93).

Students' perception toward the laboratory

Table 2 shows the students' perceptions toward the newly spectrophotometry laboratory-based learning cycle. The majority of the students in the experimental group (80-98%) were satisfied with the learning activity.

As the students gained experience in the newly spectrophotometry principle, they expressed that that the activity challenged them to think (81%) and also promoted their understanding of spectrophotometry principle (84%). About 98% of students liked the learning activity. 92% of students were eager to participate in the learning activity. 82% of students expressed that they were eager to participate in the learning activity. 90% of students felt that this laboratory work was interesting. 80% of students reflected that the learning cycle should be implemented in other laboratory classes.

Table 2. Students' perceptions toward the newly spectrophotometry laboratory-based learning cycle

Perceptions	Percentage of response
This laboratory work was interesting.	90
The activity in this class challenged them to think.	81
Students enjoyed learning in this laboratory class.	92
Students liked the learning activities	98
Students were eager to participate in the learning activity.	82
The learning activity promoted students' understanding of spectrophotometry principle.	84
The learning cycle should be implemented in other laboratory classes	80

The following is the excerpt from interviews about the students' views on the laboratory activity compared with traditional laboratory activities they had experiences:

Totally different. In the previous traditional lab, we did the experiment by following the protocol step by step without thinking. In the present lab, we designed the experiment ourselves with guidance from teacher. We understood to use the results to support our conclusion. We were proud as we could think by ourselves.

Some students appreciated this way of learning because it was challenging and made them a better understanding of the concepts:

These laboratory activities motivated me to learn and challenged me to think. I like this way of learning.

Designing the experiment to determine the amount of substance made me better understanding the application of the spectrophotometer.

Students' perception toward the developed simple device

Table 3 shows the students' perceptions toward the developed simple device. The majority of students in the experimental group (95%) preferred using the simple device to observe light absorption by a substance. As they had experiences with the simple device, they realized that they had a better understanding the spectrophotometry concepts.

About 83% of students reflected that the simple device helped them in understanding the concepts of absorption and transmission. 87% of students expressed that the device helped them understanding the relations between absorption and intensity of colored substance. Moreover 79% of students valued that the device promote their understanding how spectrophotometer functions.

Table 3. Students' perceptions toward the developed simple device

Perceptions	Percentage of response
The simple device helped students' understanding the concept of absorption and transmission.	83
The simple device students' understanding the relations between absorption and intensity of colored substance.	87
The simple device promoted students' understanding how spectrophotometer functions.	79
I preferred using the simple device to observe light absorption by a substance.	95

The following are the excerpts from interviews about the students' views on the simple device as they had experiences in the newly spectrophotometry laboratory:

I could see what is going on when a visibly light travel to a colored substances. It made me understood how spectrophotometer functions.

The device allows me to see light change intensity when passed through a colored solution. So I understood the term "absorption.

As a visibly light passes through a substance with different concentrations, I saw the transmitted-light decreased as the substance concentration decreased. It made more sense to me than I can only see Beer's Lambert Law.

Discussion

The knowledge gain as shown in table 1 clearly indicated that the newly spectrophotometry laboratory helped students to acquire knowledge on the basic spectrophotometry concepts through the learning cycle activity. This is in agreement with several research work on the use of the learning cycle to enhance student's conceptual understanding (Keeraticahmroen et al., 2010; Sriwattanothai; 2009). Even though, the students in both control and experimental groups did not gain knowledge on the key components of the spectrophotometer in the laboratory. However, this result was not surprisingly since the student had attended the lecture on spectroscopy before experiencing in the laboratory. This is in agreement with several researchers that students have prior knowledge before entering a classroom and they try to fit the new knowledge to already know in order to construct new knowledge accordingly (Bodner, Klobuchar & Geelan, 2001).

In the newly spectrophotometry laboratory-based learning cycle, the students did not follow directions as commonly practiced in the traditional laboratory. By following the learning cycle activity, students had the opportunity to design the experiment and construct knowledge themselves. Therefore, they developed a better understanding the spectrophotometry concepts as well as positive attitude toward the laboratory. This claim is supported by their knowledge gain as well as their reflection toward the laboratory. This finding corroborated many research studies, e.g. of Keeraticahmroen et al. (2010) who implemented the learning cycle approach to enhance students understanding of scientific concepts. Similarly, Sriwattanothai (2009) found that the laboratory design based on the learning cycle increased students' attitude toward the laboratory. The findings of Archavarangson et al. (2011) also supported that hands-on activity that gave students' opportunity to design the experiment increased students' achievement and attitude toward science.

Not only the learning cycle approach but also the instrument was the key success factors in this study. In the newly laboratory design based on the learning cycle approach, the developed simple device is of interest to students of experimental group. This was confirmed by the results from students' reflection toward the simple device. The students preferred using the device since it help them a better understanding the basic spectrophotometry concepts such as absorption and transmission, the relations between absorption and intensity of colored substance, and how spectrophotometer function. The students believed that they had a better understanding of these concepts because the device allowed them to visualize what is going on in the spectrophotometer. This is in agreement with Limniou, Papadopoulos and Roberts (2007) that the students understood how the instrument functions science they were not face it like a "black box".

Conclusion and Implementation

The findings from this study clearly indicated that the developed simple device promoted students understanding key basic spectrophotometry principle. The finding showed that integration of the device with the learning cycle approach enhanced students' conceptual understanding of spectrophotometry concepts and also created students' positive attitude toward the laboratory. This study, however, has some limitations in that the newly spectrophotometry based on the learning cycle activity was implemented to only one group of students. A larger trail in a different context using the learning cycle and the developed simple device with different students together with other instructors is needed. Also a variety

of data collection is needed for triangulation and clarification of the findings. Nevertheless, the results from this study can be used as a guideline for instructor for development of an effective instructional unit to promote students' understanding in various science topics.

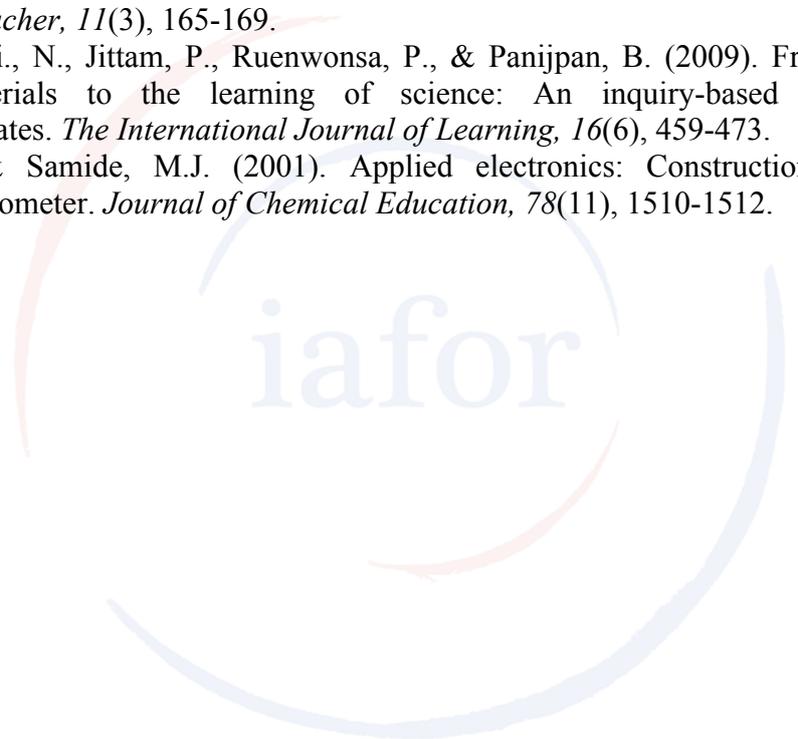
Acknowledgement

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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 circular graphic element made of two overlapping, semi-transparent arcs. One arc is a light blue color, and the other is a light red color, creating a sense of depth and movement around the text.

Reengineering the Undergraduate Engineering Final Year Projects Framework through an integration of Concurrent Engineering Principles

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Abstract – Industry-academia gap has been the point of focus for the government, the industry and the education sector practitioners and research alike for the last few decades around the globe generally and in the developed countries specifically. The developed countries have however bridged this gap to much extent while developing and underdeveloped countries are still lagging far behind in this respect. This gap has its adverse impacts on the national economies as well is a major contributing factor adding to the unemployment and thus frustration of the educated lot. The main reason on the part of education system is the lack of a systematic framework which can shape the undergraduate students in to better professionals. This paper tries to reengineer the process of selection and execution of final year undergraduate engineering projects to establish a framework which will allow the students to prove themselves as better professionals and develop their potentials to add value to their work from the very start of their careers after completing their studies.

Keywords: industry-academia gap, engineering, final year projects, reengineering, education systems, concurrent engineering

1. Introduction

Dramatic changes have been observed in the engineering industrial environment. Fast pace of globalization has promoted international competition. Focus has been shifted from defense towards commercial enterprises. Introduction of new technologies have totally reengineered the industry at almost all levels. All these revolutions have changed the way of engineering practices for today's engineers [2]. Today's graduate engineers are not well equipped with the practical knowledge to work in harsh industrial environments. Engineering curricula require major changes in order to prepare fresh graduates for the new challenges and to properly supply engineering and technology industry with quality team workers well-equipped with the necessary skills and competencies. The curricula must provide a comprehensive design for engineering students, which can help them become more handy and efficient to work in the always changing future industry [1].

Perhaps the most dramatic change of the decade has been the introduction of concurrent engineering philosophy in to different disciplines. Modern industry is shifting from technology specific departments to multidisciplinary team environment where individuals from different disciplines work on various aspects of a product or service in a simultaneous fashion. They work together concurrently on product inception till production and even on product support. Engineering graduates must have up-to-date technical as well as excellent teamwork and personal skills to fit in this environment. It is much easier to find an efficient technical person. However it is quite challenging to find a technical person with excellent personal

skills necessary to work effectively in teams [5].

Today, engineers need to have the ability to work in teams of both engineers and non-engineers who have differing roles and responsibilities for the product. A typical composition of modern industrial team consists of individuals from core design disciplines e.g. chemical, electrical, systems, aerospace, industrial, manufacturing logistics and software engineering professionals. This core team is supported by safety, security, and manufacturing specialists. Additionally marketing, finance, and contracting personnel also give their continuous inputs. This combination of various disciplines demands new engineering graduates to possess strong interpersonal relations and communication, negotiation, and conflict resolution skills. Current engineering curricula do not offer these skills [1].

Concurrent engineering is becoming a need for all engineering students and this concept has gained much attention in the last years. Concurrent engineering is basically a work methodology which involves performing and completing tasks concurrently. It is thus based on the parallelization of tasks. The main theme of concurrent engineering philosophy is simultaneous consideration of all phases of product development process from inception through design, analysis, manufacturing, testing, quality control and manufacturing. Practice of concurrent engineering principles has shown enormous reduction in time to market and product cost while improving quality [4]. Since a final year project is no less than developing a product, so the concurrent engineering principles can equally be applied.

Drexel University has applied concurrent engineering concepts in teaching and research as well as in re-modeling their curriculum. A research study shows that it resulted in saved time; improved quality, reduced cost and most importantly trained a new team of engineers skilled in practicing CE principles [4].

Another research shows the use of CE principles at Western Washington University. Students actively work on a wide variety of undergraduate design and research projects. The main focus is to combine efforts towards a common goal. The Engineering and Technology Department has introduced the concurrent concepts and design throughout the programs curricula [5]. There exists a very important relationship between the university, technical training institutions and the local industry [6].

In Pakistan, job recession rate is already very high. There is a need to re-frame our whole curricula as well as learning methodologies in order to support our economy through quality education. There is a good number of graduates passing out each year from the higher education institutions and engineering universities however majority of them lack the necessary job skills required by the modern industry. In order to cope with this problem, our universities, training institutions and industrial firms have certain responsibilities to undertake and some expectations to live up to [7]. This paper presents a framework how final year projects could be a source of learning and training for the students, so that they become aware of some of the problems which they would face in their professional life. Thus, this paper tries to establish a framework by remapping the existing process and integrating concurrent engineering principles to help the

undergraduate students practice their skills in the multidisciplinary environment and also to bridge the industry academia gap.

1. Methodology

First of all a generalized As-Is model that is currently under practice in undergraduate engineering disciplines is taken and thoroughly studied. The problems associated with the current process/model are identified by consulting undergraduate engineering students, teachers, industry professionals and research literature. Then the solution to the associated problems is approached by interviewing the stakeholders, observation of current and previous final projects and studying the available literature. Also a thorough study of concurrent engineering principles and their possible applications in the area is done. Based on all this a new framework is proposed which integrates concurrent engineering principles into the process to reduce time to market, bring about cost and market feasibility and innovation into the final year project results in addition to providing a multidisciplinary environment to the engineering students to practice their skills as they will in the real industrial environment. Validation and impacts of the framework is still under study by implementing the framework on an ongoing project on “Intelligent Prosthetic Arm for disabled people”. From this point this work takes a form of applied research.

2. Traditional Framework for Undergraduate Engineering Final Year Projects (As-Is Model)

Students are taught various engineering courses related to the particular discipline. In addition they are also given an introduction to management, social and ethical issues through some minor subjects. They are also exposed to practical aspects of

the course work through semester projects and assignments. In the final year, students are required to undertake a project which is purposed to develop and enhance their engineering problem solving skills approaches, involving use of basic applicable theories and techniques and project design implementation.

A study of final year project practices at several universities offering engineering disciplines shows that the following generalized process/framework (As-Is Model) is followed for final year projects.

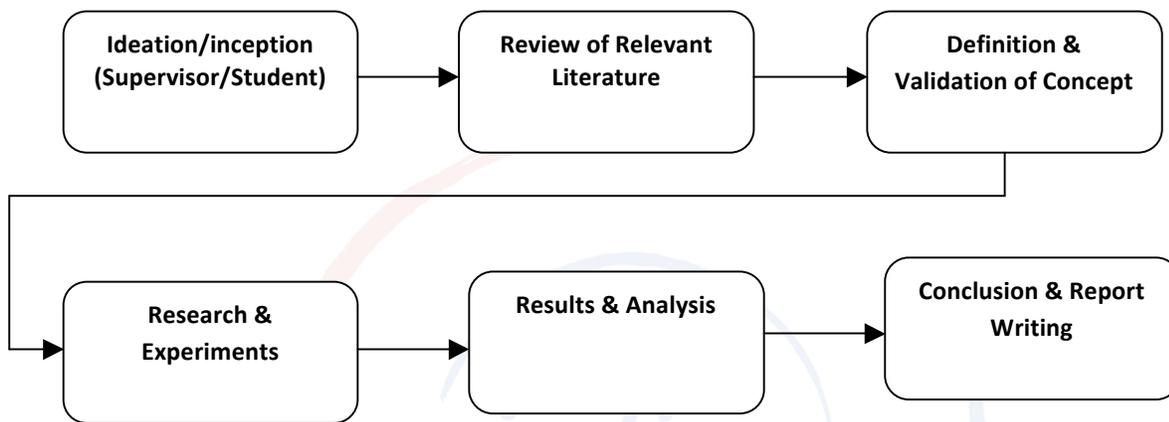


Figure 1: As-Is Model

3.1 Problems Associated with the As-Is Model

Interviews with the students, teachers and industrial professionals and a qualitative observation of the final projects bring into notice several problems associated with the model at various stages. Some of the most important problems are discussed below.

a. Project Selection Procedure/Criteria

Most of the final year projects are selected by the students themselves or suggested by the teacher/supervisor. Industry inputs are rarely involved in ideation process. Students and teachers with no industrial exposure have almost no idea of what is currently required in the industry. The fast pace of technological innovation makes an idea of today as an obsolescence by tomorrow. An

idea and hence the final product requires a thorough requirement analysis which is impossible without the help of relevant industry. The industry should be giving a starting point for the new product development, need of the time or at least the basic problem they need to solve.

b. Project Planning

There is no financial, schedule or quality planning done prior to the start of the project. Absence of risk assessment practices makes most of the projects fail in terms of finances, schedules and quality/scope which is the real theme of project planning and which the undergraduate students must learn in order to be successful on real industrial projects

when they are employed. This makes them a bad choice for the prospective employers.

c. Lack of Financial Feasibility Analysis

A successful project completion means accomplishment of the defined objectives within triple constraints of cost, quality and schedule. The current process model has no emphasis on financial feasibility of the project undertaken. Even the students don't have any idea of how to conduct financial feasibility of the project or product they are working on. This often results in less and sometimes no cost effectiveness of the end product.

d. Scope Definition

Engineering disciplines' majorly focus on developing technical skills of the students. Also it is not possible for an engineer to be jack of all trades. This results in poor or no market research and requirement analysis.

e. Team Development

Project groups are generally made by students themselves by selecting project partners from among their classmates. This selection by no means considers any related skills required for the research. The supervisor due to the course loads and traditionally a heavier load of extra administrative tasks finds less time to manage the team or their work. Students are rarely given a direction and guidance on how to manage and get the various tasks done to complete the project. Thus the project team not only lacks required team expertise but also proper leadership that is a key to success on real projects.

f. No Job Skills Development

Today's industry requires graduating engineers to be not only efficient individuals but to be effective team members who can not only add value to the team efforts by their technical skills but also by their interpersonal communication and presentation skills. Final year projects in engineering institution do not provide such environments to help them learn the skills of team work and bear and absorb the time and competition pressures. To be successful in professional life they require to work under pressure with people from different disciplines and under real industrial environments. While working in industry, they are no more independent in their work. Rather they have to take inputs from one part of the industry and provide the outputs after their own inputs to the next part of the industry. They have to face interpersonal conflicts which they would need to resolve positively. They need the skills to reach win-win resolution situations. They would need to identify risks, measure and rank risks and own the risks. To sum up, the undergraduate engineering final year project process framework must be reengineered in a way to consider the following aspects of the projects;

- Requirement analysis
- Market research
- Cost and Scope feasibility
- Enhance team work, communication, presentation and conflict resolution skills of engineers
- Provide industry environment
- Enable engineers to work in multidisciplinary teams
- Make the end product an original solution/innovation

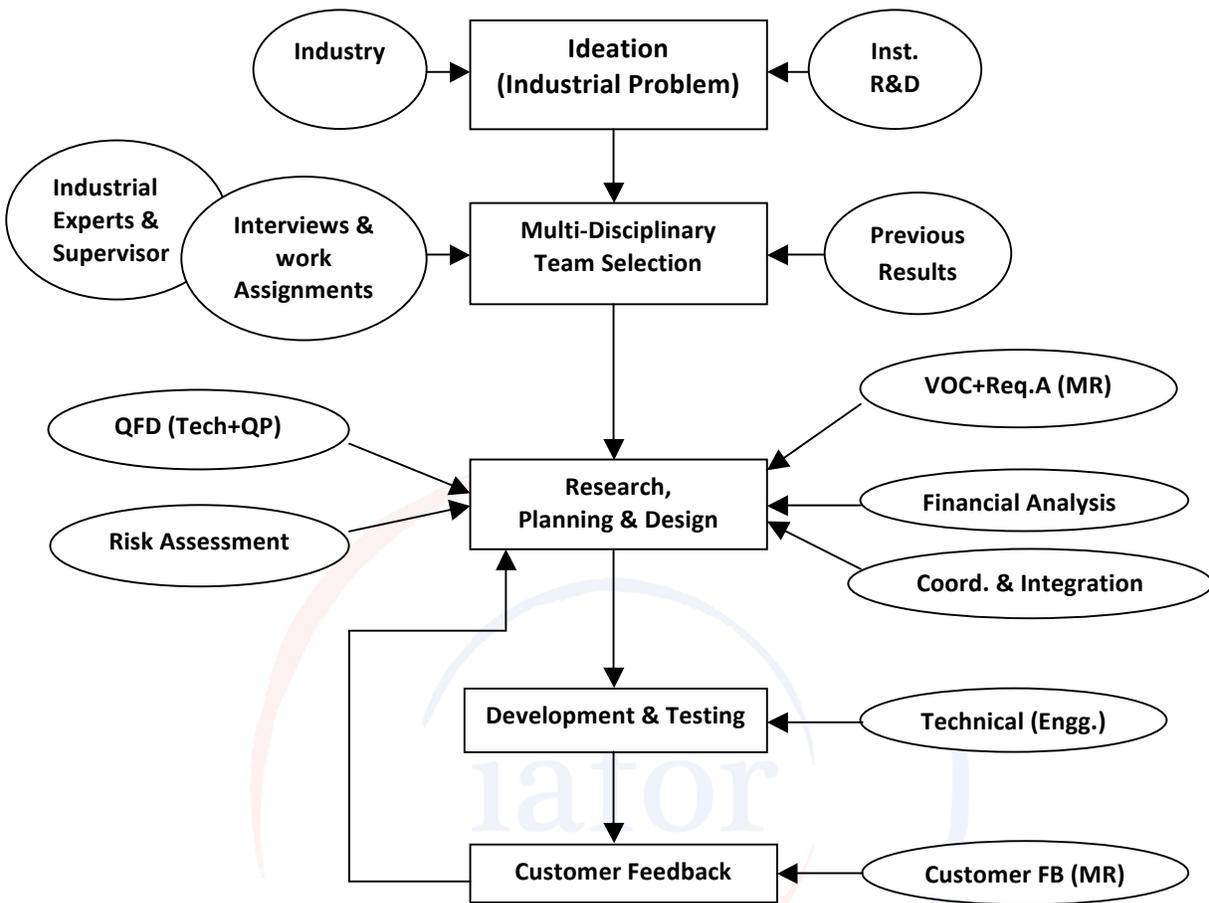


Figure 2: To-Be Model

4. Proposed Model for Final Year Undergraduate Engineering Projects (To-Be Model)

Figure 2 shows a graphical view of the proposed to-be model for carrying out undergraduate engineering final year projects.

a. Ideation

Ideation is the first stage of the model as was in the traditional model in figure 1 but in the proposed model the ideation process

involves inputs from research and development (R&D) of the university and the relevant industry. This requires the engineering universities to hold strong ties with the relevant industry. Involvement of relevant industry and R&D will help select the best ideas and industrial problems for the students to work on as their FYP. Working on latest research and industrial problems will equip the undergraduates with the skills and practices that are very currently required by the industry and thus will give them both confidence and employment opportunity after graduation.

b. Multidisciplinary Team Selection

In today's technological era, multidisciplinary teams are common to almost every industry. Secondly the output of the final year project would be beneficial both to the student and industry if it is taken as an effort to develop a new product which also involves people from management, finance, marketing and coordination and integration in addition to technical personals. Therefore this model proposes selection of multidisciplinary inter-departmental team instead of tradition core technical team from a single discipline. Most of the universities are running different academic programs like Management, Social Sciences, and Environmental Sciences in parallel with the technical disciplines of engineering and technology. Even the core technical team may involve people from multiple disciplines like mechanical, electrical and computer engineering etc.

This will solve the problem of team development as faced in the traditional framework. Students from different departments with the required basic skills and aptitude can apply for the announced projects and a panel comprising industry experts and academic supervisors can select among them to shape into a multidisciplinary team just like the normal practice in the industry. The selection process may be facilitated by the students' previous grads in the related subjects, an aptitude test and work assignments.

c. Research and Planning (Concurrent Approach)

Several tasks are performed simultaneously in this stage and hence the concurrent principles are applied to the model at this stage. All the marketing research, Risk

Management, QFD, Financial Analysis and other necessary tasks are performed simultaneously in a concurrent manner.

Marketing student works on voice of the customer and requirement analysis, market demand, market feasibility, competitor analysis and all the marketing related work. Finance student conducts a financial feasibility, price forecasting, costing of the product or solution to be developed based on regular inputs from marketing researcher and other team members involved. The technical personal work on the technical aspects related to their specific disciplines. Quality management student helps QFD and other quality control activities. The team also needs a coordinator and integration management person. Coordination and integration may be taken by the supervisor or the industry expert himself with assistance from some management student.

This practice will most probably lead to a cost effective solution development that can be easily launched as a product in the market as the multidisciplinary team covers all the aspects of the NPD process. The newly developed product/solution is tested and prototype is shared with a selected customer segment. The product may be launched for bulk production by the sponsoring industry or may be sent back for further enhancement after the customer feedback.

d. Requirements of the Proposed Model

The To-Be model requires multidisciplinary teams which needs students from across multiple departments who can undertake this project as their final year thesis as a requirement of their own degree. This requires permissions and willingness of the top as well as departmental management to allow students to work across other

departments. Industry academia collaboration is required for the practice. Supervisors need to dedicate more time in order to support such teams on a regular basis and coordinate their activities properly.

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Title: Using Self-reflection to Enhance Special Education Teachers' Learning

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Topic of submission: Student Learning, Learner Experiences & Learner Diversity.



Using Self-reflection to Enhance Special Education Teachers' Learning

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Abstract

The purpose of this research was to study how self-reflection could enhance special education teacher learning. This classroom research was conducting with 48 participants who were special education teachers from school at Bangkok metropolis. All participants were graduate students in Special Program of Special Education at Faculty of Education, Kasetsart University. They enrolled in Educational Research and Assessment weekend course in the first semester of the 2010 academic year. Data were collected by participants' journal writing on what and how participants learnt and applied in their special needs students' classroom after they finished each work and self-reflection from their portfolios and focus group after finishing the course. Data analysis was content analysis. The research results revealed that using self-reflection on learning in Educational Research and Assessment could enhanced participants developed their thinking process in knowledge, understanding, and analyzing learning concept, as well as applying in their working situation in special need students in their classrooms.

Significance of the study

In Thailand, the Individuals with Disabilities Education Act 1975 granted all children with disabilities a free appropriate public education. These children were provided for in special schools separated from mainstream schools. The 1991 Rehabilitation of Persons Disability Act has further highlighted the need to continue to expand the provision for people with disabilities. After that Thailand is moving towards integration of children with special needs into mainstream schools. The 1999 National Education Act has attempted to give more attention to special needs education. Various ministerial departments are responsible for the provision of particular special needs education. The 2008 Disabled Person Education Act states that "Disabled Persons" means a person with physical, intellectual or psychological abnormality or impairment as categorized and prescribed in the Ministerial Regulations, "Special Education teachers" means teachers with qualifications higher than a Bachelor's degree or higher and practice in both public and private school, and "Inclusion Education Program" referred to the programs that provide people with disabilities general education in regular school system at all level and styles and support teaching and learning for people of all groups, including people with disabilities. At this point, there is a big problem about lacking of teachers who are teaching in regular program who can teach inclusion program in regular school. According to the 2008 Acts, students with special needs can learn within the regular classroom. Teachers who teach in a regular classroom have to teach special students in the regular classroom or in a separate classroom set asides for students with special needs. For schools under the regulations of Bangkok Metropolitans, there are both types of classroom, classroom with only students with special needs and classroom with students with special needs learning with regular students. So teachers who teach in the inclusion education program need to have professional training to enable them to understand students with special needs and have acquired pedagogy necessary to plan their teaching.

Faculty of Education, Kasetsart University cooperated with Bangkok Metropolitan in developing a training program for teachers who have to teach in inclusive education program for schools in Bangkok. So Faculty of Education, Kasetsart University has developed curriculum in Special Education Certification in 2009. This new curriculum has been started in 2010. It offers special education teachers who teach in school in Bangkok metropolitan area to have professional development training and increase their academic knowledge in special education. In the academic year 2010, there were 48 teachers studied in this program. They received scholarship from government. They studied during weekends and worked on weekdays. The researcher taught them Educational Research and Assessment course that was a mandatory course in this curriculum. This course was 3 credits but there were a lot of contents were crammed into one academic year. Because of the time limitation, the researcher needed to design learning activities to motivate these teachers to study and apply their knowledge to their works. Furthermore the researcher found that most teachers did not have backgrounds on educational research and evaluation even though most of them had been teachers in schools. The researcher had to arrange and integrated a variety of learning activities for the students to promote student learning. The activities included reviewing prior knowledge, discussion, individual work and group work. These assignments aligned with content studied and related to their works, and motivated them to study by themselves out of classroom. The activities were arranged to promote teachers to review their lesson learned continuously by focusing on students' reflection on their work. In this case, the researcher believed that self-reflection is a learning tool for students to learn effectively. Reflection is thinking for an extended period by linking recent experiences to earlier ones in order to promote a more complex and interrelated mental schema. The thinking involves looking for commonalities, differences, and interrelations beyond their superficial elements. The goal is to develop higher order thinking skills. Dewey (1933) thought of reflection as a form of problem solving that chained several ideas together by linking each idea with its predecessor in order to resolve an issue. Knapen (2010) told that self-reflection is a learning tool used by different people in order to help them get better at what they do. It is a valuable practice that students can use to help them in their studies. For the essentials of reflection, Hatton and Smith (1995) identified four essential issues concerning reflection:

- 1) We should learn to frame and reframe complex or ambiguous problems, test out various interpretation, and then modify our actions consequently.
- 2) Our thoughts should be extended and systematic by looking back upon our actions some time after they have taken place.
- 3) Certain activities labeled as reflective, such as the use of journals or group discussions following practical experiences, are often not directed towards the solution of specific problems.
- 4) We should consciously account for the wider historic, cultural, and political values or beliefs in framing practical problems to arrive at a solution.

It is significance that the researcher provide opportunities for the teachers in this research to reflect on their learning through their works, whether or not they learn more effectively, how the researcher can encourage their students' reflection and what kind of learning reflection activities that could encourage students to learn more.

The objective of this study

To study the result of students' self-reflection on their learning and how to encourage students using self-reflection to learn more.

The expected outcomes

To have a guide for teachers to encourage their students to recognize the advantages of their own reflection on their learning and using self-reflection to learn more.

The limitation of the study

To study the results of using self-reflection on students' learning in the Educational Research and Assessment course in academic year 2010 at Faculty of Education, Kasetsart University, Bangkok Thailand. The objectives of the course were included:-

- 1) Students learn benefits of educational research and evaluation.
- 2) Students have important concept of Educational Research and Evaluation.
- 3) Students understand and use any techniques in Educational Research and Evaluation into their classroom.
- 4) Students can explain process of Educational Research and Evaluation, explain principles in construction and utilization of educational instruments, and analyze and improve educational instruments quality.
- 5) Students can explain principles in scoring and interpreting score.
- 6) Students understand and apply basic statistics for Educational Research and Evaluation.
- 7) Students understand the regulations of Evaluation in school.
- 8) Students can design appropriately classroom research proposal and classroom assessment tools.

The research participants were students who enrolled in the Educational Research and Assessment course. The students are teachers who teach in schools at Bangkok metropolitan area. There were 48 students including 42 females and 6 males. They had teaching experiences for 4 years to 14 years.

Research period took one semester (15 weeks) from June to September 2010.

Methodology

Classroom research was used in this study. The researcher was an instructor of the course. The researcher encouraged students learning by self-reflection on their learning in three different periods:

- At the beginning of the course, students had opportunities to reflect their study expectation and their study methods that helped them learn effectively.
- During the course, students had opportunities to reflect on their works as follows: what they learn, how they learn, and how they apply their knowledge to their works.
- At the end of the course, the researcher assigned students to develop their portfolios to review their knowledge and understanding concept that they gained in this course relied on course objectives and their expectation. After that the researcher conducted a focus group discussion with the students to reflect on their learning in the course.

- Research instruments and data collecting :-
 - 1) Students' self report form used at the beginning of the course
 - 2) Recording form for students self-reflection were used to reflect on their works during the course and their portfolios at the end of the course
 - 3) Recording form focus group discussion at the end of the course.
- Data was analyzed by content analysis.

The results of this study

1) Reflection at the beginning of the course

1.1) Self-reflection on students' learning expectation:

All of participants expected to gain knowledge in the course clearly and accurately. They would like to apply their knowledge in their works effectively. Here are the sample of their reflections.

“I can receive knowledge about Educational Research and Evaluation correctly”

“I expect to apply knowledge in Educational Research and Evaluation in my practice to improve students.”

“I can apply the knowledge to help special education students learn more and appropriately.”

“I can conduct my research effectively and can solve the problems in my practice.”

“I can improve myself in teaching and can achieve my goal.

“I can apply my knowledge that I receive in this course to help both regular students and students with special needs.”

1.2) Self-reflection on students' learning methods to promote their learning

There were many methods that participants used as follows: learning hard, handing in work on time, always reviewing lesson, attending class on time, self – study learning out of class, consulting with teacher if they don't understand, sharing their knowledge with peers, arranging their times for studying and doing their works appropriately. There were the reflections like this:

“Have a note book for jotting daily works in schools from Monday to Friday and assignments from university from Saturday to Sunday. Arrange the order of works for my remembering, I can send my assignments on time. Have to do like this: arrange my schedule to study in library, search new knowledge on internet, read textbooks more often, record the things that I have learned and review them every times I finish my class, wake up very early in the morning, and do daily life faster. All of this activities helps me to arrange my work system and daily life not too serious.”

“During my study, I should think and rethink the things that I have learned to understand them clearly. After my study, I should review the knowledge every time. If I don't understand any thing, I should ask my instructor immediately. If I understand any thing, I

should bring the principles and techniques that I have learned into practice in my classroom to understand them clearly.”

“I should try to learn more to explore knowledge that I have to study in advance. I should do my assignments and send them as scheduled.

“During my class, I should pay more attention to listen to the things that my instructor teach and study by my self more after the class from various sources. If I don’t understand anything, I should consult with my instructor”

“Pay more attention during study, search knowledge more than learn from the lessons, follow up my instructors’ advice, submit all of assignments on times, follow up regularly and attend every class.”

“Use Listening, Thinking, Asking, and Writing Principles, Buddhists’ Principle, to conduct how to learn and improve error that will occur.”

2. Reflection during the course

The three questions, “what do you learn?” “How do you learn?” and “How do you apply to your works?”, were used to guide students self-reflection in each assignment after they finished them, most of students can wrote their reflection on their works for the first two questions but only some students can reflect for the third question”.

3. Reflection on students’ learning at the end of the course:

- 3.1) Most students showed clearly their learning concepts. There were the reflections like this :

“Evaluation is a process that help teachers learn to know their students’ capabilities. Evaluation can be done in any period of teaching: pre-assessment or pre-evaluation, formative evaluation, and summative evaluation.”

“Formative evaluation is a process occur during class that teachers use for having their students’ background to prepare their teaching activities, and assess students’ error data in learning to improve students’ learning . Teachers can arrange remedial work for some student who can not pass criteria.”

“Authentic Assessment is an important process to help students learn. Teachers should use various types of assessment tools to assess their students.”

“Various kinds of research in education such as participatory research, action research, and classroom research, are important process of education development.”

“Education research and Evaluation can help both students learn and teachers improve themselves.

- 3.2) Some students reflected that learning methods that they used to accomplish the course were :

3.2.1) They needed to do their assignments and reflect on their works. They made them understand clearly. There was the reflection like this :

“I have learnt from the things that I gained and brought them to practice in my classroom. I took the results that I applied to my classroom to share with my friends in this course, reflected on my work in my journal at the end of each assignment, and investigated more knowledge than my lesson. I gained more knowledge from reading textbook and searching from internet.”

3.2.2) They needed to pay attention to study more by themselves and review lesson continuously and be able to analyze their knowledge to apply in their classrooms. There was the reflection like this:

“ Before I studied this course, I did not have any knowledge on Educational Research and Evaluation. At the first time, it was difficult for me to study because of lacking background. After I received explanations from the instructor, did every assignment, reflected on my assignments, tried to investigate more by myself, try to learn more by myself out of the class, and did the best in my work, it helped me to understand better.”

3.3) Most students could apply their knowledge to their works such as constructing scoring rubrics for assessing their students' learning, constructing and analyzing test, using student observation in their classrooms and conducting their classroom research proposals. There were the reflections like this:

“ I can apply the knowledge that gained from this course to my classroom and I can design rubrics scoring forms for assessing my students' works. It helped me to assess my student performances clearly. I can assess that individual students improved differently. There were evidences for my assessment. There were standard criteria for judgment. I found it easy to conduct my assessment. I involved my students to construct rubrics scoring with me to assess students' writing. It was easy to do. I can recommend this process to other teachers in my school to assess their students with rubrics scoring. ”

“ I learned about technique in educational research and evaluation. There are many techniques such as authentic assessment, portfolio assessment, rubric assessment. I can apply these techniques to my students with special needs in my classroom.”

“ I learned about the regulations that used in school. I can apply it in my work both in my classroom for my students with special needs which I concentrated on their self-improvement. I assessed during my teaching to observe whether my students can understand, act and conduct or not. It reflected my students' achievement. If I learned that my students could not achieve the lesson's goal, I need to change my teaching activities to be more effective.

“I learned how to conduct educational research. It starts from state research problem, think of research limitation -- both stating research variables and content coverage, operate definition, plan about research design such as research method, research instrument, data collection, data analysis and data interpretation, and research report writing.”

3.4.2) Some students needed to learn more about some kind of research such as case study.

“I learned more about educational research. It made me more understand how to design my research. I know research process, variables identification, and how to conduct my research. I think I know correctly about how to write research proposal and conduct research from my reflection align with the course's objectives. I would like to study further in case study research because I think it can use for my students with special needs.”

3.4.3) Some students shared their knowledge from this course to teachers and administrators in their schools especially how to use assessment and research for quality assurance.

“Educational research and evaluation are significant process at this present, because they help teachers know their students’ achievement and problems. Teachers can know how to solve students’ problem and can improve them. Teachers can modify students’ behavior. Teachers can design teaching and learning activities appropriately for each student. Educational research and evaluation are the tools for learners and their parents to have confidence to send their kids to those schools. The benefits from educational research and evaluation show on teaching and learning activities and school administration. They help schools to have quality assurance and school accreditation.”

4. Results from focus group discussion at the end of the course

4.1) Group of the students gave their opinions about learning from this course that they could apply knowledge to their works effectively and they gained more benefit than their expectation.

4.2) Some students reflected about styles of their learning that lacking of times to review their lessons made them not able to discuss during the course so they would like to improve their study methods better.

Discussion

1) The method that used in this research, let students have opportunities to reflect on their own learning, helped the students learned according to their expectation. The research results showed that the reflections on students’ expectation at the beginning of the course were the same as the reflections on their learning after finished the course and they aligned with the objectives of the course. It is noted that the contents that the students reflected on their expectation at the beginning of the course were less than after the course finished. At the beginning of the course the students can reflect only broad concept of the course such as educational research and evaluation, but after finished the course students can reflect the concepts that they learned in this course such as authentic assessment, formative assessment, rubrics assessment, classroom research and case study etc. And the students can reflect the thing that they learnt to apply to their works. So students’ reflection on their learning are tools for helping students learn and followed themselves on their own. Besides of this, students’ self reflection is tools for teachers to assess their students. Teachers can know their students’ strengths and weaknesses and can arrange their teaching appropriate to their students. The finding of this study like the study of Ottesen. Ottesen (2007) studies about “reflection in teacher education.” found that reflection as concept development (learning about teaching) and reflection as imagined practice (transcending the constraints of the practice).

The students’ reflection on their learning is a tool for teachers to have their students’ thinking because it helps students review about their knowledge, skill and feeling. It can promote students’ learning more. This process is consistent with “Learner-oriented” or “student-centered” education. It can best be promoted through an open educational system which provides maximum freedom, the widest possible choice of subjects and the greatest possible diversity of educational content. According to the National Education Act B.E. 2542, learning reform is at the heart of all concerned. As stated in Section 22, “Education shall be based on the principle that all learners are capable of learning and self-development, and are regarded as being most important. The teaching-learning process shall aim at enabling the learners to develop themselves at their own pace and to the best of their potential”. In organizing the learning process, educational institutes and agencies concerned need to

provide substance and arrange activities in line with the learners' interests and aptitudes, bearing in mind individual differences. Training must also be offered to cultivate the thinking process in order to face varied situations and be able to solve a variety of problems in different environments. For learners to fully reap the rewards of their studies, they must be exposed to authentic situations with practical work.

2) The approaches using in this study to encourage students' reflection were writing and discussion. For written reflection, the researcher encouraged the students to reflect continuously, at the beginning of the course, during the course and at the end of the course. The researcher set the guidelines for the students for their reflection. At the beginning of the course, the researcher asked them to write about their expectation and their learning styles. During the course, the researcher asked three questions, "What do you learn?" "How do you learn", and "How do you apply to your work?" At the end of the course. The researcher asked their students to reflect the thing that they learned by reviewing with the course objectives. After finished the course, the researcher used focus group technique for discussion. It is noted that the things that researcher learned from written reflections were substantial more than discussion. This result consistent with Yinger and Clark (1981). They believe that reflection results written down are more powerful than reporting them orally. For the reflection activities during the course helped students' thinking in higher order. The first question, What do you learn?, was the kind of memory question. It encouraged students to remember the thing that they have learnt. The second question, How do you learn?, is a kind of understanding question. It encouraged students to think with their own language. They can explain the concepts that they learn. They can give examples about the thing that they learned. And the third question, "How do you apply to your work?", is the kind of application question. It encouraged students to think more and link the concepts that they learned to design and use in their classroom situations. These questions are the guidelines for students to have reflection. The researcher learned that most students can reflect on the first two questions but for the third question only some students can. This research results consistent with the study of Gustafsan & Bennett (1999). They found that promoting reflection among military cadets by means of written responses in "dairies" was difficult. They identified eleven variables that affected the cadets' lack of reflective behavior in three main characteristics: learner, environmental and reflection task. For learner variables, the ability to reflect is a learned behavior that is cultivated by the individual over a period of time. How reflective an individual can become is probably a personality trait. However, designing appropriate learning experiences can develop reflecting skills. The ability to reflect on specific topic is directly proportional to how much one already knows. If learner's schema for topic is limited, then there is less ability to relate new information to it. Surback, Han, and Moyer (1991) identified that the nature of the stimulus to reflect will impact the quality of the reflection.

Conclusion and Implication

1) Students' reflection on their learning helped students learn more but teachers should have some questions or guidelines for their students like the approaches that used in this study. The three questions used in this study to encourage students' reflection, what you learn, how you learn and how you apply to your work, help students understand concepts in depth.

2) It is not easy to all of students to have reflection on their own learning, it depends on students abilities. Some students show that self-reflection on students' learning can help them

apply their knowledge to their works better but most students can reflect on the things that they learn and how they learn them. Teacher should using these approaches continuously to train students to think and give their feedback to improve their thinking.

3) The results of self-reflection can support teachers to design learning activities appropriate for students in their classrooms. So teachers should use this approach to conduct in their classroom to learn more about how to encourage students' reflection and conduct research on reflection.

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Web-based E-Learning System for LPC2148 Laboratories

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1. Introduction

Traditional embedded system experiment class is limited in space and device, such that most class is narration and theory. In such class students need to study by implementation, their question usually can not be answered rapidly. Although some website is setup with guestbook or forum which helps users to ask their questions, because they don't understand the course, they can not describe their questions well such that are hard to be answered. If students bring their flash drive with virus, it highly possible infects school's computer system, thus degrades the quality of class. . Although some classrooms have installed recovery card for their storage systems, only the administrator can install and maintain the system, adding extra burdens to the administrator and teacher. In the view of cost, except computers, some course may need other device of developing board. For instruments costing thousands of dollars, students can only practice in the classroom, which restricts the learning environment.

E-Learning not only breaks the limits of temporal and spatial, but also gives students some abstract concepts. By digital teaching materials, they can record their learning portfolio via some mechanisms. Study says that most students have positive feedbacks on e-learning activities (Restivo 2009)

However, most on-line education system is passive teaching. They offer students who can download digital learning materials, but no interactive functions. Some studies say that the interactive interface between teacher and students can be implemented by some software like RealVNC (Ishida 2009). Besides, there are problems in construction and maintenance of the experimental environment. Our system builds a remote virtual laboratory, in order to give students more opportunities for operation and practice.

The system is a teaching platform constructing with Moodle, Open OCD and arm-linux-gcc. Users can login our website online then practice, and they can monitor and realize the situation of program running in develop board by real-time image returned by IP-Cam. Except flexible teaching time, students have less annoyance in installing system and tool software, while teachers can monitor user's implementation by some software like VNC, even can demonstration by controlling user's computer. It is directly solve student's problem. In administrator's direction, it reduces complex procedure when reconstructing system, while in operator's direction it is cost-saving.

	Traditional embedded system learning environment	Remote laboratories learning environment
Convenience	Low	High
Maintainability	Low	High
Risk of virus	High	Low
Construction cost	High	Low
Rate of reconstruction	Slow	Fast
Real-time interaction	Low	High

Table.1 Comparisons between traditional learning environment and remote teaching environment.

2. System Design

2.1 System architecture

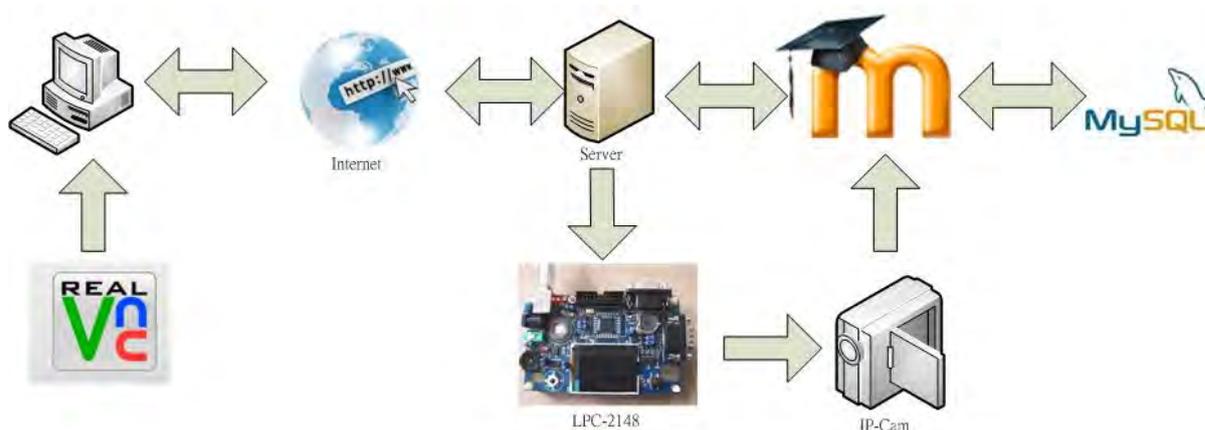


Fig.1 System architecture

The system is based on an Ubuntu operating system. We hope that users can do embedded practice and experiment by network easily. Users can see courses and example programs on Moodle platform and use IP-Cam to return real-time images with power measurement of LabVIEW to understand practical operation situation of experimental board. This teaching approach can provide more convenient learning, and enhance student's learning interests. For Monitoring function, it is to capture user's VNC snapshot through IP address by Server and displayed on the web pages for teachers to control teaching circumstance.

2.2 Software

The followings are Open Source software; thus they are flexible in development, and require less cost:

- (1) Ubuntu 8.04 LTS: It is a Linux operating system of graphical interface, based on Debian and GNOME desktop. As this operating system has high compatibility with hardware, it is used for the server. LTS (Long Time Support) means that one new version will be released every six months.

- (2) Apache: It is a web server, which can be operated in different operating systems; it was developed by Apache Software Foundation, and until now, it is the HTTP server software with the highest market share.
- (3) MySQL: It is a relational data management system. With high stability, high efficiency, and low cost, it is widely applied in large web sites and applications. It was compiled with C and C++, and it could be connected with database with MySQL++ or built-in API. MySQL is developed from Linux, so its operating mode is command oriented. However, it poses a burden to ordinary users. Thus, graphical interfaces have emerged such as phpMyadmin which is a graphical, web based management tool.
- (4) Moodle: Moodle (Modular Object-Oriented Dynamic Learning Environment) is an E-learning platform designed based on PHP language. The users can use and modify the code easily by following the authority of GNU (General Public License), and many relative sets and modules can be downloaded on website. Due to this reason, Moodle gives a big place to play for program modification.
- (5) phpMyAdmin: It is MySQL management program developed from PHP, thus the database can be modified and managed through webpage.

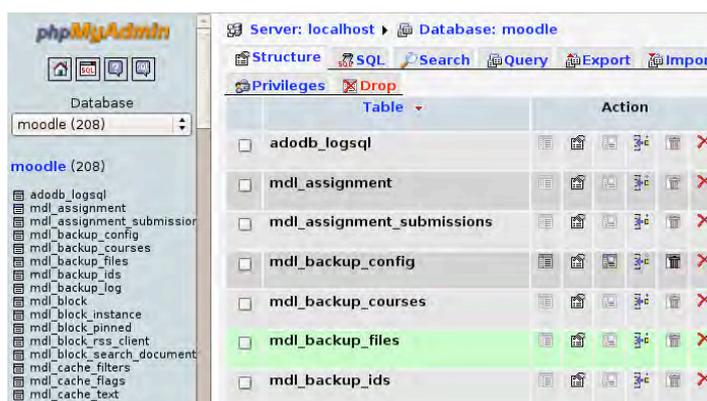


Fig.2 phpMyadmin interface

- (6) PHP: PHP (Hypertext Preprocessor) is a common webpage design language; its syntax is very similar to C, Perl and Java, so it can be easily learnt by users. Its key feature is that it can be embedded into HTML syntax to design a dynamic webpage and further display diversified pages. PHP has its encoder, so original codes cannot be easily read, and it helps to raise efficiency.

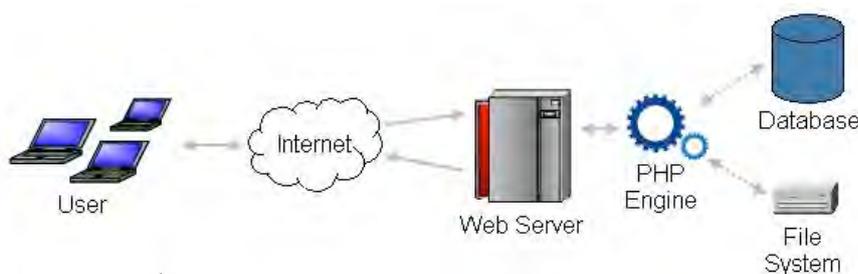


Fig.3 Structure chart of PHP

- (7) Anyterm: Anyterm is a software tool of remote execution terminal, operated in Linux system. It is based on Javascript, and it supports most of browsers. In this system, it provides an operating interface for users, so that students can start GDBProxy, Debug and Compile. It can allow the students to be familiar with the system environment of Linux when doing practice. In addition, Anyterm is authorized by GPL, so that it can be distributed, downloaded, used and rewritten by users.
- (8) LabVIEW: The instrument interface can be designed by user's request. The system uses GPIB connection to read 34980A data and present to the panel.
- (9) VNC: The full name is Virtual Network Computing. It is a remote operating software that uses RFB protocol to send and receive operating motion and real-time image by internet. The reason to adopt this remote operating software is because the advantages of supporting several platform and VNC Snapshot function.

2.3 Hardware

- (1) LPC2148: The LPC2148 microcontrollers are based on a 16-bit/32-bit ARM7TDMI-S CPU with real-time emulation and embedded trace support, that combine microcontroller with embedded high-speed flash memory ranging from 32KB to 512 KB. A 128-bit wide memory interface and unique accelerator architecture enable 32-bit code execution at It maximum clock rate. For critical code size applications, the alternative 16-bit Thumb mode reduces code by more than 30 % with minimal performance penalty. Due to their tiny size and low power consumption, LPC2148 are ideal for applications where miniaturization is a key requirement, such as access industrial control and medical systems. It is a complete development environment for teaching.

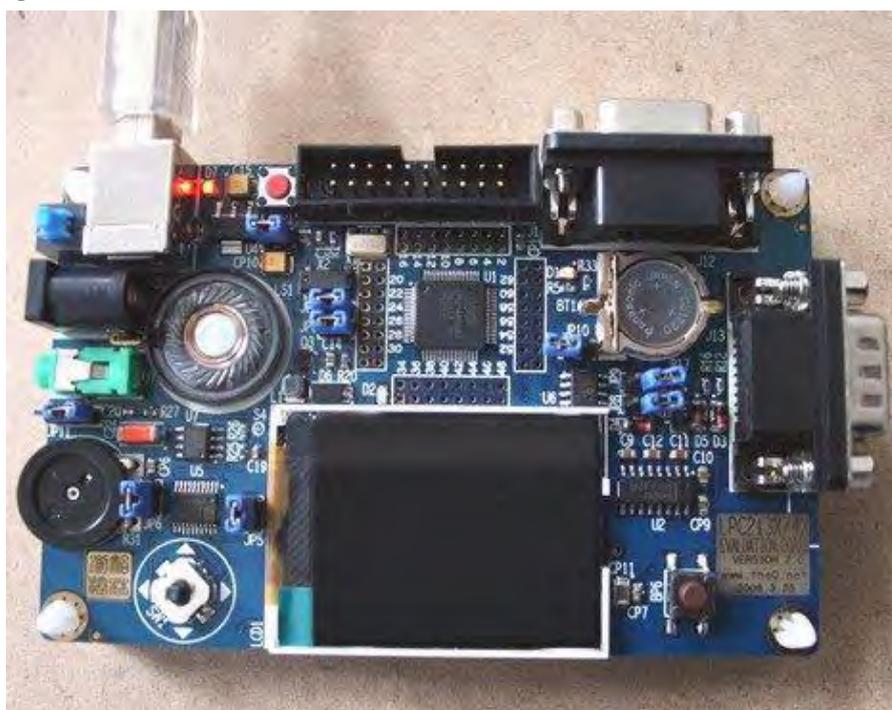


Fig. 3 LPC2148 Entity Graph of Development Board

- (2) C-200 Dual IP-Cam: This system uses the product of WEICHU company. IP-Cam has built-in Web Server with very simple installation to connect and control by accessing internet port and power cable. It's convenient to have the function of returning real-time image for remote teaching platform.
- (3) 34980A: This is a powerful multifunction measure unit which can measure temperature, AC or DC voltage-current, resistance and frequency through different modules. The unit itself has 8 expansion slots, and users can add modules upon their request. Besides manual control and measure, 34980A has built-in Web Browser to provide the function of remote control. There are three methods to connect computer by GPIB and USB.

3. Operating process

It is a teaching website based on Moodle platform that can design requirement by their own, and users just need to plug in via internet (Fig. 4). As Moodle has built-in function to batch account and secret number, it can be applied to manage users account effectively.



Fig. 4 Moodle Login Page

In the courses of Moodle, it provides simple sample programs and input frame for users to practice for reference (Fig. 5). In the future, it will add new peripheral hardware and advanced courses of program practices in successions.

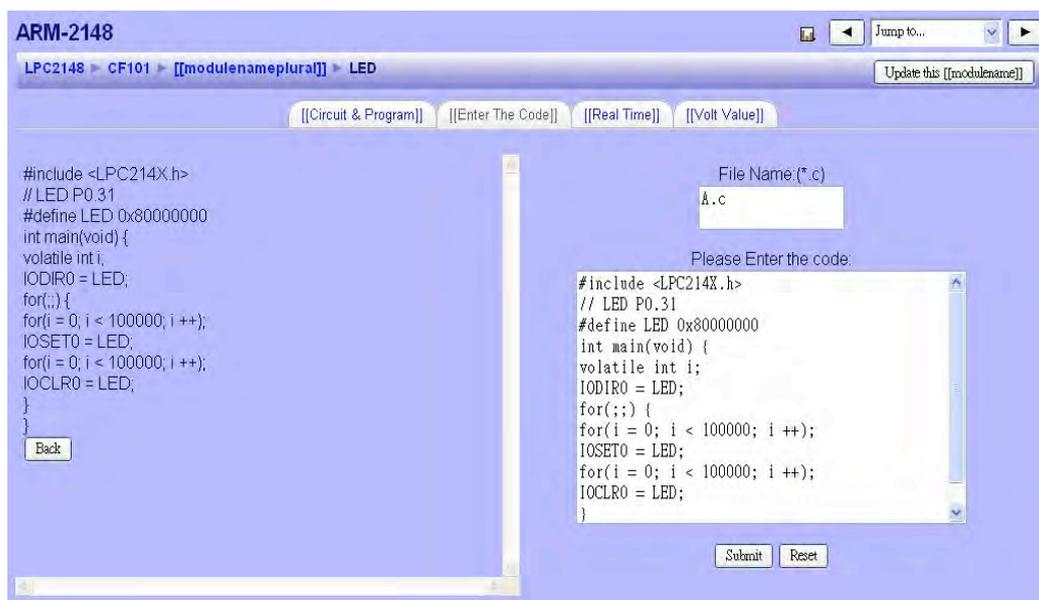


Fig. 5 Sample program and programming exercise

This system is intended to provide a convenient, perfect and economic distance teaching environment. Therefore, there is no need to install complicated system and tool software by using this system. The users only have to input code in the frame designed by us (Fig. 6) and follow-up the instruction of system to operate Anyterm to accomplish the action of compiling and burning from remote.

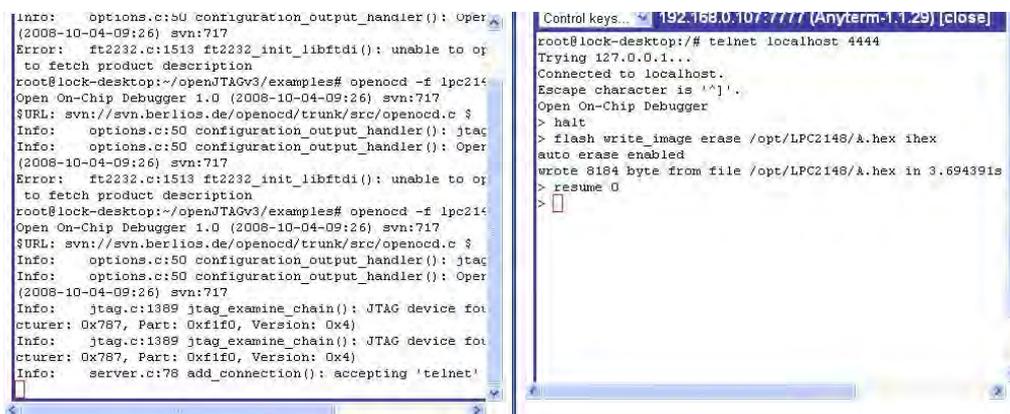


Fig. 6 Execute Compile and burn action by Anyterm

Regarding to burn-in program, Open OCD is created the function of remote burn at Server side. The users can burn files by operating Anyterm on website simply. Fig. 7 is the remote connection instruction received at Open OCD in the meantime of connection between Server side and development board Then, open new Anyterm to the burn page of Debugger. Burn program can be started after Debugger process (Fig. 8).



Fig. 7 Connect to Open OCD Server

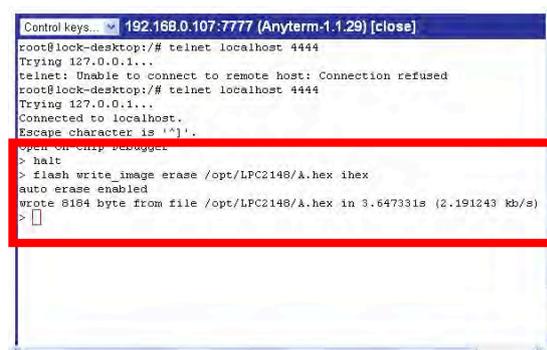


Fig. 8 Debugger Burn of LPC-2148

After burning the files, the users can return the real-time image of development board situation through IP-Cam to verify the result of burning. The users can see the actual situation of development board peripherals (Fig. 9).

Through User-Machine Interface of Labview to return power measurement of development board can help students to understand practical operation situation of experimental board. This kind of course can convenient students learning and raise learning interest effectively. Another way is to use Labview HMI interface. It will present on-board power consumption single diagram (Fig.10).

There are mainly two ways for teacher side to confirm the practical situation of users. One is to check with Administrator’s permission by IP-Cam directly. Another one is to monitor practical situation of multiple users by VNC timing screenshot simultaneously (Fig. 11).

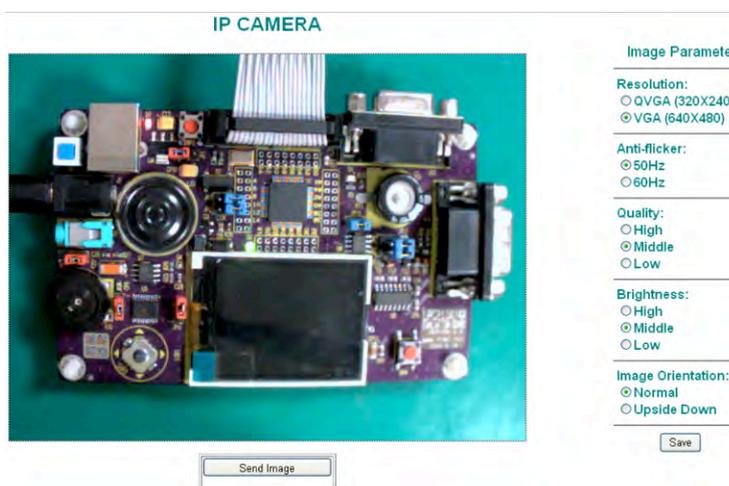


Fig. 9 Return the Real-time Video

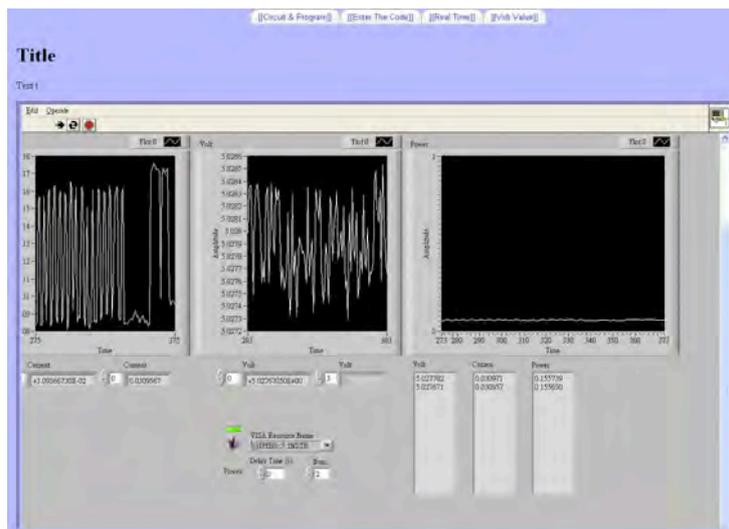


Fig. 10 Return value through the Labview



Fig. 11 Timing screenshot data

4. Conclusion

The purpose of system is on creating an embedded distance learning environment. It makes user's study be not limited by time and place. It can help teacher to grip user's conditions of study and let teacher to adjusts the teaching schedules and methods timely. With the gradual improvement of the system in the future. In addition to allowing users to learn diversely, but also reducing the cost of the laboratory building. In the part of Sever, We adopt Moodle to be Platform and modify the Module of Feedback to make the system. Adding the programming block and features real-time video return, we hope to provide students like living in the learning environment of laboratory. The system is in the research stage now. The function is not perfect but it also has the following advantages

- (1) Free and flexible practice time on class.
- (2) Practicing of class can do on any place.
- (3) Help the practice teaching on remote place.
- (4) Provide true result of program execution, not just simulation result.

- (5) Experimental equipments are easy to unified management and maintenance.
- (6) Save the time of installing complex software tools with beginners.
- (7) Find out the question and solve it at the first second during the practice.
- (8) Promotion of Open Source Software.
- (9) Low cost, high efficiency.

5. Future Work

In the age of information explosion, network has been completely integrated into everyone's life. And the lifelong learning is a trend of future. We hope to develop more complete remote teaching system that will make more people who want to learn to have a good environment of study, and have the chances of increasing their skills. For the system, we have considerable work space. Eg

- (1) Moodle platform and user-friendly interface beautification.
- (2) Richness of curriculum.
- (3) The control and analysis of network traffic.
- (4) Record the user to practice the situation of the pros and the cons.
- (5) Raise the performance and enhance real-time interaction.
- (6) Network and system security upgrade.
- (7) Effective arrangements for planning practice time on-line users.

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Embedded Microprocessor Lab.

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Rethinking effectiveness of multi-cultural learning experiences for local host students

Kin-chi WONG and Keith THOMAS

Abstract

This study examines summer schools programmes as a form of exchange experience. In 2010, 646 students attended the Chinese University of Hong Kong (CUHK) international summer school, with a principal objective being to provide a multi-cultural learning environment. There are 74% of the participants were international students and 26% were local students (both from CUHK and from other local universities). Pre- and post-course evaluations examined students' expectations and subsequent experience in terms of learning attitude, engagement and perceived learning outcomes.

Preliminary pre-course survey findings showed that CUHK students joined the summer school in order to reduce the regular semester workload, while international students and non-CUHK students were more motivated to experience a multi-cultural environment. Post course findings, show that international students and non-CUHK local students reported higher achievement in learning outcomes than CUHK students, while both international students and non-CUHK local students also reported higher levels of engagement in a multi-cultural context than CUHK students did.

The findings suggest that host students may not derive the same benefits from summer schools as international students and non-host CUHK students. Open-ended comments suggests that the intensive schedule pressures students into concentrating on the required reading and on assessment tasks. As CUHK students are focused on course content and materials, they remain relatively insulated from wider engagement with other students. This paper outlines some curriculum design and planning features, including increase in group activities and a greater proportion of group assessments, in order to facilitate an effective multi-cultural learning environment for all students.

Introduction

The central interest by the University Grants Committee (UGC), evidenced by the recent Academic Development Process (ADP) exercise for the 2012-2015 triennium, is in a strategic approach towards quality of taught programmes (UGC 2010). This paper reports recent findings related to the Chinese University of Hong Kong's (CUHK) International Summer School (ISS). The stated objective of the ISS is to provide a multicultural learning environment for international and local students, an outcome that organizers hope is facilitated by students learning and living alongside other academic high-achievers from a range of countries and cultures. In this sense, the design of the ISS is intended to enable CUHK and other local students to provide the equivalent of a cultural exchange with international students, but without needing to go abroad.

The annual ISS programme runs over five weeks, typically from the end of June to early August each year. Summer school courses are offered in three main disciplines: business, engineering, humanities and social science. In addition, the ISS offers language study options in both Putonghua and Cantonese. In 2010, 646 students attended the summer school. Seventy-four percent of these participants were international students from over thirty-five countries; twenty-six percent were local students from CUHK and other local universities. This paper reports on the learning attitudes, achievement of generic learning outcome and multicultural engagement between students and possible design considerations are explored to improve the achievement of ISS learning outcomes.

Literature

CUHK is a research-intensive university; however, teaching quality is an important constant. Indicators, typically quantitative and qualitative data from students (and employers), are the basis of internal mechanisms used by institutions to evaluate success in relation to its teaching and learning (T&L) processes. These indicators (along with benchmarks) apply to a range of activities with the UGC drawing particular attention to the need to value add by programmes and activities. Taught programmes add value by developing personal, intellectual and employability skills. Another indicator, highlighted by the UGC in the ADP process, is the University's approach to competition with other institutions and why – reflecting the nature of competitive advantage in the subject fields. These considerations, added value and competitive advantage, find common expression in the annual summer school programme at CUHK, with the focus on finding suitable performance indicators that indicate success or otherwise.

Given that universities in Hong Kong are financed by public funds, provision of “high quality T&L” is the foremost responsibility for CUHK. Accepting no litmus test to delineate the boundaries between good and excellent programmes, the object is to provide quality in terms of internationally competitive teaching experience and in achievement of stated learning outcomes. As such, any concern over educational quality requires a shift from an exclusive focus on student learning and on individual teachers, typically a matter of relevance of course material and of good delivery, to a wider interest over alignment in design and coherence of curriculum. Wider still, educational quality considerations also need to include an institutional level view in order to capture the collective effect on *graduate capabilities* and *programme-level learning outcomes*).

Method

The pre-course survey was administrated in both paper and online based before the summer school started. The pre-course questionnaire contains questions about students' objectives for doing the summer school, and their expectation on their multicultural engagement, learning attitude, learning engagement, learning outcome. During the last week of summer school, a paper-only post-course survey was administered in class for each course. The post-course questionnaire contained questions about students' learning experience upon completion of the summer school. The same set of questions related to learning in a multicultural environment, achievement of stated learning outcomes, learning activities, learning strategies and learning attitude were asked for both pre and post-course surveys. In total 646 students attended the summer school in this year; there were 527 and 521 students respectively who returned the pre-course and post-course questionnaires. The responses rates of both surveys were 81.2% and 80.7% respectively.

This study examines to compare the difference of the learning outcomes (in terms of generic capabilities, and gain in cultural experience) between types of students. Further analysis is to explain the difference in terms of multicultural engagement.

Measures

Three scales were developed based on 15 items from post-course questionnaire of student learning experience in summer school programme. Table 1 below displays the reliability of the scales, the Cronbach alphas values are higher than 0.8, it is argued that they have good reliability

Scale	Number of items	Reliability (Cronbach alpha)
Generic learning outcome	9	0.93
Multicultural engagement	2	0.86

Generic learning outcome

This scale measure overall reflections of their development of generic capabilities after completion of summer school programme. The selected capabilities include critical thinking, creative thinking, problem solving, communications skills, interpersonal skills, and ability of dealing with difference cultures, etc.

Multicultural engagement

This scale measures student involvement and engagement of working with students other cultures.

Analysis and Results

Figure 1 illustrates the relative development of generic learning outcome between types of students, CUHK, International and non-CUHK local students.

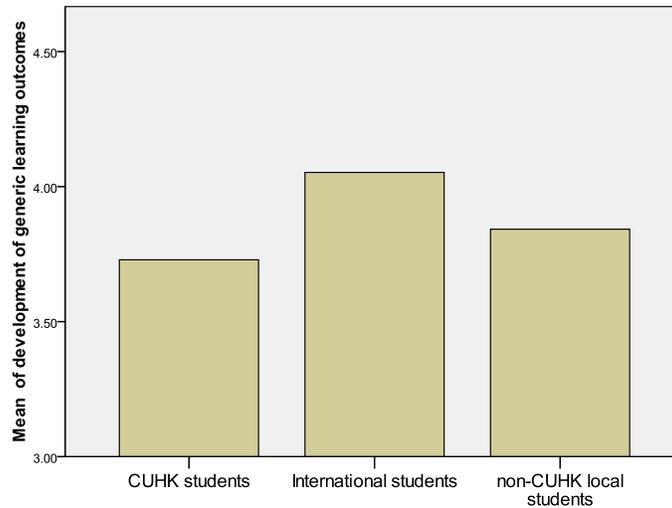


Figure 1: Comparative development of learning outcomes

An analysis of variance (ANOVA) showed that the difference of generic learning outcome between types of students was significant, $F(2,474) = 9.92, p < .001$. Post-hoc analyses using the Hochberg (GT2) post-hoc criterion for significance indicated that CUHK students reported lower achievement of learning outcomes than international students (*Mean difference* = $-.36$, *Standard error* = $.08, p < .001$). However, there is no significant difference in generic outcome between international students and non-CUHK local students (*Mean difference* = $-.21$, *Standard error* = $.11, p = .14$).

Figure 2 illustrates the relative means in generic multicultural engagement between types of students.

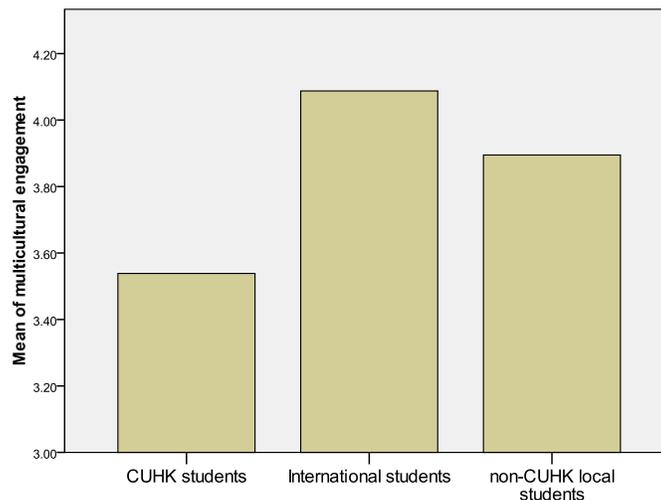


Figure 2: Comparative means in multicultural engagement

An analysis of variance (ANOVA) showed that the difference of multicultural engagement between types of students was significant, $F(2,473) = 12.78, p < .001$. Post hoc analyses using the Hochberg (GT2) post hoc criterion for significance indicated that CUHK students reported lower multicultural engagement than international students

(*Mean difference* = -.55, *Standard error* = .11, $p < .001$). However, there is no significant difference between international students and non-CUHK local students. (*Mean difference* = -.19, *Standard error* = .15, $p = .48$).

Figure 3 shows the relative objectives of having cultural exchange and reduce regular workload for students before summer school.

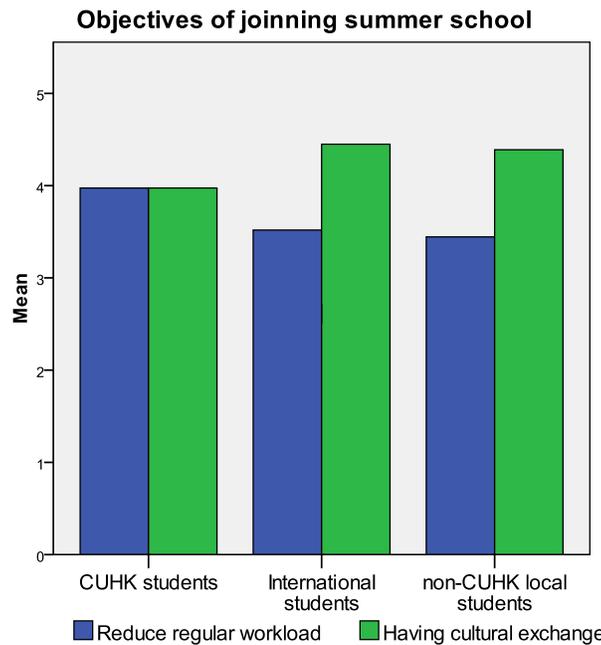


Figure 3: Comparative means in cultural exchange

An analysis of variance (ANOVA) showed that the difference in desire to have cultural exchanges between types of students was significant, $F(2,515) = 8.39$, $p < .001$. Post hoc analyses using the Hochberg (GT2) post hoc criterion for significance indicated that CUHK students reported lower desire to having cultural exchange in summer school than international students (*Mean difference* = -.48, *Standard error* = .12, $p < .001$). Moreover, there is no significance difference between non-CUHK local students and international students (*Mean difference* = -.06, *Standard error* = .17, $p = .98$).

The following graphs showed the students reflection on the objective to do the summer school programme. A paired-samples t-test indicated that objective of international student of joining summer school were significantly higher for having cultural exchange ($M = 4.45$, $SD = .67$) than for reducing regular workload ($M = 3.52$, $SD = 1.22$), $t(458) = -13.49$, $p < .001$. The finding is also consistent to the non-CUHK local students. Their objective of international student of joining summer school were significantly higher for having cultural exchange ($M = 4.39$, $SD = .70$) than for reducing regular workload ($M = 3.44$, $SD = 1.15$), $t(17) = -3.07$, $p = .007$. However, paired-samples t-test indicated that objective of CUHK student of joining summer school was not significantly difference for having cultural exchange ($M = 3.97$, $SD = .97$) and for reducing regular workload ($M = 3.97$, $SD = .74$), $t(38) = 0.00$, $p = 1.00$.

To summarize, international students reported higher achievement of learning outcomes than CUHK students did. This may be because CUHK students are less engaged in multicultural environment. In addition, local student reported lower learning attitude than both international students and non-CUHK local students. However, multicultural engagement is an important factor as a learning outcome. CUHK students report a lower interest in having a cultural exchange in summer school. It may be because their primary objective of joining summer school is to reduce regular term workload, instead of having cultural exchange. However, being local and thus in a familiar environment reduced the contextual dissonance and hence need to adapt routines to the detriment of exchange goals. Meanwhile, international students and non-CUHK local student would like to have cultural exchange over reducing regular term workload.

Discussion

Local HK students appear to have a less positive learning attitude than international students do, and host university students are less engaged in a multicultural environment. These factors help explain the relative development of learning outcome between different types of students. The findings suggest that the central issue that affects the effectiveness in terms of student outcomes of a multi-cultural learning experience is the students learning attitude and the student engagement in multicultural environment.

Students with a higher motivation in learning will seek other learning opportunities. International students and non-CUHK local student appear to have a higher desire to learn in an international environment and to experience the cultural exchange, and so they report a stronger multicultural engagement. Hence, they draw greater benefits from the summer school. Qualitative comments from pre-course questionnaire showed that these external students all look forward to the summer school. They expected to meet new friends from all over the world, and anticipate being required to interact with different cultures in order to exchange ideas. Some international students also reported looking forward to knowing more about Hong Kong and its local dialect – Cantonese. Some student reported wanting to learn from professors from other universities.

Based on qualitative comments from post-course questionnaire, international students and non-CUHK local students emphasized they had a great experience. Some of these students enjoyed being in a class with such a diverse group of students, and they were genuinely interested in learning about the home country of each other. Some of these international students and non-CUHK local students found it was a nice overall experience studying in a different study environment than their own country or institution. They reported having learnt from class participation and they were able to have a different learning experience. Most of these students also thought that their communication skills had improved, in addition to feeling more confident when interacting with people from around the globe.

However, host students reported a lesser benefit from summer school; they generally appeared to have a less positive learning attitude and reported less engagement in the multicultural environment. Based on qualitative comments from pre-course questionnaire, many CUHK students would have liked to engage more with students in a multicultural environment. However, many of these students wanted to reduce their

regular term workload. Consequently, while wanting to engage in multicultural learning environment most CUHK students took the course for credits, and the intensive schedule of study made it hard to concentrate on more than the required reading and assessment. Quite a few of these students considered the summer programme was too short, while some students claimed the course schedule was too tight. Therefore, it is possible to conclude that CUHK students' focus was on course content and materials, and as a result, they tended to remain relatively insulated from wider engagement with other international students. The result is that the effectiveness of a multicultural learning experience for CUHK students appears to have been limited.

Closing remarks

A multicultural learning environment is not solely determined by a diversity of students in terms of race, background and culture. The objectives and motivation of the student is also important. In order to design an effective multicultural learning environment, it seems that a credit-bearing scheme may encourage students to not engage as much with other students in a short summer programme. The effect consequently is that their development in terms of more generic learning outcomes can be limited. One possible strategy, besides reducing the credit-bearing component of the ISS is to design learning activities so that there are more group activities and build in a greater proportion of group assessments. Furthermore, outside classroom type of activities can facilitate greater multicultural engagement, but the challenge is to encourage greater participation by CUHK students in programmed orientation type activities and other possible activities such as "ice-breaking", becoming a volunteer on campus tours and by encouraging a system of buddies.

SHAPING STUDENTS' ATTITUDES AND LEARNING OF ENVIRONMENTAL ISSUES THROUGH AN ENVIRONMENTAL EDUCATION VIRTUAL WORLD (EEVW)

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Abstract

Environmental issues plague individuals and nations alike. In a bid to inculcate global citizenship and 21st Century skills in our pupils, the team has developed an Environmental Education Virtual World (EEVW), through the use of Second Life, to engage pupils to think deeply on issues that affect the environment. This paper presents the pedagogical approach on the use of Second Life and the findings on how the EEVW has shaped the attitudes and learning of pupils from a Singapore primary school in the area of environmental education. The primary advantage of using Second Life in a complex subject like environmental education lies in the provision of an immersive, virtual 3-D environment that allows for synchronous interaction against the backdrop of a quasi-gaming interface that many digital natives - our students - are well accustomed to. Unlike traditional models of environmental education, this project takes on a multidisciplinary approach with the integration of English, Science, National Education and Character Development cultivating the elements of civic, language and scientific literacy in the design of its content and tasks. This project also provides pupils with a broad-based education, preparing them to be 21st Century Learners - pupils who are self-directed learners and pupils who are able to collaboratively learn and communicate effectively in this globalised age.

Keywords: Environmental Education; Virtual World; Second Life; 21st Century Competencies; ICT

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1. Introduction

Perspectives on the use and value of Second Life in the context of education vary considerably. However, the affordances presented to those who have been using are unquestionable. Despite some difficulties with it, there are many advantages. Kuo Chuan Presbyterian Primary School, together with industry partner Figment Pte Ltd, has created an Environmental Education Virtual World (EEVW) to explore the possibilities of engaging pupils using an alternative form of pedagogy.

Second Life is a space in which pupils are allowed to experiment in ways that are not possible in real life. It opens up opportunities for pupils to work collaboratively, taking on roles and identity to undertake activities not normally physically possible. Launched in 2003 by Linden Lab, Second Life is neither dead, nor dying despite much media suggestions. On the contrary, with the release of Viewer 2 in March 2010, the increased possibilities for integration with other systems and software position it as the overwhelmingly popular platform amongst the others.

Using the school's curricular framework and mapping it against the Six Learnings curricular framework⁴ for fictive worlds, the curriculum is then packaged and delivered using a variety of means: lectures, seminars, problem-based learning, demonstrations, film and video, simulations and debates within the virtual island.

2. Rationale

As part of the school's key strategies in promoting Environmental Education (EE), Pualu Kuo Chuan – a virtual island based in Second Life was designed to provide our pupils with a multi-sensory experience to explore environmental issues in a safe and controlled environment. Unlike traditional models of environmental education, this project takes on a multidisciplinary approach with the integration of English, Science, National Education and Character Development cultivating the elements of civic, language and scientific literacy in the design of its content and tasks.

Environmental issues plague individuals and nations alike. With the design and implementation of the Environmental Education Virtual World (EEVW), the school hopes to better nurture our pupils to be global citizens, engaging them to think deeper on issues that affects the environment.

The primary advantage of using Second Life in a complex subject like environmental education lies in the provision of an immersive, virtual 3-D environment that allows for synchronous interaction against the backdrop of a quasi-gaming interface that many digital natives - our students - are well accustomed to.

Although EE is currently infused into the Primary Science, Social Studies and Health Education syllabi, the learning outcomes for the syllabi, however, do not extend beyond requiring pupils to give examples of man's impact on the environment. Hence, to ensure that the outcomes of independent learning, higher order thinking and communal problem solving are met, the school

⁴ Developed by Dr Lim, Kenneth, Assistant Professor and Research Scientist, Learning Sciences Laboratory, National Institute of Education, Nanyang Technological University, Singapore (<http://www.slideshare.net/voyager88/the-six-learnings-of-second-lifetm-presentation>)

has deployed an island in Second Life to augment the teaching and learning of EE. Through the use of Second Life, pupils will be engaged in Self-Directed Learning (SDL), they will be empowered to take initiative and responsibility in establishing their learning goals. Pupils will no longer be recipients of information but will take on the role of information seekers as they immerse themselves in a rich interactive environment searching, discovering and taking ownership of what they want to learn.

Within this safe environment, pupils will also be engaged in Collaborative Learning (CoL)–social interactions targeted at deeper knowing. Within the virtual island, they will find opportunities to interact with the programme as well as with one another so as to gain a better understanding of concepts, problems, and phenomena or to co-create new knowledge and/or solutions to the issues presented. Pupils will also get the opportunity to collaborate on authentic tasks to supplement the learning in virtual world.

For instance, in the virtual Chek Jawa Zone (Chek Cinta)⁵, pupils are required to write a petition letter to a fictitious Environmental Minister against urban development. Such a task not only raises the environmental consciousness among pupils but it also promotes critical thinking skills. Consider the next example - when a class of pupils enters the Air Pollution Zone, they are not presented with pages of words and pictures as in a textbook. Instead, they enter into a safe and authentic environment that interacts with them. They will be able to see vehicles with exhaust fumes, petrol pumps, a fossil-fuel power plant with fumes billowing out from its chimney and a weathered statue. A pupil may then ponder in his/her mind and decide to investigate the causes of the weathered statue (establishing their own learning goals). Upon clicking, a “Heads-up Display” (HUD)⁶ will appear and provide the pupil with information informing the pupil that the weathered look on the statue is due to acid rain. The pupil would then develop a new learning goal – what causes acid rain – and proceed on to do his or her research answering his/her own questions (Self-directed Learner).

In addition, pupils are also trained in handling “difficult and hazardous situations” without exposing them to real risks such as shutting down a nuclear power plant during a nuclear meltdown or immersing themselves in a jungle environment to witness the clearing of trees for the growing of oil palms.

3. Preliminary Research and Evaluation

As modern personal computers gain processing and graphical-display power, more realistic interactive models and simulations could be created to help students grasp complex relationships more effectively. In some cases these simulations and activities “allow students to observe phenomena and do activities, albeit vicariously, that they could hitherto only do in the real world” (Winn, et al, 2006, p. 26) and can thus reduce the need for costly (and potentially environmentally hazardous) field trips or physical models (Tuthill & Klemm, 2002). With an

⁵ Chek Cinta is a virtual zone in the EEVW which is closely modelled after Chek Jawa, a wetland in the offshore island of Pulau Ubin, Singapore. In Chek Cinta, pupils are able to “explore” and learn more about the flora and fauna that can be found in Chek Jawa. Examples are the sea cucumber, sea grasses, horseshoe crab, mangroves trees and the hornbill.

⁶ HUD (Heads-up Display) – is a display that presents data within Second Life without requiring the user to look away from his or her usual viewpoint.

eye toward future developments in instructional technology, Taylor & Disinger (1997) predicted that computers would permit students to: “explore existing places and things to which students would not otherwise have access. (For example, take virtual reality field trips to remote natural environments, such as rainforests or ocean reefs.) [and] explore real objects that without alterations of scale in size and/or time could not otherwise be effectively examined”. (pp. 3-4).

Based on surveys conducted from early August to October 2011, the use of the EEVW has been well received by both our pupils and pupils from the cluster schools.

Survey Question	‘Yes’ (%)			‘No’ (%)		
	KCPPS ⁷	ATS ⁸	TVPS ⁹	KCPPS	ATS	TVPS
“Does the use of the EEVW provide you with opportunities to work with your classmates?”	87.6	76.3	94.5	12.4	23.7	5.5
“Has the EEVW been advantageous towards your learning experience in environmental issues?”	96.8	86.8	97.3	3.2	13.2	2.7
“Have you heard of Chek Jawa before you toured Chek Cinta in the EEVW?”	34.6	65.8	75.7	65.4	34.2	24.3
“Were you able to name and describe some of the flora and fauna of Chek Jawa after exploring Chek Cinta?”	87.1	89.4	81.1	12.9	10.6	18.9
“Did you look up and search for resources and information on the flora and fauna of Chek Jawa after you toured Chek Cinta?”	14	N.A	N.A	86	N.A	N.A
“Do you find the authentic task in Chek Cinta useful for your learning?”	100	N.A	N.A	0	N.A	N.A
“Were you aware of some of the marine life ¹⁰ that can be found in the waters of Singapore before you explored the Underwater Zone in the EEVW?”	35.1	68.4	59.5	64.9	31.6	40.5
“Were you able to name and describe some of the marine life that can be found in the waters of Singapore after exploring the Underwater Zone?”	86.5	89.5	75.7	13.5	10.5	24.3

When asked what they found beneficial in using the EEVW, many responded about gaining awareness as well as an in-depth knowledge about the flora and fauna found in Chek Jawa and the waters of Singapore. Also, pupils voiced that they were able to understanding topics like ‘Water Pollution’ in their Science syllabus with better breath and clarity.

⁷ Kuo Chuan Presbyterian Primary School (KCPPS) , n = **185** Primary 5 & 6 pupils

⁸ AiTong School (ATS) , n = **38** Primary 5 pupils

⁹ Townsville Primary School (TVPS), n = **41** Primary 3, 4 and 5 pupils

¹⁰ Marine life that can be found in Singapore waters include the clown fish, the butterfly copperband fish, hawksbill sea turtle and the brain coral.

4. Sustainability & Scalability

Spanning across the Primary 4 to 6 curriculum, subject integrations with English, Science and key messages from National Education have been infused into the island. The EEVW is also a key platform in our school-wide environmental initiative – Greening Kuo Chuan - which not only aims to educate our pupils in environmental and greening issues but also with skills that goes hand in hand with real-life greening and conservation.

Development of the EEVW is being segmented into three phases. Phase 1 which has been completed and funded by the Ministry of Education’s Innovation Fund (Tier 2)¹¹ touches on biodiversity, conservation, air, land and sea pollution and sustainable energy. Due to the success of this project, the school is now planning to embark on phase 2 featuring waste management (landfills, incineration, recycling plants) and a green city. This will be funded by the annual ICT fund. These first two phases have been designed to be an interactive ‘e-textbook’.

The third phase, however, will be likened to an ‘e-workbook’ where pupils will engage in a problem-based project and use the island as a workbook to provide a solution to the given problem – pupils will become the creators: ‘Synthesis & Evaluation’ stages in Bloom’s taxonomy. It will be developed using the eduLab¹² funding (\$ 200, 000). The focus of our island will be on “building a sustainable green city”. This fund is jointly administered by both the National Institute of Education (NIE) and the Education Technology Division, Ministry of Education. We have partnered Dr Kenneth Lim, an Assistant Professor and Research Scientist from the Learning Sciences Lab, National Institute of Education who will guide our school in this project. There are 3 other secondary schools under this eduLab funding. Dr Lim is currently training both the HOD/ICT and LH/ICT (internal) in research methodology as well as assisting the school in the preliminary trial of the island with the Primary 6 pupils.

Currently, we have hosted two schools from the cluster that had expressed interest to make use of our EEVW to extend their pupils’ learning. The school is now making plans to work out lesson packages which will be made available to schools in the cluster as well as open our EEVW to schools from other clusters. This project was also awarded the South 7 Cluster Best Suggestion of the Month award in June 2011. The EEVW will also be a major platform for Project Work next year.

5. Summary and Discussion

¹¹ The Ministry of Education’s Innovation Fund (MIF) is awarded to schools with projects that are innovative and possess the potential for scalability. Kuo Chuan Presbyterian Primary School was awarded the MIF on 28th May 2011 with a total funding amount of S\$49, 969.55.

¹² EduLab supports the development of teacher-initiated ideas in order to transform learning with technology through school-centred projects. Support for project teams includes funding, professional learning opportunities, and brokering for research/industry expertise.

This paper highlights the use of technological innovation (EEVW) and its translation to teaching and learning. With the pedagogical foundations – Six Learning and Bloom’s taxonomy – and the affordances that Second Life presents, the EEVW has and will continue to prove to be an excellent source of providing for engaging and meaningful learning for the pupils.

As will be the case in all innovations, there were some difficulties encountered. Pupils in their excitement would be tempted to customise their avatar’s appearance rather than focus on the given task. The scaling up would also require better machines and a stronger and better bandwidth to support the users. However, based on the feedback collected thus far, the benefits have far outweighed the difficulties.

Teachers using this platform will also have to move away from a traditional stance to one of a facilitator. As a facilitator, teachers will now be privy to the thoughts and inner feelings of the pupils as they interact and discuss over the shared experiences. This provides and structures for an intellectually stimulating classroom environment and acknowledges the value of the pupil in his/her learning. Having said, the role of a facilitator cannot be carried out effectively without much practice and training.

This project is still in its developmental stage and there is much to be culled from it. This paper is by no means exhaustive. Readers who wish to obtain information on areas that are not specified are welcomed to email the authors.

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Annex 1

Environmental Education Virtual World Pulau Kuo Chuan

Global Warming: The Carbon Bathtub

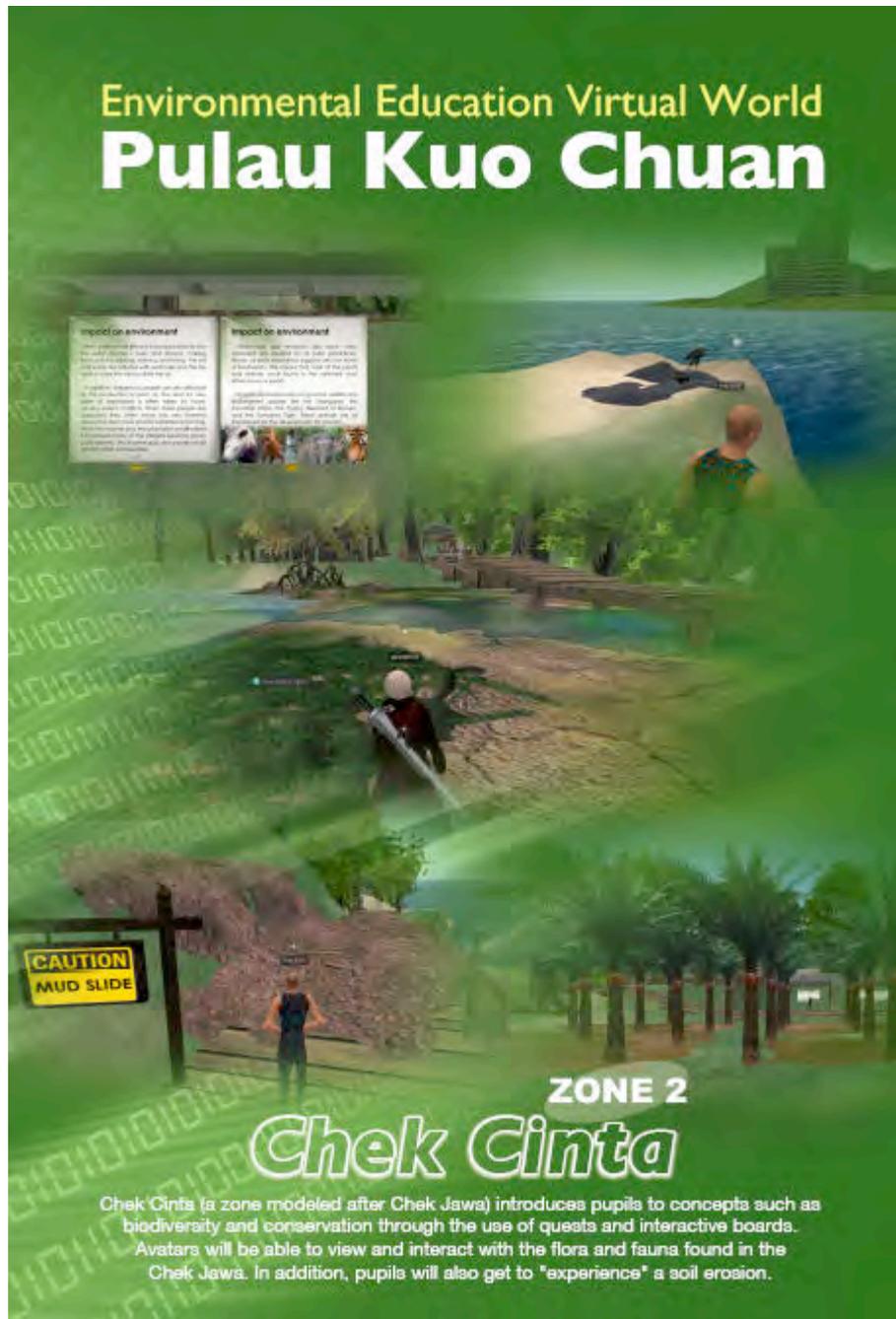
45% in atmosphere
10% by plants and soil
45% absorbed by sediments

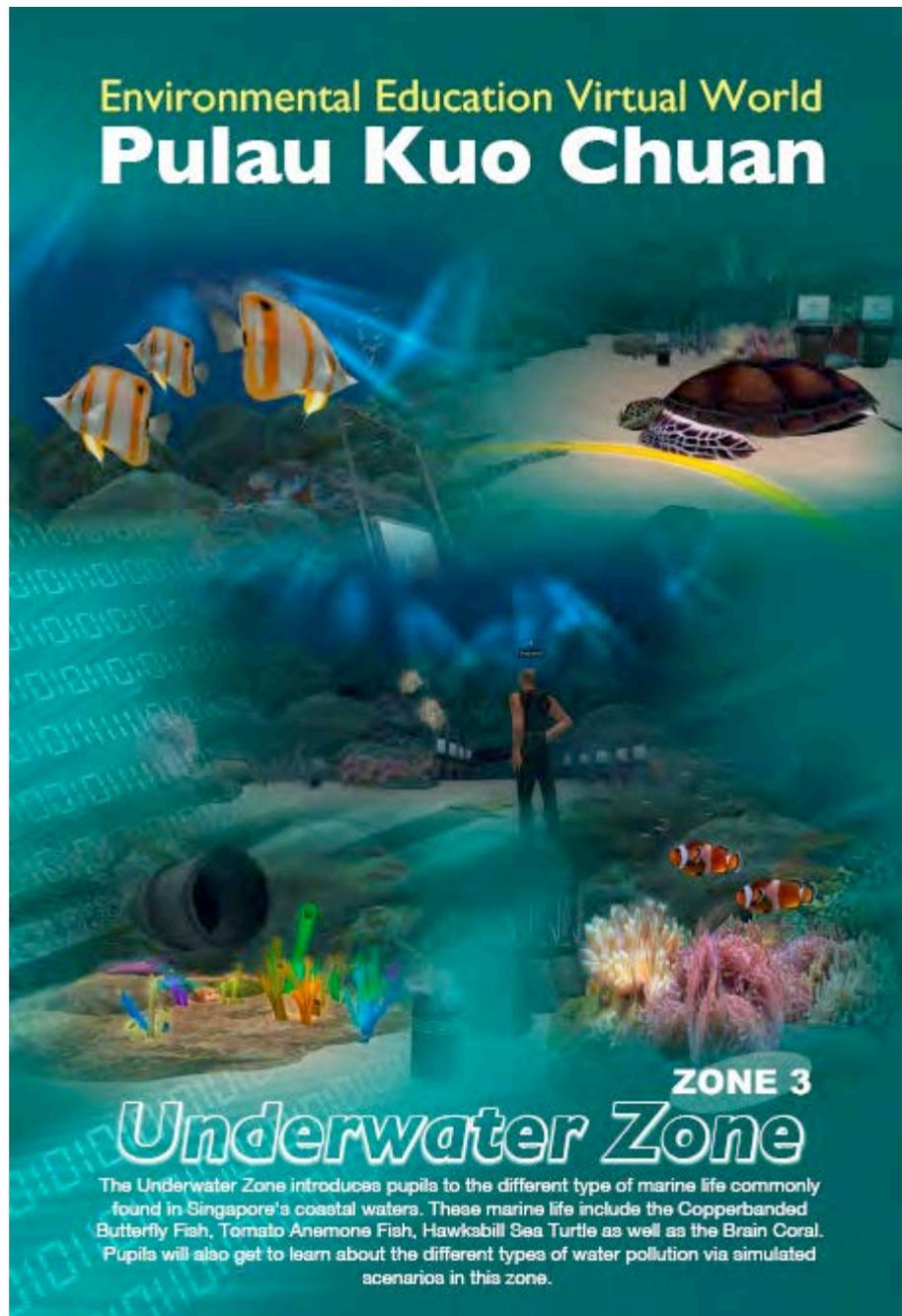
Pulau Kuo Chuan Directory Map

Solar Panel

ZONE 1
Green Museum

The Green Museum introduces pupils to the concepts of renewable energy, climate change, clean technology, in-world navigation skills and cyberwellness (in-world etiquette). In this zone, avatars are able to view a 3D global warming show as well as interact with break-out models featuring a solar panel and a turbine.



The image depicts a virtual underwater world. In the foreground, a diver stands on a sandy seabed. To the left, a large black pipe discharges a stream of water. To the right, a sea turtle is visible. The background features a coral reef with various colorful corals and several copper-banded butterflyfish. The scene is illuminated by blue light rays filtering down from above. The overall atmosphere is educational and immersive.

Environmental Education Virtual World

Pulau Kuo Chuan

ZONE 3

Underwater Zone

The Underwater Zone introduces pupils to the different type of marine life commonly found in Singapore's coastal waters. These marine life include the Copperbanded Butterfly Fish, Tomato Anemone Fish, Hawkabill Sea Turtle as well as the Brain Coral. Pupils will also get to learn about the different types of water pollution via simulated scenarios in this zone.

Environmental Education Virtual World Pulau Kuo Chuan

ZONE 4
Air Pollution

The Air Pollution Zone is where pupils learn more about the internal working of a fossil fuel by "immersing themselves in a chimney full of smog" to learn more about the harmful effects of air pollution. Avatars will also learn about the different types of fuel for vehicles and investigate the cause and effects on acid rain.



Equal and Special Treatment in Education

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Abstract:

Pauro Freire suggested “the concept of banking model of education” and “student-teacher dualism”. He suggests if the former type of education took place, oppressed people (≠students) remained same position for long time. He recommends mutual conversation between teachers and students to avoid such problem. This paper introduced typical model of educational situation and showed to precede education for small number of students. Some ways to show students that a teacher is just relative existence are described.

Key words: educational model, student, teacher, landscape gardening

1. Introduction

We are engaging in research and education in university. As a practical teacher, we have many chances to stand up in front of students. There we give lectures. Students are listening. Some of them might carefully listen; some of them might sometimes sleep. Students who look sleeping are not always really sleeping but they are listening what teachers speak. People are not what they seem. When we are in the process of doing lectures or lessons, we sometimes think what we are doing now.

When I was a student, I think why we students are here. But when I became lecture presenter, I am wondering what we are doing here and what we are delivering to students. In the form of lecture, presenter speaks in front of many students. One teacher meets many audiences at once. In this situation, what kind of communication is happening? If this type of communication is just one case of education, what other choices we can have?

Generally speaking teachers delivers some knowledge to students. Knowledge is an inheritance handed by previous generation (not so old one). In the university context, most of the type of knowledge might be “science”.

This paper describes a phenomenon that occurs in one-to-many communication in education, and other choices teachers can have. I belong in environment horticulture department and my major is landscape gardening. Concrete examples I experienced are introduced in the following chapters.

2. Subject

This paper deals with case studies what can be seen in our university, especially in the educational scenes of my experience. But same thing will be seen as more general situation.

3. Educational model

3-1. Basic model

Basic model in educational scene are shown in Fig.1. Big circle shows “teacher”. Many small circles show “students”. Teachers are given special authority to deliver educational contents. Contents are pre-decided before real students gather. One teacher confronts many students. This model is most common situation. If students have very restricted knowledge about something, this type of

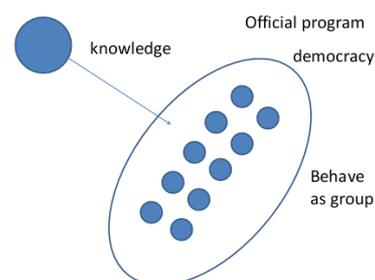


Fig.1 Basic Model

teaching will be effective. Paulo Freire suggested about “Banking model of education”¹⁾. Fig.1 model is easy to fall into such education. In the case of adults, they pay tuition or seminar fee by them and attend it. If they don’t want to attend some kind of educational event, they just don’t pay the money and don’t appear the place. Participants gather from their own decision. In compulsory education scene like elementary, junior and senior high school, students have small rights to judge if they really need to take the class. Parents have to work, so they have not much time to educate their own children. So they drop their own children to the educational system. This has a good aspect to accustom children into social life. Schools can offer small scale of social environment. In higher education like university, students seem to have the right to chose if they enter the university or not. This is correct in the previous age. In the country like Japan, all senior high school students can enter universities if their parents have rooms to pay tuition fee because numbers of universities are many. These universities have been made in population increasing age. Now Japanese society is experiencing population decreasing age. This means that students gathering in front of teacher are not always attend in the place from their own real intention. They are dispatched from their parents. Stake holder of university education might be students’ parents. Judging from this situation, basic model have to be changed.

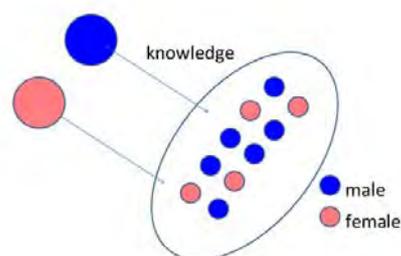
3-2. Model which shows students diversity

Here basic models are looked at more closely. If we find the difference of sex, teacher and students can be separated into two types as Fig.2 shows. This is one of such model which looks at the quality of students. Other important component of students’ quality is revealed in Fig.3. Fig.3 shows only the part of students. In the students group, their interest of a certain subject is different. Yellow shows student who has high

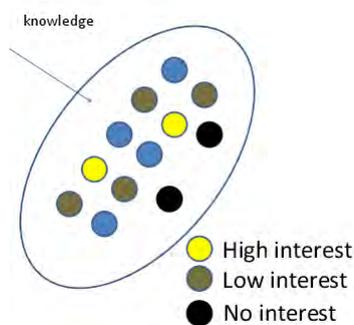
interest in the subject and light brown shows low interest, black students show no interest. So teachers are speaking in front of various students.

Fig.2 and Fig.3 just shows examples of diversity of students. In this internationalized society, students’ diversity might arise from their nationality or creed.

If teacher look at this situation and students they will do something more.



Fug.2 Modified Model 1



Fug.3 Modified Model 2

3-3. Feedback model

“This is nothing special”, many educators might think. To avoid miscommunication, teachers select mutual communication and feedback style.

If they want to achieve this in the official program, it will become like Fig.4. Teachers prepares question and answer time. It is all right that student asks a question or teacher asks a question. The other part is trying to answer the question. Fig.4 shows “one time feedback”.

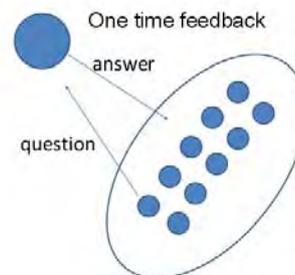


Fig.4 Feedback Model

In real situation, many times feedback can be possible.

As we could experience in the ACE 2011 in

Osaka, not only communication between presenter and audiences prevail, but also communication among audiences might happen. At that time all of the participants in the place become like equal components in the place.

3-4. Model of developing next meeting chance

Through teachers’ eyes, some students might seem to be excellent with the subject and some students might seem to be difficult to make his or her progress. If the education is just mass-production, one lecture is self-sufficient. Excellent students get good evaluation, slow students get worth evaluation and it is over. But the education contains the continuing step; excellent students can get higher training and worth students can get supplementary lessons.

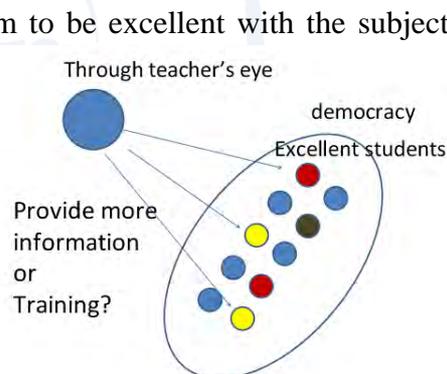


Fig.5 Differentiation of students

If there is no official subject of higher or supplementary, what teachers do? Such excellent students usually might be recommended to enter graduate school. But eager teacher might make special training time for the students. The teacher will call some students for the purpose. It means picking up some students from students’ group. Teacher invites some students. Especially if the subject is defined as laboratory activity, professor is able to call special few students to suggest

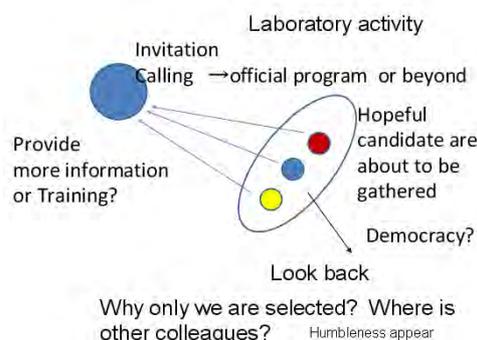


Fig.6 Students invited

something to them. Same thing might be true to the general subject. Fig.6 is such

model. If few students are gathered, they might come, but they arise some doubt “why only we are gathered?” Students have the character that they want to learn with group. If only one student is called to have special lesson without relation to get official credit, it is an embarrassing situation for them. Teachers have to take care of sexual harassment too. But such special treatment might against democracy policy.

4. Case study of education scenes

4-1. Special teacher’s lesson

In landscape gardening practice, faculty members cannot provide every curriculum for students. Sometimes proper teachers are working outside the university. Fig.7 and Fig.8 shows professional person outside university take a class. The person in white circle is the invited teacher. Fig.7 is a practical training of garden construction. They are making stonework with this craftsman’s advice. In the white circle of Fig.8 there is a chief of public garden facility. He explains the management of the place. Students are listening his speaking. In this model usual faculty doesn’t appear as teacher. Even if faculty have chance to appear the place, they just watch over the education process. These professionals are not official teacher. Their usual work are different from faculty. So their presences suggest students that there are reliable persons outside university. It might be the beginning of deconstruction of “Banking model of education”.



Fig.7 Stonework



Fig.8 Park manager’s instruction

4-2. Students’ own activity

Other than regular class curriculum, students can act as practitioners in neighboring community. Fig.9 and Fig.10 shows students’ volunteering activity of pruning. This group called “Green Association” does service of trimming to community especially for elder people. It becomes good job training for students. In this activity, teacher doesn’t appear. They just move from their volunteer mind and meaning for life.



Fig.9 Lunch time



Fig.10 Trimming volunteer

4-3. Teacher moves from student's instruction

Students make trial and error. In this stone moving practice, students stretch a rope and suggest machine operator (=teacher) how to move the crane machine. If this process succeed, lying stone can turn into standing stone. Fig.11 is lying stone. Fig.12 is standing stone.



Fig.11 Lying stone



Fig.12 Standing stone

4-4. Supplementary class

This is the case of supplementary class. In regular class, few students could not keep up to the class program. These three students in Fig.13 were called and did special extra training of CAD operation. This is not included official curriculum. It looks like Fig.6 model. The difference is the students invited here are not excellent students. In this CAD training, teacher can look at students' computer on screen of teachers' part. Teacher can operate student's computer to show



Fig.13 Extra training

how to operate CAD soft. Students can see teacher's operation. These three students positively gathered to get CAD qualification. If education takes place in small number it becomes easier to do mutual communication.

5. Conclusion

Typical "Banking model of education" is easy to be made in Fig.1 style education. To avoid "Banking model of education", Freire suggested the importance of conversation between teachers and students. He said sometimes teachers were students and students were teachers. As shown in case study, there are several choices for teachers to take.

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Title:

The Primacy of the Right over the Good in International Education

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Topic of the submission:

Community, Culture, Globalization and Internationalization

The Primacy of the Right over the Good in International Education

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Abstract

*Utilitarianism and deontology form the opposite poles of moral philosophy. Utilitarianism is a doctrine committed to maximizing the good by adopting “the greatest happiness of the greatest number” principle, whereas deontology is the one claiming that there must be the basic rights (life, liberty, equality) of all individuals to protect whatever it takes. The conflict between both doctrines is brought to light especially when the right is sacrificed to the maximization of the good. Utilitarians object that there is no such case or it can rarely happen, but I shall argue that it is quite common. We shall show that there is no intrinsic connection between happiness and virtue by drawing upon Kantian deontological ethics. Also, Kant’s ethics stresses the universal nature of moral laws. In Jean Piaget’s *The Moral Judgment of the Child*, we shall see that the classical, fundamental opposition in ethics manifests itself in the form of a stark contrast between the two moralities in the stages of moral development of the child. It seems to me that the importance of deontological perspectives is increasing, not decreasing, in a globalized world. At first sight, it would be inappropriate that deontological ethics pursues universal values amidst multi-culturalism, and we would be better off with a relativist attitude that the moral distinction between right and wrong is only meaningful in the historical and cultural contexts in which it is placed. In some cases, however, cultural particularity poses a grave threat to the fundamental values of humanity (sweatshop labor, for example). Deontological ethics has no intention of undermining the rich cultural diversity because its sole aim is to guarantee the basic rights for every single individual. As deontologists, we could develop a deep understanding of different cultures by being actively engaged in them and appreciate the significance of cultural pluralism.*

1. The Foundations of Morals

In moral philosophy there are two major strains of debate concerning the foundations of morals. One is the debate over the epistemic status of moral judgments and is subdivided into a descriptivism/non-descriptivism (or prescriptivism) debate and a

cognitivism/non-cognitivism debate. The latter is closely related to, but distinct from the former. A descriptivism/non-descriptivism (or prescriptivism) debate is concerned about the problem of whether or not moral judgments can be reduced to the descriptions of facts or properties of the world. Descriptivists claim that moral judgments describe facts or properties of the world, whereas non-descriptivists (prescriptivists) claim that in moral judgments there is something more than to describe facts or properties of the world and especially there is a prescriptive force such as commendation or condemnation, in which descriptive statements are lacking. So, from the prescriptivist point of view, we cannot approach moral judgments in an objectivist attitude and we must be more actively engaged in the objects of the judgments.

A cognitivism/non-cognitivism debate is concerned about the problem of whether or not moral judgments have a truth-value (true or false). Cognitivists claim that moral judgments have a truth-value just like theoretical sentences, whereas non-cognitivists claim that moral judgments do not have a truth-value just like exclamatory or imperative sentences. In general, cognitivists claim that morality can be universalizable (e.g., telling a lie is wrong, full stop), whereas non-cognitivists claim that morality has meaning only in the historical or cultural background where it is placed (e.g., telling a lie is wrong under certain circumstances but ...). The position I would like to pursue in this paper is non-descriptivist (prescriptivist) cognitivism, that is, moral judgments are not just the descriptions of facts or properties of the world because of the prescriptive force (non-descriptivism), but they have a truth-value (cognitivism).

The other debate is over the adoption of substantial moral principles between utilitarianism (consequentialism) and deontology (non-consequentialism). The debate over utilitarianism vs. deontology is the classical and most fundamental in ethics. I would like to address the need for deontological perspective in a globalized world, so we shall examine the debate in more detail.

2. Utilitarianism (Consequentialism) vs. Deontology (Non-consequentialism)

As epitomized in the famous phrase “the greatest happiness of the greatest number,” utilitarianism is a hedonistic doctrine which is committed to maximize actual or expected utility. A utilitarian prioritizes public utility (efficiency) over justice in the sense that someone’s win means other’s loss (zero-sum game), so the less advantaged could sacrifice themselves to the more advantaged. On the other hand, a deontologist claims that there must be some basic rights guaranteed for every single individual

whatever it takes to protect them, and prioritizes justice over public utility (efficiency) in the sense that inequalities are only allowed in so far as they are to the benefit of all. John Rawls, in a voluminous book titled *A Theory of Justice*, contrasts utilitarianism with social contract theory, and defends the latter against the former. The point is that there are some cases in which the greatest good is in a stark contrast with the rights of all individuals. In short, utilitarianism is a good-based philosophy, whereas deontology is a right-based philosophy.¹ Consequentialism or non-consequentialism is an ultimate choice in the adoption of a substantial moral principle.

We have to note here that “deontology” means “a decision-maker’s duty or obligation to prioritize the rights of all individuals over anything else.” So it is a utilitarian who sacrifices some for the benefit of others and it is a deontologist who protects the rights of all individuals against the greatest good. In the extreme case, utilitarianism requires one to sacrifice oneself to others. Deontology, however, treats the rights of all individuals as being equal and does not demand such a supererogatory action. The point is that, since from a deontological standpoint the rights of all individuals seem to be equal, claiming one’s own rights does not imply egoism.

It is interesting to see a hypothetical scenario that Ferrell et al. come up with in order to make stand out the overarching differences between utilitarian and deontological decision-making.² Sam Colt is a sales person whose company produces nuts and bolts and he is considering a deal with a bridge contractor. Assume that the bolts of his company have a 3 percent defect rate, which is not unlawful but turns out to be unfit for use at the time of disaster such as earthquake. A utilitarian Sam Colt conducts a cost-benefit analysis. The probability of an earthquake is 50 percent and even if there should be an earthquake, those who are benefited from the bridge (the community as a whole) would exceed the fatalities (as many as one hundred people). A utilitarian Sam Colt would make a deal because he conceals the defect rate of the bolts from the bridge contractor (which deems the greatest good as a result of a cost-benefit analysis). On the other hand, a deontological Sam Colt sees the rights of all individuals as being equal. If there should be an earthquake, some must lose their lives even though the number of

¹ In using the term “good,” we need to make a distinction between “non-moral good,” which is synonymous with “happy” and “moral good,” which is synonymous with “virtuous.” To avoid confusion, I shall utilize the term “good” in the sense of “non-moral good” throughout my paper. For, otherwise it would make no sense to discuss the primacy of the right over the good because in the sense of “moral good,” the term “good” is synonymous with “right.”

² Ferrell, et al., *Business Ethics*, pp. 148ff.

them would be small compared with the number of those who are benefited from the bridge. A deontological Sam Colt would decline the deal because he informs the bridge contractor of the defect rate (which deems the protection of the rights of all individuals). This hypothetical scenario illustrates that the case in which the greatest good is in a stark contrast with the rights of all individuals: a utilitarian Sam Colt prioritizes the greatest good over the rights of all individuals, whereas a deontological Sam Colt prioritizes the rights of all individuals over the greatest good.

Sam Colt's case is a hypothetical scenario, so utilitarians might object that there is no such case or it can rarely happen in real life. But I shall argue that it is not so difficult to come up with a real life example similar to this case, and rather it is quite common. Recently, I watched the news reporting that Japan's Atomic Energy Commission released the new estimates on the cost of nuclear power generation following Fukushima nuclear accident in the wake of the devastating earthquake and tsunami of March 11. The cost could be raised by 1 yen per kilowatt-hour at most, so even if it's added to the previous assumption, the total cost would be still lower than other forms of power generation. There are some panelists who object to it by calculating the cost even higher. Watching the news, I think to myself what a utilitarian way of argument it is to support the nuclear energy generation based on a cost-benefit analysis like that. Speaking from the deontological viewpoint, the safety and protecting people's lives preempts the cost-benefit calculus no matter how it's calculated.

Deontologists reject the intrinsic connection between happiness and virtue, which Utilitarians affirm. We shall show that there is no intrinsic connection between happiness and virtue by drawing upon Kantian deontological ethics. Kant criticizes the Hellenistic philosophers of following the same method as far as the definition of the highest good is concerned. Both the Stoics and the Epicureans sought the unity of virtues and happiness under the law of identity, although they are two different elements of the highest good. The Stoics hold that virtues amount to happiness, whereas the Epicureans on the contrary hold that happiness amounts to virtues. Against the Stoics and the Epicureans, however, Kant claims that almost always people cannot receive their happiness in proportion to their virtues. This means that in the real world a virtuous person is not necessarily happy and a vicious person is sometimes happy. Kant calls the achievement of virtues the "supreme good (oberste Gut)" as the first condition of the highest good, as distinct from the "highest good (höchste Gut)," in which the necessary connection between happiness and virtues would be possible.

Kant makes a distinction between morals and religion and writes as follows:

(M)orals is not really the doctrine of how to make ourselves happy but of how we are to be *worthy* of happiness. Only if religion is added to it can the hope arise of someday participating in happiness in proportion as we endeavored not to be unworthy of it.³

So in order to achieve the highest good Kant needed to postulate the immortality of the soul and the existence of God.

Also, Kant's ethics stresses the universal nature of moral laws. Kant tries to exclude any empirical condition in morality, and denies that the moral law is based on the motives of sensible impulses such as inclination and particular desires. So the categorical imperative has to be independent of one's own happiness and personal interests. When Kant says that we must act on maxims which are universalizable, he means that not only are these maxims adopted by all others, but also they are prompted by an unconditional, uncontingent, and non-arbitrary will. Conversely, maxims that are not universalizable are contrary to duty, and acting out of such maxims is morally unworthy.

In the *Groundwork* Kant formulates the categorical imperative in the following three ways:

The Formula of Universal Law (FUL): Act only on that maxim through which you can at the same time will that it should become a universal law. (G. 421)

The Formula of the End-in-Itself (FEI): Act so that you always use humanity, in your own person as well as in the person of every other, never merely as a means, but at the same time as end. (G. 429)

The Formula of the Kingdom of Ends (FKE): All maxims from our own legislation ought to harmonize into a possible kingdom of ends, as a kingdom of nature. (G. 436)

Kant goes on to make a controversial remark about the categorical imperative as follows:

The three ways mentioned of representing the principle of morality are, however, basically only so many formulas of precisely the same law, one of which unites the other two in itself. (G, 436)

Kant attempts to bring moral law nearer to intuition by giving the formulas of the categorical imperative beyond FUL and saying that they are basically equivalent.

³ Kant, *Critique of Practical Reason*, p. 130.

The Golden Rule is formulated as “Do unto others as you would have others do unto you,” or conversely, “Do not do unto others, what you would not have others do unto you.” The difference between the Golden Rule and Kant’s categorical imperative is this: Since the Golden Rule is formulated from your point of view, someone could disagree with your maxim, whereas Kant’s categorical imperative requires that your maxim should be universalizable. In this sense, rather than the Golden Rule, Kant’s categorical imperative addresses more clearly the universal nature of moral laws.

3. Jean Piaget’s Theory of Moral Development

Now we shall see Jean Piaget’s theory of moral development as presented in *The Moral Judgment of the Child*. The reason why we discuss Piaget’s theory here is because I find it intriguing that the fundamental opposition in ethics as we have seen it above manifests itself in the form of a stark contrast between the two moralities in the stages of moral development of the child. Piaget illustrates the two moralities by studying how children play the game of marbles. Piaget contrasts the moral constraint of the adult and the cooperation between equals. Constraint is bound up with unilateral respect and leads to heteronomy, whereas cooperation is based upon mutual respect and leads to autonomy.

It sounds strange, but Piaget here connects constraint with egocentrism. Because the younger children know that there are the rules outside themselves that they must respect, but they are egocentric in the sense that they set up the arbitrary rules on their own. But the rules followed by the older ones are based upon mutual consent, so internalized and universalized. In the game of marbles, for example, the younger children try to hit as many marbles in the square as they can, so "win" the game in their own ways, but the older ones try to gain more marbles than the opponents, so really win the game.

The Characteristics of the Earlier Morality	The Characteristics of the Later Morality
constraint of the adult	cooperation between equals
egocentric/imitation	equality/solidarity
obedience/unilateral respect	reciprocity/mutual respect
heteronomy	autonomy

objective responsibility moral realism ⁴ retributive justice	subjective responsibility motives/intentions distributive justice
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Table 1: The Comparison between the Characteristics of the Earlier and Later Morality

In order to see what Piaget actually means by the objective and subjective responsibility, we shall discuss the following two scenarios. Piaget interviews children and asks them which one they think is held more responsible for his action.⁵

<p>Scenario I (Broken cups)</p> <ul style="list-style-type: none"> •John: He was called for dinner. But he didn't know that behind the door to the dining room there was a chair and on this chair there was a tray with fifteen cups on it. When he went into the room, he broke all the fifteen cups. •Henry: When his mother was out, he tried to get some jam out of the cupboard. But the jam was so high up that he couldn't grab it. While he was trying to get it, he knocked over a cup. The cup fell down and broke.
<p>Scenario II (Ink blot)</p> <ul style="list-style-type: none"> •Augustus: When his father was away, he noticed that his father's ink-pot was empty. Augustus thought that he could help his father by filling the ink-pot before he came home. But while he was opening the ink-bottle, a slip of the hand made a big blot on the table cloth. •Julian: His father went out and Julian thought it would be fun to play with his father's ink-pot. When he played with the pen, he made a tiny blot on the table cloth.

Table 2: Two Scenarios concerning the Objective and Subjective Responsibility

Piaget reports that the younger children tend to evaluate the severity of the responsibility for the actions based upon their consequences alone. That is, the greater the amount of the material damage done by your action is, the more responsible you are held for it. So in the scenario I, John, who broke fifteen cups, is held more responsible for his action than Henry, who broke only one cup. Likewise, in the scenario II, Augustus, who made a big spot on the table cloth, is held more responsible than Julian,

⁴ A caution is in order regarding Piaget's use of the term "moral realism." Piaget defines "moral realism" as "the tendency which the child has to regard duty and the value attaching to it as self-subsistent and independent of the mind, as imposing itself regardless of the circumstances in which the individual may find himself." (*The Moral Judgment of the Child*, p. 106)

⁵ Piaget, *The Moral Judgment of the Child*, pp. 118. Piaget actually examines three scenarios but we shall describe only two of them in the interest of space.

who made a tiny one. The older ones, on the contrary, take into account the motives or intentions of the actions in order to measure the severity of the responsibility for them. So in the scenario I, Henry, who wanted to get the jam and broke a cup, is held more responsible for his action than John, who broke the fifteen cups just by accident. In the scenario II, Julian, who played with his father's ink-pot, is held more responsible for his action than Augustus, who tried to help his father by refilling the ink-pot. The objective responsibility, as Piaget calls it, measures the responsibility only in terms of the consequences of the actions, the material damage done by the actions, whereas the subjective responsibility measures the responsibility by taking into consideration the motives and intentions of the actions. Piaget's study shows that the subjective responsibility takes over the objective responsibility with increasing age.

I have a few words on retributive and distributive justice. Retributive justice is something like if you did something wrong, then you must be punished, and it can be traced back to Hammurabi's Code: "an eye for an eye, a tooth for a tooth." On the other hand, distributive justice is something like if your child did something wrong, then don't punish him but explain him why this is wrong to do, and it is bound up with the idea of equality. Here as well we can see that distributive justice gets the upper hand of retributive justice with increasing age.

According to Piaget, there is the essential difference between the two moralities. Indeed Piaget accepts that the origin of the two moralities, constraint and cooperation, is social. Actually Piaget sees equalitarianism not as innate but as acquired. But it is worth noting that Piaget criticizes Durkheim of identifying constraint with cooperation and Bovet of deriving mutual respect from unilateral respect. From the standpoint in which morality is based upon the social or conventional, it remains the status quo, i.e., a socially accepted norm. So Piaget thinks that morality ultimately takes on a dimension that goes beyond the social or the conventional. It is important to distinguish between "ought" and "socially valid," as aptly described by German words "Gültigkeit" and "Geltung."⁶ The former refers to post-conventional norms, whereas the latter socially established ones.

The death penalty is a case in point here. The death penalty is still in place in the U.S. as well as here in Japan. According to the Gallup polls, 60-70 percent of American

⁶ For this distinction, see also Habermas' *Moral Consciousness and Communicative Action*, p. 61, 126, 161-2, p. 177.

people are steadily in favor of the death penalty. A recent Japanese government survey shows that record high more than 80 percent of Japanese people supports the capital punishment. What does this mean? This means that the death penalty is socially valid or accepted in both countries. According to the above distinction, however, it is one thing to say that it ought to be and it is another to say that it is socially valid. The death penalty could be justified from the historical or cultural background of the country concerned or by claiming that the death penalty acts as a deterrent to homicide. But it seems to me that the death penalty is based on retributive justice and someday it could be overtaken by distributive justice. There is indeed a widespread trend toward abolishing the death penalty. But we have to wait until another day to see its total abolishment.

It is easy to see the close connection between Piaget's developmental theory of moral judgment and Kohlberg's theory of stages of moral development. It is controversial whether Kohlberg's stage 6 as the final stage of moral development, which corresponds to Piaget's characteristics of the later morality, is empirically verified or just a philosophical speculation. When the term "duty" or "obligation" is used, there is such a connotation that it is imposed upon from external authority, but deontological duty or obligation means the one as the other side of the claim to one's own right, which is based upon the concept of equality. The correlation between right and duty in Kohlberg's stage 6 of moral development shows the notion of duty as a deontological one. Kohlberg would agree with Piaget that the stages of moral development exist in a hierarchical order from the prior to the posterior stages, whereas critics would argue that there is no such order and that especially stage 6 is an alternative to stage 5.⁷

4. From Moral Contextualism to Universalism

A number of specific issues that we encounter in international education should be explored in the light of the utilitarianism vs. deontology debate. It seems to me that the importance of deontological perspectives is increasing, not decreasing, in the age of globalization. We are going through the following three stages in a globalized world:

- 1) Ethnocentrism
- 2) Moral Contextualism
- 3) Universalism

⁷ E.g., C. Gillian and J. M. Murphy. For this, see Habermas' *Moral Consciousness and Communicative Action*, p. 176.

In ethnocentrism, we unconsciously tend to impose our own moral standards on others. We learn from moral contextualism that the moral distinction between right and wrong is different from culture to culture and has meaning only in the culture where it is placed. Proverbially speaking, “When in Rome, do as Romans do.” But there are some cases in which the particularity of culture poses a serious threat to the fundamental values of human existence (sweatshop labor, for example). There must be some general or universal moral values (“core values”) beyond the cultural differences. These are basic values that apply regardless of social structure, whether it may be capitalism or socialism.

This leads us to the natural law theory: beside the positive laws of each nation, the natural law reflects ethical codes that all nations ought to abide by. Take as an example the sales of harmful products in foreign countries. Despite a decline in domestic cigarette sales for various reasons, tobacco companies expanded their markets to developing countries and increased their sales. Indeed cigarette sales in developing countries could be justified on the basis of low longevity rates there. In some cases there is a need for an international agreement to regulate the sales of products. One of the toughest challenges we face in a globalized world would be how to balance the tension between moral contextualism and universalism.

5. Conclusion

Utilitarianism (consequentialism) and deontology (non-consequentialism) form the opposite poles of moral philosophy. As we have seen by drawing upon Kant’s ethics, the upshot of deontological ethics lies in the claim that there is no intrinsic connection between happiness and virtue and deontologists prioritize the right over the good. The most I would like to emphasize is the fact that the importance of deontological ethics is increasing, not decreasing, in our time of globalization. At first sight, it is not appropriate that deontological ethics pursues universal values amidst a variety of nations, people, cultures, and religions. We might be better off with the contextualistic idea that the moral distinction between right and wrong is only meaningful in the historical and cultural backgrounds in which it is placed. But deontological ethics has no intention of undermining the rich cultural diversity because its sole aim is to guarantee the basic rights for every single individual. Rather, in contrast with a “Live and let live” attitude, we deontologists can look at different cultures with respect by being actively engaged in them and appreciate the significance of cultural pluralism.

The similar social/economic problems that occurred at the domestic level are now taking place at the international level: Increasing unemployment rate and widening economic inequality between rich and poor. We have just seen that “Occupy” movement that started in New York’s Wall Street spreads worldwide in a matter of weeks or months. Under these circumstances we must keep in mind that we must do it right in a globalized world. Sometimes we must sacrifice the good in order to do it right. But I believe this is the most important message we need to get across to people all over the world in the time of globalization.

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Student Perceptions of Japan in the Global Context

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Conventional wisdom holds that the world is becoming increasingly outward-looking and interconnected, just as Japanese youth are becoming increasingly inward-looking and insular.

"Today, it appears that Japan is increasingly looking inward and walling itself off from outside influences - a trend that's showing up in everything from movies to music to learning languages. Even as the supposedly irresistible tide of globalization washes against Japan's shores, insular and parochial attitudes are strengthening."

SOURCE: Gavin Blair, "More Japanese Shunning the Outside World", Japan Today, March 12, 2009.

As a proxy indicator of insularity, this study investigates student perceptions of the relative ranking of Japan among countries around the world with respect to various indicators of cultural identity and well-being. Care is taken to assess both student *beliefs* (substantive knowledge) and *degrees of belief* (normative knowledge), thereby facilitating examination of differences in levels of confidence in expressing beliefs. The study compares Japanese students before and after a mandatory year of study-abroad, both between groups and relative to a reference group of non-Japanese exchange students in Japan.

Results suggest that non-Japanese exchange students studying in Japan have a better sense of Japan's rankings among countries of the world than do Japanese students – and they also are more certain of their convictions. More striking, perhaps, is the substantial improvement among Japanese students following their study-abroad experience, and the resultant opportunity to both sample another culture and to reconsider Japan from a more distant perspective. Alas, although Japanese students dramatically improve their substantive knowledge through study-abroad, their normative knowledge (which is related to self-confidence, willingness to risk error, etc.) improves but continues to lag non-Japanese counterparts.

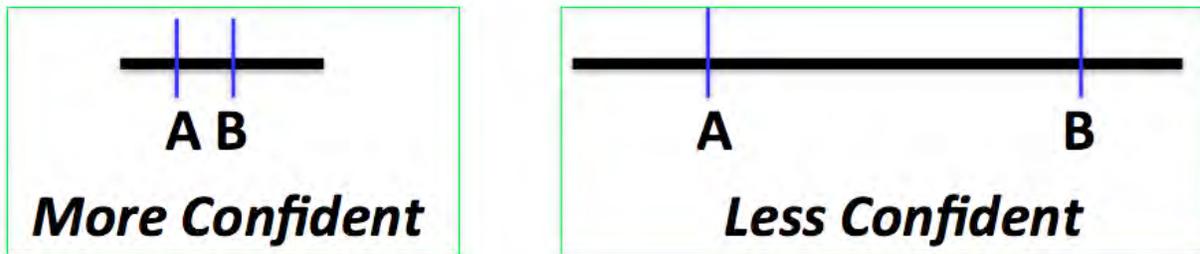
Part A: Background Issues

Perceptions, Bias, and Precision

Scientific inquiry often is guided by principles commonly associated with objective probability statements. Such statements relate to long-run frequencies in (often artificial) replications of an experiment, such as the tossing of a coin. Many interesting probabilities, however, are neither observable nor subject to replication. For example, the population of Japan is in principal countable, and therefore presumably knowable (to a given degree of accuracy, such as the nearest million people) – but may not be known *to you*. Nonetheless, you doubtless have some vague notion of the true answer, enabling you to respond whether it is likely closer to, say, 10 million or 100 million. Your vague notions can be expressed through subjective probabilities, which share the same guiding principles as objective probabilities (possible values are mutually exclusive and exhaustive, the probabilities sum to unity, and they conform to coherence, Bayes theorem, and other basic axioms of probability theory). If your subjective probability estimates are equally likely to be above or below the unknown (to you) true value, then your estimates are unbiased. If your subjective probability distribution is tightly clustered within a narrow range of possible values, then you are displaying precision (or confidence). If you can express your perceptions by designating a 25th-tile (such that you believe there is 1 chance in 4 the true value falls below that value) and a 75th-tile (with 1 chance in 4 it lies above that value), and if the true value across many such questions falls inside and outside that interval with equal frequency, then you are well-calibrated (high normative knowledge).

Over-Confidence

Beginning with the behavioral experiments of Amos Tversky at Stanford and Daniel Kahneman at Princeton, for which a Nobel Prize was awarded, there has accumulated overwhelming evidence of the cognitive tendency toward over-confidence in individual decision-making. Research indicates that we tend to place more faith in our beliefs than is warranted by objective evidence. Further, the greater our substantive knowledge of content, the less likely our normative knowledge leads us to fully express the extent to which there remains uncertainty with regard to our beliefs.



In the displays above, where $A = 25^{\text{th}}$ -tile and $B = 75^{\text{th}}$ -tile, the response on the left expresses greater confidence in an estimate, which may or may not be justified. For either response, research suggests that the true value is far more likely to be outside the range (or IQR, inter-quartile range) than inside, and that this tendency is more pronounced among the more confident. Most such studies have involved westerners.

Under-Confidence

There is at least one contrarian piece of evidence regarding over-confidence. A 2011 study by General Electric surveyed more than 1,000 senior executives in 12 developed countries. Each was asked their perception of the relative success of their home country with regard to each of five criteria thought to facilitate innovation. For eleven countries, perceptions closely mirrored reality; however, Japanese executives rather dramatically understated the success of Japan with regard to three of the five criteria.

USA Rank	Criterion A	Criterion B	Criterion C	Criterion D	Criterion E
Actual	3	9	8	5	4
Perceived	3	10	9	6	4

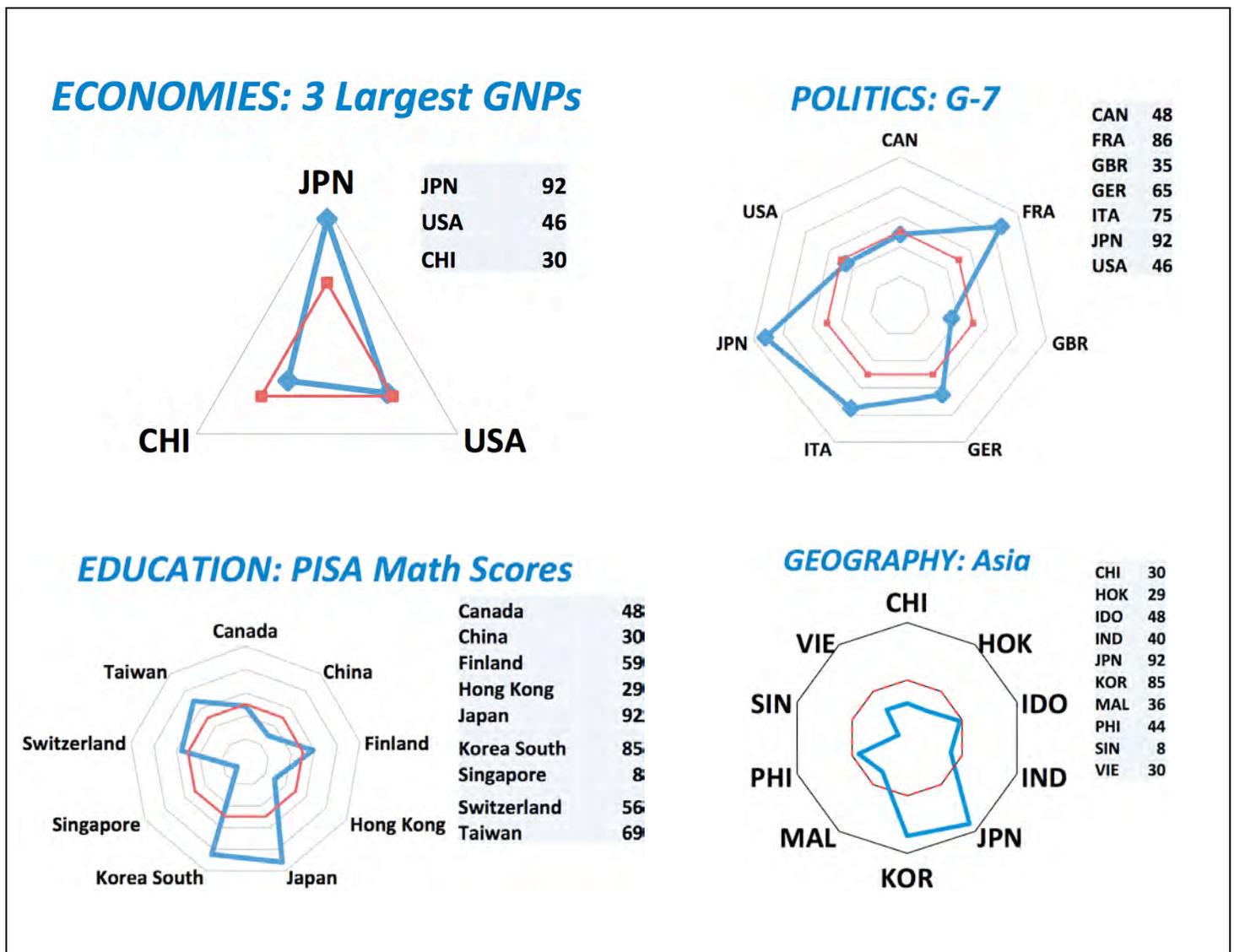
Japan Rank	Criterion A	Criterion B	Criterion C	Criterion D	Criterion E
Actual	6	4	1	3	10
Perceived	2	12	11	12	11

Source: <http://flowingdata.com/2011/05/03/perceived-vs-actual-country-rankings/>

Uncertainty Avoidance

Under-confidence can be a manifestation of uncertainty avoidance, a trait studied in depth at the national level by Hofstede. Below are comparisons of scores countries (with 100=high, 50=average, 0=low) for Japan and countries that are in some sense "comparable" on each of four dimensions.

Japan Exhibits High Uncertainty Avoidance, Relative to Other Countries



Based on Hofstede, <http://www.geerthofstede.nl/research--vsm.aspx>

Part II: Survey Study

Study Sample

Subjects are undergraduate students at Akita International University (AIU). The institution is unique within Japan in its focus on a global liberal arts education, its practice of conducting all (non-language) classes in English, and its mandatory full-year study-abroad requirement for graduation. The school has student-exchange arrangements with more than 100 colleges and universities around the world, as a result of which roughly 25% of all students in any undergraduate class are visiting Japan from abroad. This environment provides an excellent experimental laboratory to measure and discern possible differences in subjective probability distributions among:

	<i>Sample Size</i>
1) <i>Japanese students, Before the mandatory study-abroad year</i>	47
2) <i>Japanese students, After the mandatory study-abroad year</i>	30
3) <i>Non-Japanese students, During their study-abroad in Japan.</i>	17

Subjects first were provided a brief introduction to elicitation of subjective probabilities, based on the sample question: What percentage of Japanese claim to be Buddhists? The discussion focused on arriving at a best guess (say 80%), a 25th-tile (LQ, lower quartile) estimate (say 40%), and a 75th-tile (UQ, upper quartile) estimate (say 90%). It was then explained that the range should be widened if you believe the true value (here 71.2%) is more likely to fall outside the interval. Conversation continued until it seemed apparent the subjects understood the basic elicitation concepts.

Subjects then provided their 25th-tile, 50th-tile, and 75th-tile to:

Question 1: To the nearest one million, what is the population of Japan?

Question 2: What rank is the population of Japan, among all countries?

Question 3: What rank is the "globalization" of Japan, among all countries?

Question 4: What rank is the "happiness" of Japan, among all countries?

Question 5: What rank is "perceived corruption" of Japan, among all countries?

Hypotheses

H1 – Japanese students have relatively inaccurate perceptions of Japan, as evidenced by perceived rankings of Japan relative to other countries on a variety of measures

H2 – Subjective perceptions of Japanese students are downward biased with respect to the ranking of Japan

H3 – Subjective perceptions of Japanese students exhibit under-confidence

H4 – Subjective perceptions of Japanese students in ranking Japan improve following their mandatory study-abroad experience

Analysis

For each student, and for each question, a subjective probability distribution is constructed from the three input parameters (25th, 50th, and 75th-%tiles), as illustrated in the Appendix for Student #1 on Question #2.

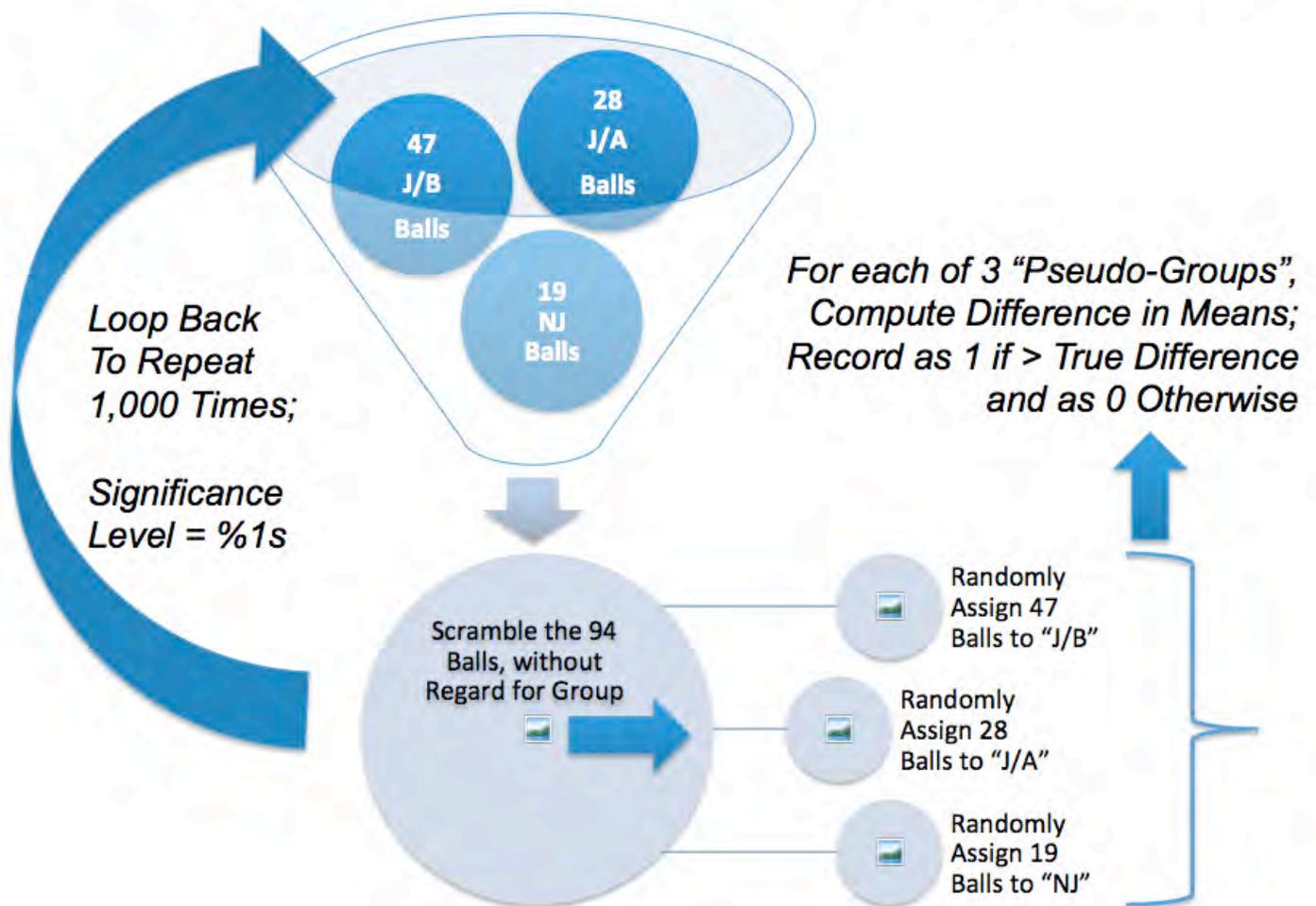
Summary statistics for each question are then combined across subjects within each of the three groups, for display in the following table format:

Estimated Rank of Japan (Countries) Actual Rank =	Sample Size	Mean Estimate	Standard Deviation	Mean IQR	St Dev IQR
Japanese, Before Study-Abroad	47				
Japanese, After Study-Abroad	28				
Non-Japanese, During Study-Abroad	19				
All Students	94				

The difference in mean estimates among groups facilitates a direct test of H1 and H2. The standard deviation and inter-quartile range measures allow testing of H3 and H4. Traditional difference in means tests, such as a t-test assuming equal variances, would not be appropriate in this context.

Instead, a more trustworthy, and more intuitive, test is constructed based upon bootstrap simulations. The analytic process follows this diagram:

Bootstrap Simulation of Statistical Significance



For each question, $N=94$ estimates of the unknown value are generated. To assess how likely the difference observed between the means of any two groups, the 94 estimates are reassigned to groups at random each of 1,000 times, and the frequency of observed differentials greater than the actual difference is taken as the "p-value" for testing the null hypothesis of no difference. Following convention, a p-value below 0.05 will be interpreted as suggestive of a statistically significant difference in means.

Results

Question 1: To the nearest one million, what is the population of Japan?

This first question is different from those that follow in at least two ways: it asks for an estimate of absolute magnitude rather than relative rank, and a priori it is anticipated that students have greater “substantive knowledge” of the population of Japan than of the rank of the population of Japan.

Level of Japan Population (Millions) Actual Value = 126.5	Sample Size	Mean Estimate	Standard Deviation	Mean IQR	St Dev IQR	Bootstrap Test Prob. Equal Means	
Japanese, Before Study-Abroad	47	115.02	38.18	74.15	37.08	JB v JA	0.14
Japanese, After Study-Abroad	28	120.04	20.45	45.61	26.93	JB v N	0.06
Non-Japanese, During Study-Abroad	19	125.42	6.06	12.26	6.54	JA v N	0.09
All Students	94	118.62	26.41	53.14	27.88		

<https://www.cia.gov/library/publications/the-world-factbook/geos/ja.html>

The results table above confirms that students have a relatively accurate perception of the country population, with a mean estimate of 118.62 million, compared to the actual value of 126.5 million. The under-estimate may reflect media focus on the pending shrinkage of Japanese population, but in any event the hypothesis that the estimated value differs significantly from the actual value is rejected for all three groups. There also were no significant differences in estimates among the three groups, as indicated by the bootstrap simulation results. Finally, note that the degree of confidence in estimates by Japanese students increases following study-abroad, but nonetheless is about four times greater than that of non-Japanese exchange students.

Question 2: What rank is the population of Japan, among all countries?

Given the students have displayed substantive knowledge regarding the population of Japan, interest turns to their perception of where that population ranks among all countries of the world – the place of Japan within global context. The actual ranking of Japan is 10. Prior to their study-abroad experience, Japanese students wildly miss the mark, and express a downward bias in their perception of Japan, with a mean rank of 45.13. They also exhibit under-confidence, with a very wide IQR (average 79.91) that contains the true rank of 10 in a remarkable 44 of 47 instances.

Rank of Japan Population (Countries) Actual Rank = 10	Sample Size	Mean Estimate	Standard Deviation	Mean IQR	St Dev IQR	Bootstrap Test Prob. Equal Means	
Japanese, Before Study-Abroad	47	45.13	36.01	79.91	74.56	JB v JA	0.00
Japanese, After Study-Abroad	28	13.07	8.96	30.93	22.10	JB v N	0.02
Non-Japanese, During Study-Abroad	19	10.47	2.41	7.11	3.20	JA v N	0.00
All Students	94	28.57	21.16	50.61	44.51		

<https://www.cia.gov/library/publications/the-world-factbook/geos/ja.html>

Following their study-abroad year, Japanese students improve dramatically in their mean ranking of Japan (at 13.07), although still significantly higher than the nearly spot-on mean ranking (of 10.47) by non-Japanese exchange students; of course, those students may well have studied Japan in a global context prior to selecting it as their study-abroad destination.

The remaining three questions are more vague, as they are based on published rankings that themselves are subjective in nature. There is no obvious reason why that should sidetrack a well-calibrated respondent. Interestingly, Japanese students answer Question 3 in a manner that suggests an initial belief that Japan is well-integrated within the global community, but after experiencing another culture they come to share the view of non-Japanese students (with a difference in means that is not statistically significant) that it is less so (although all three groups underestimate the extent to which Japan is not perceived as "global").

Question 3: What rank is the "globalization" of Japan, among all countries?

Rank of Japan Globalization (Countries) Actual Rank = 45	Sample Size	Mean Estimate	Standard Deviation	Mean IQR	St Dev IQR	Bootstrap Test Prob. Equal Means	
Japanese, Before Study-Abroad	47	8.18	23.72	54.43	82.19	JB v JA	0.00
Japanese, After Study-Abroad	28	31.47	18.93	38.44	63.23	JB v N	0.07
Non-Japanese, During Study-Abroad	19	34.59	11.71	32.17	46.02	JA v N	0.00
All Students	94	20.46	19.87	45.17	69.23		

<http://globalization.kof.ethz.ch/>

Again, the Japanese students displayed under-confidence; even though on average the perceptions changed very substantially following the study-abroad year, in both instances more than 70% of the IQRs contained the true value of 45; among non-Japanese counterparts, most were over-confident.

Question 4 asked how Japan ranked in happiness, relative to other countries around the world. As with "globalization" before, and "perceived corruption" to follow (in Question 5), the definition and precise measurement process was left undefined. Similar to Question 2 regarding population, Japanese students greatly improve their subjective estimates following a year studying abroad. However, in this instance there is a significant upward bias (a more happy ranking than true) before studying abroad, and a significant downward bias (a less happy ranking than true) after studying abroad. Regardless of group, Japanese students again provide IQRs that capture the true rank of 75 more than the fully-calibrated half the time, and foreign students less than half the time.

Question 4: What rank is the "happiness" of Japan, among all countries?

Rank of Japan Happiness (Countries) Actual Rank = 75	Sample Size	Mean Estimate	Standard Deviation	Mean IQR	St Dev IQR	Bootstrap Test Prob. Equal Means	
Japanese, Before Study-Abroad	47	38.34	52.19	55.50	47.30	JB v JA	0.00
Japanese, After Study-Abroad	28	94.03	61.32	39.17	31.38	JB v N	0.00
Non-Japanese, During Study-Abroad	19	68.22	18.04	22.12	17.53	JA v N	0.00
All Students	94	60.97	48.01	43.89	36.54		

<http://www.happyplanetindex.org/>

All three groups recognize that Japan is relatively less corrupt than most other countries, although following the study-abroad year there is a statistically significant increase in perceived corruption. Contrary to H2, both before and after studying abroad the Japanese students express an upward bias in favor of Japan.

Question 5: What rank is "perceived corruption" of Japan, among all countries?

Rank of Japan Corruption (Countries) Actual Rank = 17	Sample Size	Mean Estimate	Standard Deviation	Mean IQR	St Dev IQR	Bootstrap Test Prob. Equal Means	
Japanese, Before Study-Abroad	47	8.13	22.38	22.04	24.94	JB v JA	0.04
Japanese, After Study-Abroad	28	14.44	28.40	26.93	24.37	JB v N	0.01
Non-Japanese, During Study-Abroad	19	20.16	6.03	12.30	9.43	JA v N	0.05
All Students	94	12.44	20.87	21.53	21.64		

<http://www.transparency.org/publications/gcr>

Conclusions and Implications

This study provides suggestive evidence in support of the claim that Japanese youth tend to be inward-looking and insular, less aware of the place of their country within the global context, often are biased in the pessimistic direction when assessing Japan, and often lack confidence in expression their opinions.

However, the study also finds strong evidence to indicate that awareness of Japan within the global context improves dramatically following a one-year study abroad experience. Caution must be applied in attributing this shift in perspective solely to the study-abroad experience. It may be explained in part by the natural maturation process, as students who have completed their study-abroad tend to be on average older and further along in their studies (although for this sample only 37% of variation in units completed toward degree is explained by a study-abroad dummy variable). Another plausible explanation is that Japanese students are gaining insights and perspective by sharing classrooms and dormitories with non-Japanese exchange students throughout their college experience, and this advantage is reinforced through the study-abroad opportunity. In any event, the combination of mandatory study-abroad for a full year and the substantial presence and influence of non-Japanese exchange students appears to contribute toward improved understanding of the place of Japan within the global context. That provides a basis for more outward-looking graduates.

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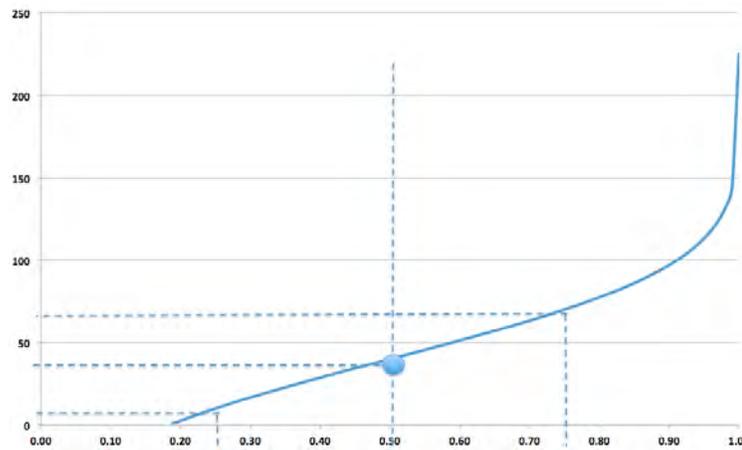
Appendix: Subjective Probability Distributions (for Student #1, of 94)

ID	LQ	MED	UQ
1	10	40	70

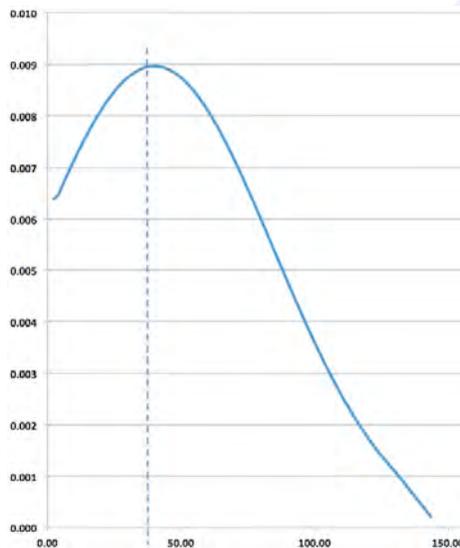
Response to Question 2:

What rank is the population of Japan, among all countries?

Inverse Cumulative Distribution for Student #1 (centered at 50%-tile)



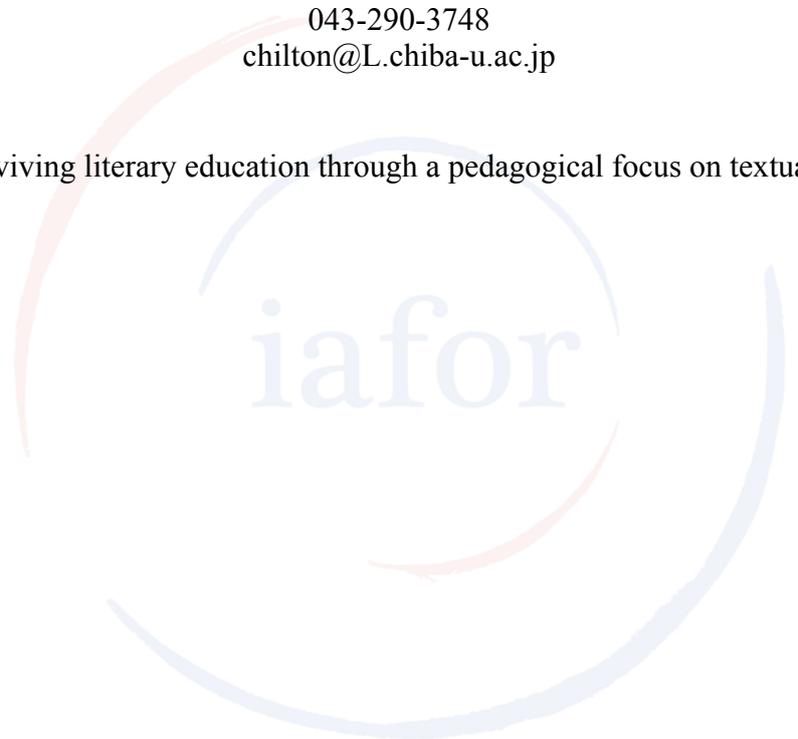
Probability Density Function for Student #1 (centered at Estimate = 40)



Make it Sing! A Defense of Literary Education

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Topic: Reviving literary education through a pedagogical focus on textual pleasure

The logo for the International Association for Educational Research (IAFOR) is centered on the page. It features the word "iafor" in a light blue, lowercase, sans-serif font. The text is enclosed within a circular graphic composed of two overlapping, curved lines: a light blue line on the bottom and a light red line on the top, creating a partial ring around the text.

iafor

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I want to begin by asking whether literature could disappear as a subject of study in the world's institutions of higher learning. Will its demise come at the expense of a drive towards more 'useful' or instrumental forms of knowledge and being? Or will its death be laid at the feet of the often abstruse theoretical preoccupations of literary scholars and critics? Perhaps its eclipse will be due to a globalized generational shift towards more accessible and immediate forms of entertainment and textual mediation. I suppose I should also ask, Does it matter if literary studies disappears from higher education? After all, in one of English literature's most powerful statements in favor of literary culture, E.M. Forster's 1911 novel *Howards End*, the protagonists – the Schlegel sisters, who stand for cultural learning and truly liberal imaginations – did not get their literary education at a university. In fact, they didn't even go to university. The novel makes it seem as though they learned everything they needed through clever conversation with writers, artists, and intellectuals.

These questions may strike some as alarmist, even defeatist. I almost wish they were. Alas, the wind does seem to be blowing against literature and literary studies, as it does against the humanities as a whole. Literary studies, for its part, has had to work ever harder to justify its existence, to make its educational claims heard. I don't have world-wide statistics, but I can tell you that in the United States, the number of English majors has dropped precipitously. I also don't have the numbers for here in Japan, but I can tell you from anecdotal evidence, and from a casual survey of academic departments and faculty job postings that literature is becoming increasingly sidelined.

My presentation will first discuss possible reasons for the death of literary studies. To try to account for this I believe we should look to those globalized pressures against educational excursions into the territory of the imagination, where outcomes cannot be quantified – where there is, literally, no payoff. But I will also spend some time looking inwards, so to speak, to consider how metropolitan literary scholars have, perhaps unwittingly, aided and abetted the forces of globalization by turning their subject into a narrowly scholastic endeavor, open only to the highly qualified. What one finds after wading amongst the monographs, journals, syllabi and conference presentations of my fellow literary scholars is that pleasure, once considered the object of literature, does not fit the research paradigms that structure literary

analysis. Therefore, I will conclude my talk in what I hope will be a happier register by offering ways of bringing pleasure back into the study of literature.

But before I really get going, I want to clarify what I mean by literature. This is crucial as there are many possible definitions of the thing – indeed the meaning has shifted to the point that noted literary critic Terry Eagleton has argued that literature doesn't actually exist!¹ Up until the mid-nineteenth century, literature, at least in English, meant anything that could be read, a sense of the word that lingers to this day, as in 'consult the literature that comes with the new TV to make sure you set it up right.' In the academic sense, we talk of 'literature reviews' in doctoral dissertations, a sense of literature review that differs markedly from that held by readers of *The London Review of Books* or the *Sunday New York Times*. In the latter sense, the literature being reviewed on one hand means serious non-fictional books, and on the other hand novels, usually by well-known writers with some sort of literary pedigree or reputation. Furthermore, in academia it is generally assumed that a literature department and its courses will also deal with non-fiction. Besides taxonomies of kind, there are also taxonomies of quality to contend with. Literature courses implicitly elevate certain texts to the realm of literature, while others remain down in the earthly realm of the bestseller, or the book for reading at the beach. That said, no two literature professors will ever agree on the criteria for elevating, say, *Lolita* over *Harry Potter*. So literature can mean everything but also a limited thing. Seeing as we're all academics, I'll use the more limited definition, but I'll tighten it up by defining literature as a text produced by the imagination that require relatively high degrees of exegesis.

Now I'll get to the problems. I think I'm on safe ground claiming that, world-wide, many universities assume that the teaching of foreign languages is worthwhile because it expands the intellectual and imaginative abilities of students. There are also, of course, practical considerations: foreign language abilities gives one an edge in competitive job markets. Combining literary study with language study, on the other hand, is often held to be either too difficult or too culture-specific to be of use. Literature departments do exist, not to mention classes, majors, degrees, tenured faculty teaching and researching these things, professional journals, monographs published by leading academic publishers – you get the point – these things all exist, so yes it seems that after all, literary studies is alive and well. Moreover, in the best institutions in the United States, where I was fortunate enough to attend graduate school, literature departments in many languages do quite well, and there is no shortage of motivated students, dedicated faculty, and innovative curricula. At universities of this caliber, all but a few understand and accept the worth of literary education, and the humanities in general. Yes, the literary academic industrial complex is alive.

However, when we widen the lens and focus on less well-endowed systems of higher education, the literary academy begins to look more like a cottage industry. Literary reading and literary inquiry serve no instrumentalizable purpose, therefore they are overlooked or disregarded by institutions and students alike. Philosopher Martha Nussbaum of the University of Chicago's Law School is one of the more notable recent voices calling attention to the decline of the humanities, and the potential harm this could do to democratic citizenship. In calling for the replacement of the humanities at the center of a liberal

¹ More precisely, what Eagleton argues is that "[i]t will not do to see literature as an 'objective', descriptive category. . . . literature does not exist in the sense that insects do, and the value judgements by which it is constituted are historically variable" (1996, p. 14).

education, Nussbaum notes that even in the U.S. “the humanities are widely perceived to be inessential, so it seems fine for them to be eliminated, and for some departments to be eliminated completely” (2010, p. 123). Nussbaum situates the decline of literary studies within the context of the overall decline of liberal arts education, which in many cases results from political pressure to reorganize university education to serve the economy. In Britain, Nussbaum notes, humanities departments have to justify themselves to the government “by showing how their research and teaching contribute to economic profitability” (2010, p. 127). The situation in Britain, with the election of David Cameron, as many of you know, has only grown more dire. There are flashes of light in the darkness: Nussbaum notes that the worth of liberal arts education has been acknowledged in many institutions around the world, including in the Indian Institutes of Technology and Management – which, she says, are “at the heart of the profit-oriented technology culture” (2010, p. 125) – where “instructors have felt the need to introduce liberal arts courses, partly to counter the narrowness of their students, but partly, as well, to cope with religious- and caste-based animosities” (Nussbaum 2010, p. 125). But these are, alas, only flashes. Moreover, Nussbaum cautions that the decline of the humanities cannot solely be blamed on outside pressures. Universities have become too used to taking budgetary short-cuts, leading Harvard president Drew Faust to ask whether universities have “‘become too captive to the immediate and worldly purposes they serve? Has the market become the fundamental and defining identity of higher education’ ” (qtd. in Nussbaum 2010, p. 124).

Another inside pressure comes from developments in literary studies themselves. One of those internal pressures I have already spoken of – literary intellectuals’ self-consciousness about the instability of the very thing that is supposed to be their academic field. Imagine if astronomers suddenly came to the conclusion that astronomy didn’t really exist – you can bet their doubts would soon find an echo, and enrollments would certainly suffer. But another internal hit at literary studies is captured by Anthony Kronman in a recent book called *Education’s End: Why Universities Have Given Up on the Meaning of Life*. Kronman argues that what he calls the “growing authority of the modern research ideal and . . . the culture of political correctness” (2007, p. 7) are responsible for marginalizing the big questions – such as the meaning of life – from humanities classrooms. Kronman is a former professor in Yale’s Law School, and since his retirement in 2004 has been teaching the humanities in Yale’s Directed Studies program, so he’s not engaged in research in any of the fields of the humanities. Moreover, there is more than a hint of a conservative return to a Eurocentric great books traditionalism about his critique of the humanities. His collapsing of pertinent questions of identity and diversity in the shop-worn term political correctness is evidence of that. Nevertheless, I think he has a point about the insularity of much of the research carried out by humanists, and that this applies perhaps mostly to literary scholars. He acknowledges that academic specialization is simply a version of other systems of specialized labor, and that it is as valid a goal for academics as it is for Adam Smith’s pin makers. However, for Kronman, the benefits of the research ideal for the humanities have been fewer than those for the sciences. In literary criticism, he argues correctly, “it is not at all clear that the sequence of interpretations championed by scholars of succeeding generations constitutes a . . . progressive body of knowledge” (2007, p. 132). It may be that literary criticism works instead as the great literary critic Northrop Frye once said, as a cyclical alteration of outlooks and values, “the spinning of the prayer-wheel of interpretation” (Kronman 2007, p. 132), the product of fashion or fad. What is missing is what Kronman calls a basis for a “confident belief that specialized research and truth are linked – that the first [research] is the best, perhaps the only, means for achieving the second [truth]” (2007, p. 132). The problem with

the humanities is that concepts like truth have been unmasked as illusions or ideologies perpetrated by interests seeking to maintain power and influence. Thus the possibility of a progressive and incremental accumulations disappears, or reappears as just another discourse masquerading as truth.

As for political correctness, Kronman boils it down to the conflict between discourses that emphasize the nearly unshakeable influence of race and gender, and to a lesser extent ethnicity, on a person's interests, and therefore their interpretive framework, and the more classical secular humanist ambition to achieve one's distance from oneself so as to see things with a more critical eye. So, you have English professors telling you that your race and gender are who you are and shape the way you see things, and somehow you're supposed to step outside that and be a critical thinker, unshackled by those very things that make you you. In my experience, I have found this to be less of a problem than opponents of the supposed turn to political correctness maintain. I have never encountered what Kronman caricatures as a classroom of students speaking as delegates for a racial, gender, or ethnic position. I have found that students are willing and eager to suspend, ironize, and even challenge these positions. The trick is to set the tone so that students can enter the irony zone.

The irony zone is merely the outer ring of the goal, which is pleasure, which is where I will now turn. As Nussbaum says of literature: "Citizens cannot relate well to the complex world around them by factual knowledge and logic alone. The third ability of the citizen, closely related to the first two, is what can call the narrative imagination" (2010, p. 95). By this she means the ability to imagine and empathize with the other, and to be able to – and crucially, value the act of – listening to, reading, and understanding the other's story. University humanities classrooms are not the only site of this learning, but they can play central role in cultivating it. They can cultivate it by modeling and involving students in the ambiguous, challenging, and eventually (one hopes) invigorating intellectual slalom course that literary critics negotiate in their professional lives. It's a course that takes us from the work of explaining, making sense and connecting on one side to judging on the other. Judging a novel or a play or a poem is, implicitly, asking whether it will give pleasure. While there is validity and necessity in keeping the two sides apart, they don't have to remain apart. We should, as professional critics and teachers, pay more attention to asking whether a work will give pleasure.

But answering that question means answering *how* it gives pleasure, which takes us rather neatly back to the work of explaining, making sense, and connecting. These modes of analysis can help us realize the modes of pleasure – not totally, of course, nothing could or should try to replace the seductions of fiction. Instead these modes of analysis work better by foregrounding their limitations, and by overtly maintaining a sense of the ineffable. We don't have to revert to Kantian notions that ally pleasure with judgment and virtue. We can be more ambitious.

We can also be more trusting, of the students, and of our own emotional and aesthetic responses. What that means in the classroom is the primacy of the initial affective moment – that moment when a student feels whether she likes or dislikes the book. That moment of seemingly pure affect is the moment where meaningful academic education takes off – and it is no problem that the moment seems antithetical to anything academic or analytical. By reassuring students that feeling one way or another is not wrong or misdirected we go a long way to reassuring them that their experience of reading can be enriching.

But we should not stop there. If the overall goal is pleasure, that means as academics and students we have to analyze pleasure. I realize that sounds counterintuitive. But the pleasure in analyzing our experience of pleasure is one of the gestures of the educated imagination, and it belongs in the classroom. It belongs there not because it necessarily increases knowledge or skill. It certainly cannot be measured or tested. But it is one with the pleasure of learning, and because the pleasure of analyzing literary texts closely echoes the work of analyzing behavior, ideas, actions, it is central to the education of the imagination.

Some may point out that I am really talking about two different things – the pleasure of reading and the pleasure of textual analysis. Yes of course these are two different actions, with different methods and different ends. But they can also be conceived of in a continuum; in other words the act of textual analysis completes, or attempts to complete, the act of reading. It makes the solitary act of reading more social, a transformation, that, ironically, returns literature to its nontextual roots. Oral literature, in other words, is always already a social act, seeing as stories are recited before groups of listeners, and the responses – ranging from emotional to analytical – occur in the public sphere. The trick is to bring something of oral literature's social dimension to the modern literary practice of solitary reading and private responses.

Others may question whether pleasure is by nature too frivolous to merit serious academic attention. As Catherine Belsey says in a new book advocating renewed critical attention to pleasure, “[i]f the joys of reading corresponded only to joy narrated, or the depiction of delight, the answer might be yes” (2011, p. 3). As Belsey answers, the “durability of the Troy story shows [that] enjoyment does not in practice depend on a good outcome” (2011, p. 3). According to some of my students, one of the most enjoyable classes they took from me was Tragedy – yes, a whole term's worth of death, war, pain, suffering, injustice, and of course, fear and pity (I made them read Aristotle too).

As the durability of tragedy shows, we don't bring the fact of pleasure into the literature classroom just to make our students happy, or to lead them to a Panglossian acceptance of the world as it is. We bring it in because it is one of the great mysteries of life. Why are we attracted to the tragic, the evil, the bad, and to suffering? Why do we choose to experience fear and pity? Is Aristotle right in claiming that the result, the catharsis of emotion, compensates for the discomfort we feel as we watch *Oedipus Rex* or *Hamlet*? I think there is more to it, but as I am not a psychologist, I hesitate to provide answers. But I do not hesitate to put to my students exactly what I have just put to you. In other words, in a sort of meta-pedagogy, I reveal to the students that our goal will not only be to experience textual pleasure, but to actively, and disinterestedly, analyze the nature, the purpose, and the mysteries of our pleasure.

This takes us back to the continuum of pleasure in the moment of reading and pleasure in the moments of textual analysis. The latter, of course, takes place temporally after the former. We don't want to lose sight of the pleasure in the moment of reading (or seeing a play, for that matter) because that, again, is something that we want our students to trust, and to acknowledge as one of life's rewards. Aristotle's notion of catharsis emphasizes the benefits experienced once the play is over; we want to give equal or greater emphasis to the benefits experienced during the play, or while reading. The issue of textual pleasure we want to emphasize can be defined as “what feature or features of a form of telling that initially caught

the attention of some part of the public on the basis that it pleased them is responsible for the pleasure it gave and perhaps continues to give” (Belsey 2011, p. 7)? But we have to be careful: we’re not in the business of prescribing pleasure, as in ‘I like it so you should like it too.’ And we also must steer clear of terminology that simply registers pleasure and enjoyment. Saying that an author gives pleasure through, say, her linguistic energy and power of invention is merely to say that one finds these things in the text, one likes these things, and that because one likes these things they are good. Pleasure has been noted and celebrated, but not illuminated. Nor should we be parading our refined literary tastes and critical abilities. Again, the terms that register pleasure often serve as the critic’s means of showing off his abilities and erudition, and when pressed on the students, what they really say is that if you share these responses, then you too are one of the elect, like me! As Belsey notes, in a literature classroom of this kind, “[r]eading soon turns into a process of being called to account” that “generates at least as much pain as joy” (2011, p. 9). So, if you happen to find yourself slogging your way through a book heralded by previous generations of august critics, the problem must be with you, and not the book.

We should also be careful of the slippage between pleasure and aesthetic value. The latter concerns often Kantian categories of judgments of taste. These can be illuminating, but they are not the same thing as pleasure. They also imply hierarchies, which imply someone else’s ideas of what we should be reading – ideas often based on one group’s notions of its own moral or racial or some other illusory sense of superiority. Thus we have to acknowledge that we all have our different likes and dislikes, and there is no arguing taste. Hierarchies also give rise to the tautological argument that fiction that counts as art gives pleasure, fiction that is not art cannot give pleasure, or, at least, the correct sort of pleasure, which is aesthetic pleasure. We can cut through this morass by focusing on, as Belsey argues, the singular pleasure of fictionality: what draws us to it in the first place, she asks (2011, p. 11)?

It should be clear by now that I don’t believe that literary pedagogy should set out to answer that question definitively. The overall aim should be to recognize pleasure, reflect on it, and push towards critical analysis of it – all without denigrating the pleasure that reading gives us. To conclude, teaching literature will not make our students better people. That used to be goal of teaching literature, but when we realized that certain tyrants and mass-murderers were deeply read, that goal became highly suspect. Literary education will also not correct the supposed decaying effects of mass urban industrial or postindustrial societies – another hazy, gentlemanly goal, this time of the 1930s. That said, for all of their discrediting, residues of these goals continue to motivate the study of literature. Even through the 1960s and 70s when literary studies became highly politicized, and into the 80s when literary theory shifted attention to more philosophical inquiries about the relationships between signification and ideology, the idea that literature was good for you never really disappeared. Why it is good for you, on the other hand, is a question that remains unsettled – as it should be, because it allows students to reflect on and analyze the nature of literary pleasure.

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Using Facebook and Google Docs for Teaching and Sharing Information

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Abstract

In the 21st century, teachers need to realize that they are educating the net generation who are always online and connected with others via social network. These students do not primarily learn by reading or listening but rather they learn by doing and exploring. This paper presents the approach and the experience in using Facebook and Google Docs. We have evaluated and analyzed the result of the survey that asked users about the advantages and disadvantages of using Facebook and Google Docs. Most users agree that the advantages of Facebook are 1) reducing communication cost, 2) increasing participation, 3) providing convenience and ease of use, and 4) increasing collaboration. Most users view the main disadvantage as getting distracted easily while using Facebook. Moreover, Facebook still lacks features such as file submission and file sharing to support the complete learning process. Thus, in this paper, we also propose how to use Google Docs to allow participants to view and update information with each other more efficiently than to simply use Facebook documents. Most users agree that Google Docs has advantages in terms of document collaboration, quick access, easy sharing, and convenient and easy usage. However, Google Docs has disadvantages in terms of requiring users to connect to the Internet and having limited features compared to Microsoft Word and Excel.

Keywords: Facebook, Google Docs, e-learning, innovative teaching, social media, learning tool

1. Introduction

In the 21st century, teachers need to realize that they are educating the net generation who are always online and connected with others via social network (Oblinger, 2009). These students do not mainly learn by reading or listening but rather they learn by doing and exploring (Oblinger, 2009). Students are usually on Facebook which now has more than 800 million users worldwide (Facebook, 2011). In Thailand, the total number of Facebook users is reaching 12,881,800 and has grown by more than 3,754,860 users in the last 6 months. As of October 29, 2011, Facebook penetration in Thailand is 19.40% of the country's population and 73.67% of the country's Internet users.



Figure 1: Thailand Facebook Usage Statistics (Socialbakers.com, 2011a)

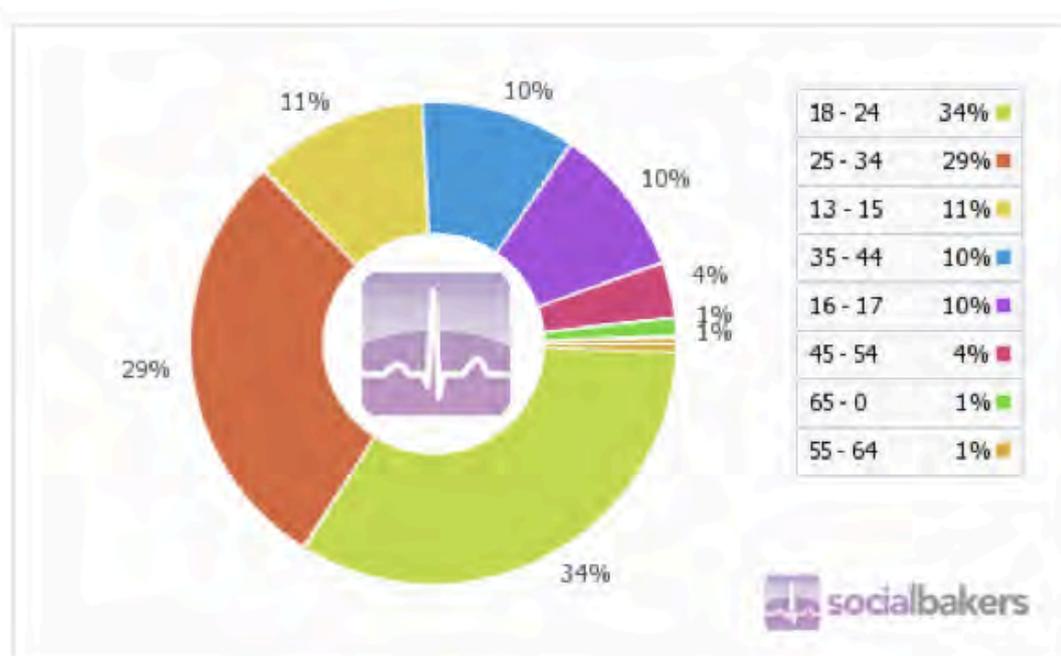


Figure 2: User Age Distribution on Facebook in Thailand (Socialbakers.com, 2011b)

As a result, Facebook can be a potential tool for learning and teaching aiming to reach this group of young people, many of which are in Thai colleges and universities. It is also essential to understand the advantages and disadvantages as well as how to appropriately use Facebook for learning and teaching. Nonetheless, teachers cannot use only Facebook as a teaching and learning tool. Facebook still lacks features such as file submission and file sharing to support the complete learning process. Therefore, in this paper, to embrace the social media technology into classroom, we also propose how to use Google Docs to allow participants to view and update information with others more efficiently than just simply using Facebook documents which does not support simultaneous editing by multiple users.

In the remaining of the paper, we organize the paper as follows. Section 2 presents the usage of Facebook and Google Docs in classroom. Then, in Section 3, we present the survey result including both advantages and disadvantages of using Facebook and Google Docs for teaching and sharing information. Finally, we conclude this paper in Section 4.

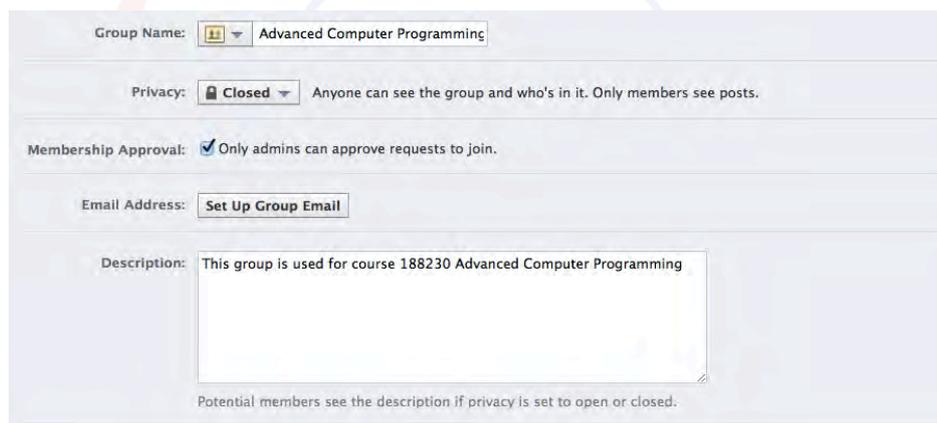
2. Facebook and Google Docs Usage in Formal and Informal Education

In this section, we describe how we use Facebook and Google Docs in courses at Khon Kaen University, Thailand.

2.1 Facebook Usage for Sharing Information and Teaching

In this section, we describe how we use Facebook as a supplementary tool for sharing and teaching in classroom. Facebook allows us to create group that we can set as a closed group or a secret group. A closed group allows anyone to see the group and but only group members can see posts in the group. A secret group allows only members to see the group, group members, and posts by members. In our classroom, we decided to use a closed group, as shown in Figure 3, because we want the group to be seen by students so that they can ask to join the group.

There are several activities that group members can perform to share information and learn together in Facebook group. Figure 4 shows that a member can write a post, which is suitable for real time information but unsuitable for information to be kept and referenced. A group member can also upload images to share visual information as shown in Figure 5. In the case that group members want to obtain opinions from or to ask questions in choices to other group members, they can use the poll feature to do so. Figure 6 shows the poll that asks the date and time that group members prefer to take a quiz. If group members want to share information that should be kept and referenced later, they should use Facebook Docs which is suitable for a document with a single editor but unsuitable for a document with multiple editors.



The screenshot shows the Facebook group creation interface. The 'Group Name' is 'Advanced Computer Programming'. The 'Privacy' is set to 'Closed', with a note: 'Anyone can see the group and who's in it. Only members see posts.' The 'Membership Approval' is set to 'Only admins can approve requests to join.' The 'Email Address' is 'Set Up Group Email'. The 'Description' is 'This group is used for course 188230 Advanced Computer Programming'. A note at the bottom states: 'Potential members see the description if privacy is set to open or closed.'

Figure 3: Creating a Closed Group



Figure 4: Sample Group Post

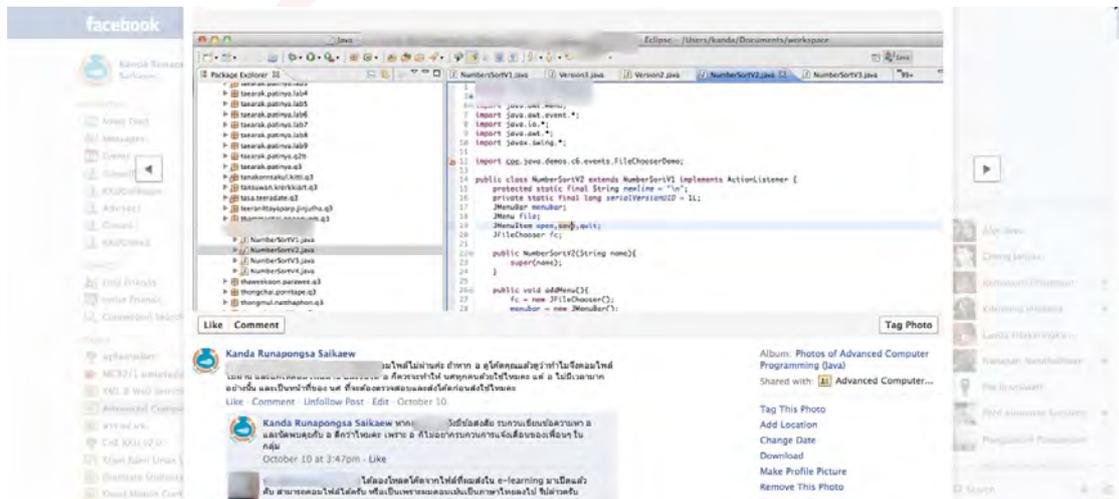


Figure 5: Sample Group Uploaded Photo



Figure 6: Sample Group Poll



Figure 7: Sample Facebook Doc

2.2 Google Docs Usage for Sharing Information and Teaching

In this section, we describe how we use Google Docs to allow participants to view and update information with others more efficiently than just simply using Facebook documents. Google Docs allows users to create and share documents, presentations, spreadsheets, forms, drawings, tables and collections. Google Docs supports real time collaboration. Thus it is appropriate for promoting collaborative activities in a learning process. Figure 8 shows the list of documents shared by a teacher of one course. Figure 9 depicts the real time sharing document. If multiple users are editing or viewing a document at the same time, we will see their names listed at the top of the document frame. An example of using a Google Form to gather necessary information from students is shown in Figure 10.

Features of Google Docs in Sharing Documents with Others

- 1) Documents: 50 users can edit the same document at the same time. We can share a document with up to 200 users.
- 2) Spreadsheets: A total of 50 users can edit the same spreadsheet simultaneously. We can share a spreadsheet with 200 collaborators and/or viewers.
- 3) Presentations: 10 users can edit the same presentation at the same time. However, we can share a presentation with up to 200 users (the total of collaborators and viewers combined cannot exceed 200)
- 4) Drawing: Up to 50 users can edit and view the same drawing at the same time.

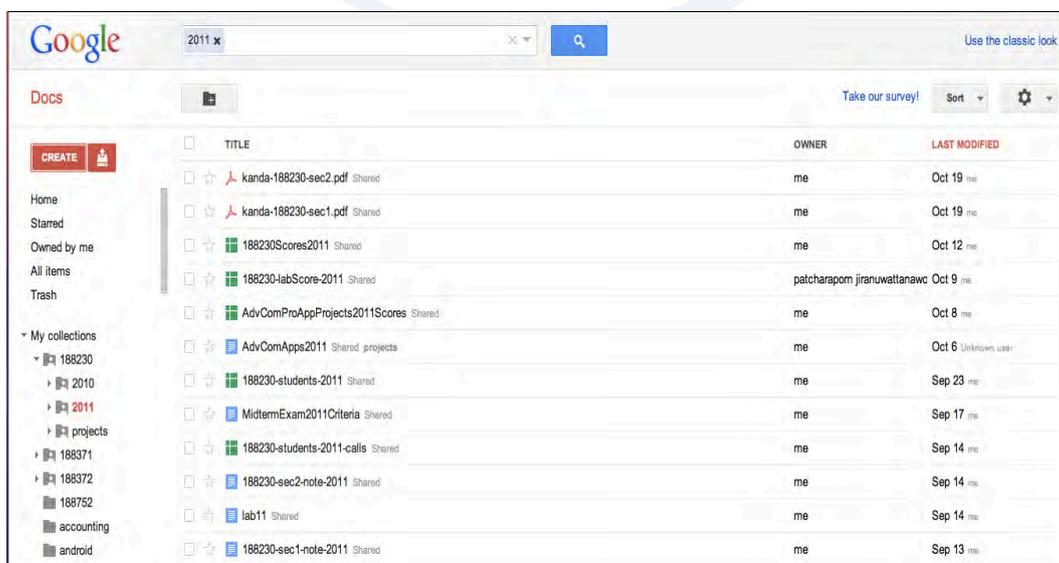


Figure 8: Sample Usage of Google Docs in One Course

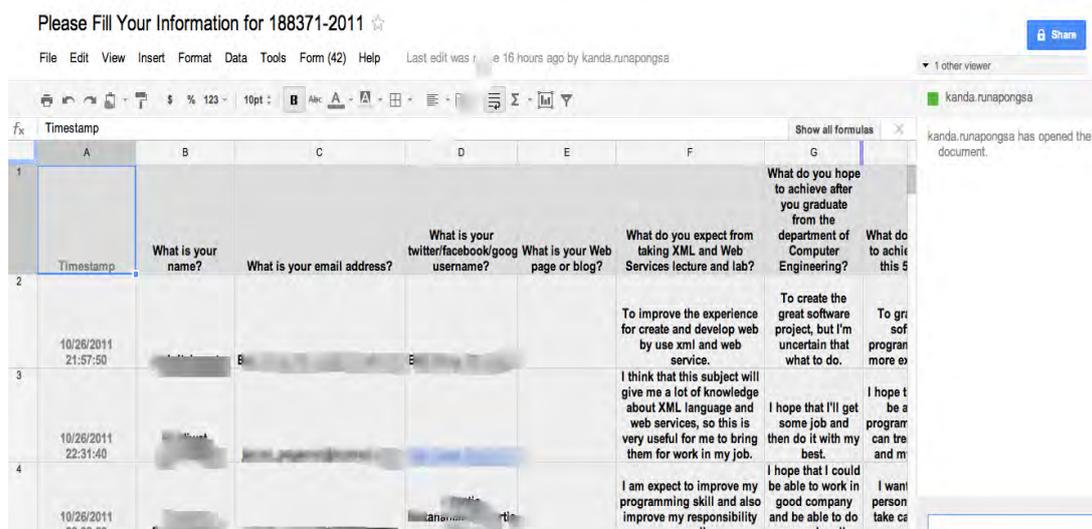


Figure 9: Sample Real Time Collaboration with Other Users

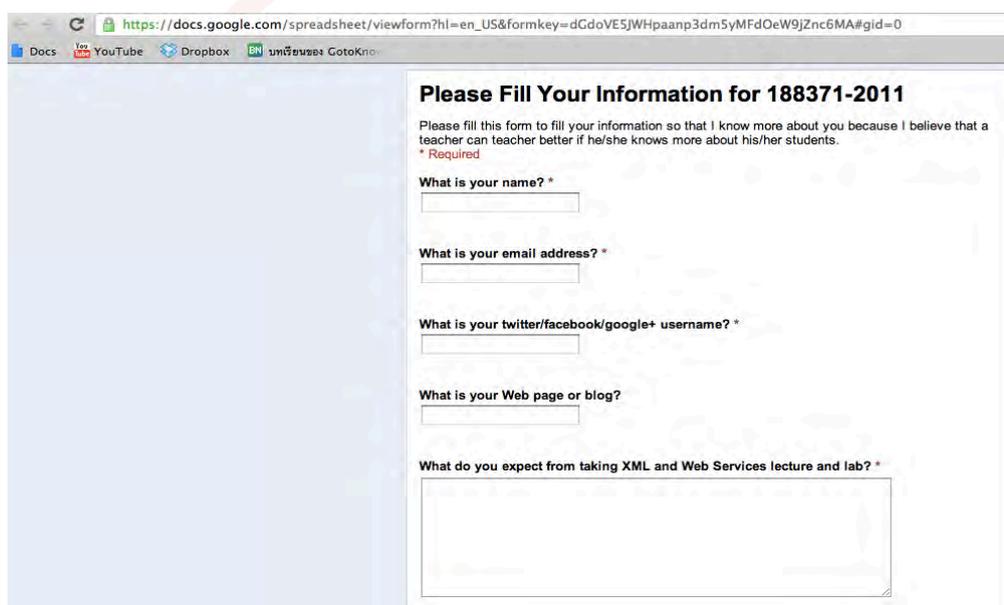


Figure 10: Sample Google Form

3. Survey Results

In order to survey users' opinions and to receive interesting comments, we have created an online survey page which is available at https://docs.google.com/spreadsheet/viewform?hl=en_US&formkey=dGVHanBFQmZCdnlfQUVqcXdQOVQyeXc6MQ#gid=0. The targets of this survey are teachers and learners who have some experiences in using Facebook and Google Docs as supplementary tools for teaching and sharing information. We separated the questionnaire into 2 sections. The first section collects information about advantages and disadvantages of using Facebook for teaching and sharing information, while the other section assesses the advantages and disadvantages of using Google Docs for teaching and sharing information. There were 69 respondents who replied to this survey.

3.1 The General usage of Facebook and Google for Teaching and Sharing information

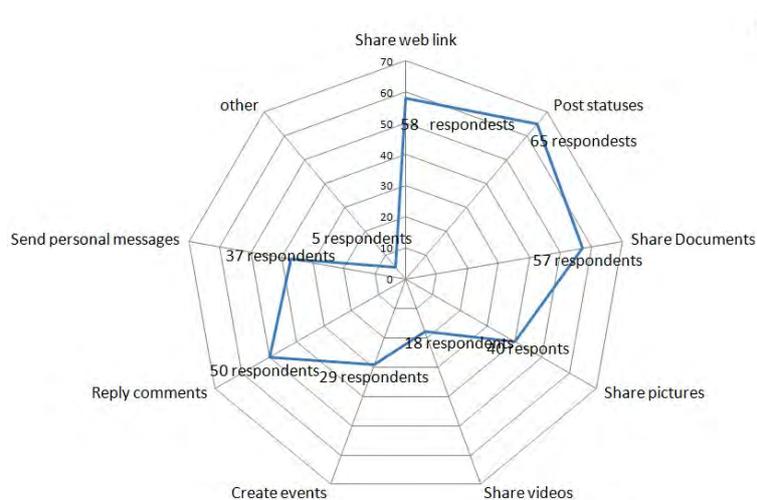


Figure 11: How Respondents Use Facebook in Teaching and Sharing information

Figure 11 shows that 94% of respondents have used Facebook for posting status updates, 84% have used Facebook for sharing web links, 83% have used Facebook for sharing documents, 72% have used Facebook for replying to comments, 58% have used Facebook for sharing pictures, 49% have used Facebook for sending personal messages, 42% have used Facebook for creating events, 28% have used Facebook for sharing videos, and 7% have used Facebook for other purposes. This indicates that most of respondents have used Facebook for sharing resources that include status updates, documents, and pictures.

3.2 The Opinions of Advantages and Disadvantages of Using Facebook for Teaching and Sharing Information

In this section we investigate the advantages and disadvantages of using Facebook for teaching and sharing information. The first set of questions assesses the degree of different advantages of using Facebook for teaching and sharing information including 1) instant interaction, 2) convenience and easiness, 3) courage to share, 4) communication cost reduction, 5) more participation, 6) increasing collaboration, and 7) brainstorm. We divide the degree of agreement to each advantage into 5 levels: strongly agree (5), agree (4), neutral (3), disagree (2) and strongly disagree (1).

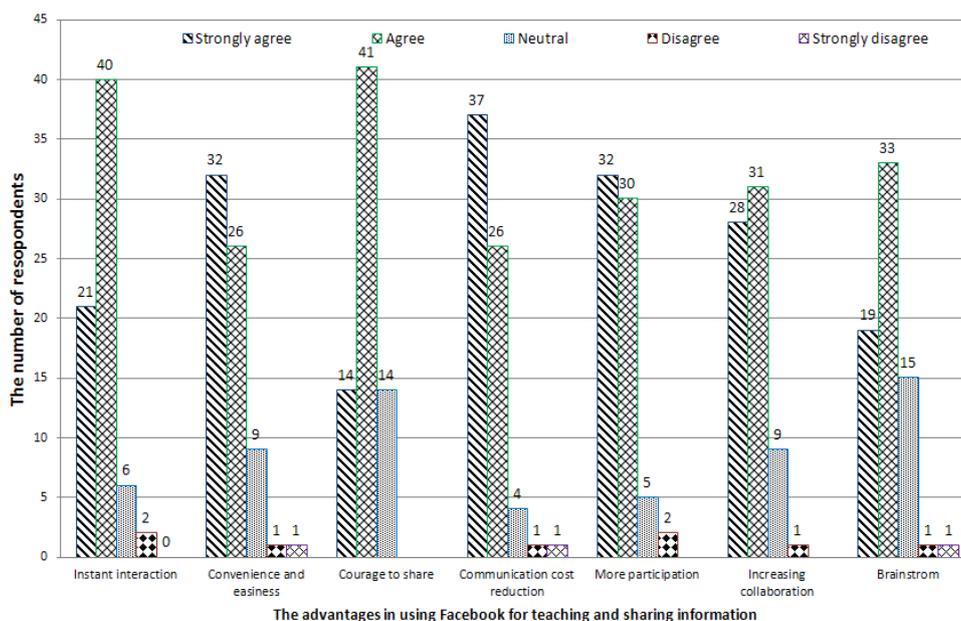


Figure 12: Advantages of Using Facebook for Teaching and Sharing Information

Table 1: Descriptive Statistics about Advantages of Using Facebook for Teaching and Sharing Information

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Instant interaction	69	2.00	5.00	4.1594	.69923
Convenience and easiness	69	1.00	5.00	4.2609	.85151
Courage to share	69	3.00	5.00	4.0000	.64169
Communication cost reduction	69	1.00	5.00	4.4058	.79185
More participation	69	2.00	5.00	4.3333	.74096
Increasing collaboration	69	2.00	5.00	4.2464	.73576
Brainstorm	69	1.00	5.00	3.9855	.83124
Valid N (listwise)	69				

From Table 1, we can rank the advantages of using Facebook for teaching and Sharing information from the most agreeable advantage to the least agreeable advantage as 1) communication cost reduction, 2) more participation, 3) convenience and easiness, 4) increasing collaboration, 5) instant interaction, 6) courage to share, and 7) brainstorm.

The second set of questions assesses the degree of different disadvantages of using Facebook for teaching and sharing information which include 1) time consuming, 2) difficult to find resources, 3) difficult to keep resources, 4) too open to public, 5) disturbing personal space, and 6) getting distracted easily. As before, we divide the degree of agreement to each advantage into 5 levels: strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1).

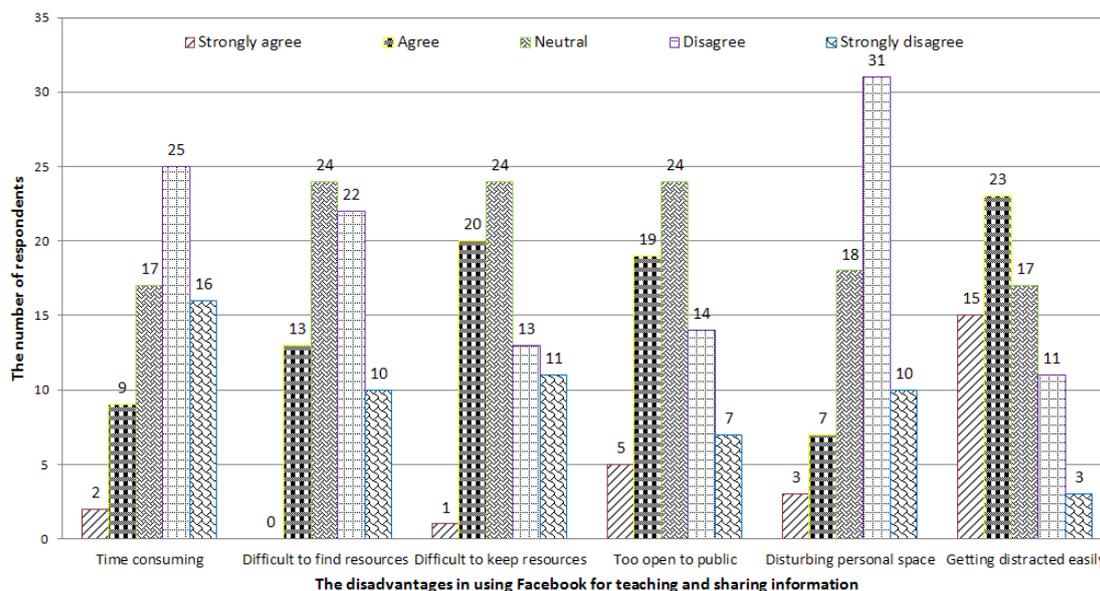


Figure 13: Opinions about the Cons in using Facebook for teaching and sharing information

Table 2: Descriptive Statistics about Disadvantages of Using Facebook for Teaching and Sharing Information

	N	Minimum	Maximum	Mean	Std. Deviation
Time Consuming	69	1	5	2.36	1.071
Difficult to find resources	69	1	4	2.58	.961
Difficult to keep resources	69	1	5	2.81	1.075
Too open to public	69	1	5	3.01	1.091
Disturbing personal space	69	1	5	2.45	1.008
Getting distracted easily	69	1	5	3.52	1.133
Valid N (listwise)	69				

From Table 2, we can conclude that many users agree that the most agreeable disadvantage of using Facebook for teaching and learning is that they get distracted easily. This disadvantage gets the mean agreement score of 3.52.

3.3 The Opinions of Advantages and Disadvantages of Using Google Docs for Teaching and Sharing information

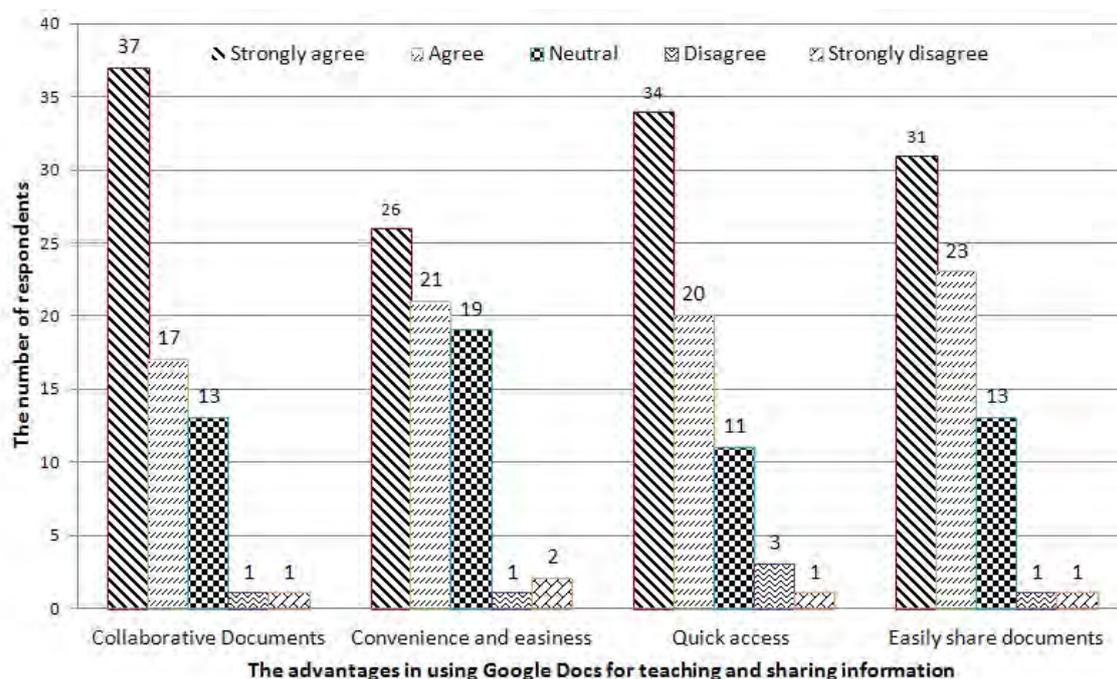


Figure 14 The advantages in using Google Docs for Teaching and Sharing Information

Table 3 Descriptive Statistics about Advantages of Using Google Docs for Teaching and Sharing Information

	N	Minimum	Maximum	Mean	Std. Deviation
Collaborative documents	69	1.00	5.00	4.2754	.92170
Convenience and easiness	69	1.00	5.00	3.9855	.99251
Quick access	69	1.00	5.00	4.2029	.96375
Easily share documents	69	1.00	5.00	4.1884	.89567
Valid N (listwise)	69				

From Table 3, we can rank the advantages of using Google Docs for teaching and Sharing information from the most agreeable advantage to the least agreeable advantage as 1) collaborative documents, 2) quick access through the Internet, 3) easy to share, and 4) convenient and easy to use.

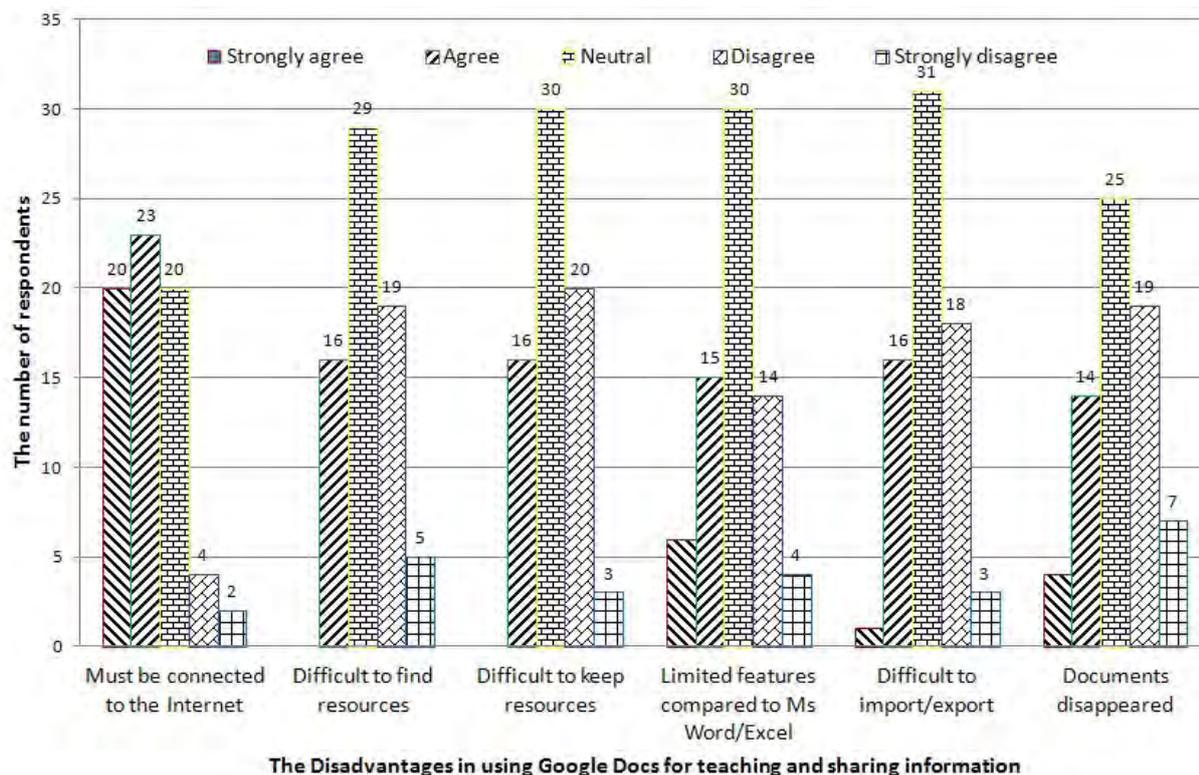


Figure 15 Disadvantages in Using Google Docs for Teaching and Sharing Information

Table 4 Descriptive Statistics about Disadvantages of Using Google Docs for Teaching and Sharing Information

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Must be connected to the Internet	69	1.00	5.00	3.7971	1.02297
Difficult to find resources	69	1.00	4.00	2.8116	.87909
Difficult to keep resources	69	1.00	4.00	2.8551	.82739
Limited features compared to Ms Word/Excel	69	1.00	5.00	3.0725	1.00468
Difficult to import/export	69	1.00	5.00	2.9130	.85301
Documents disappeared	69	1.00	5.00	2.8406	1.05193
Valid N (listwise)	69				

From Table 4, we conclude that the most agreeable disadvantages of using Google Docs for teaching and Sharing information are the need to connect to the Internet and having limited features compared to Microsoft Word or Excel.

An optional question in our survey is what other IT tools that users have some experience in teaching and sharing information are. The result is depicted in Figure 16.

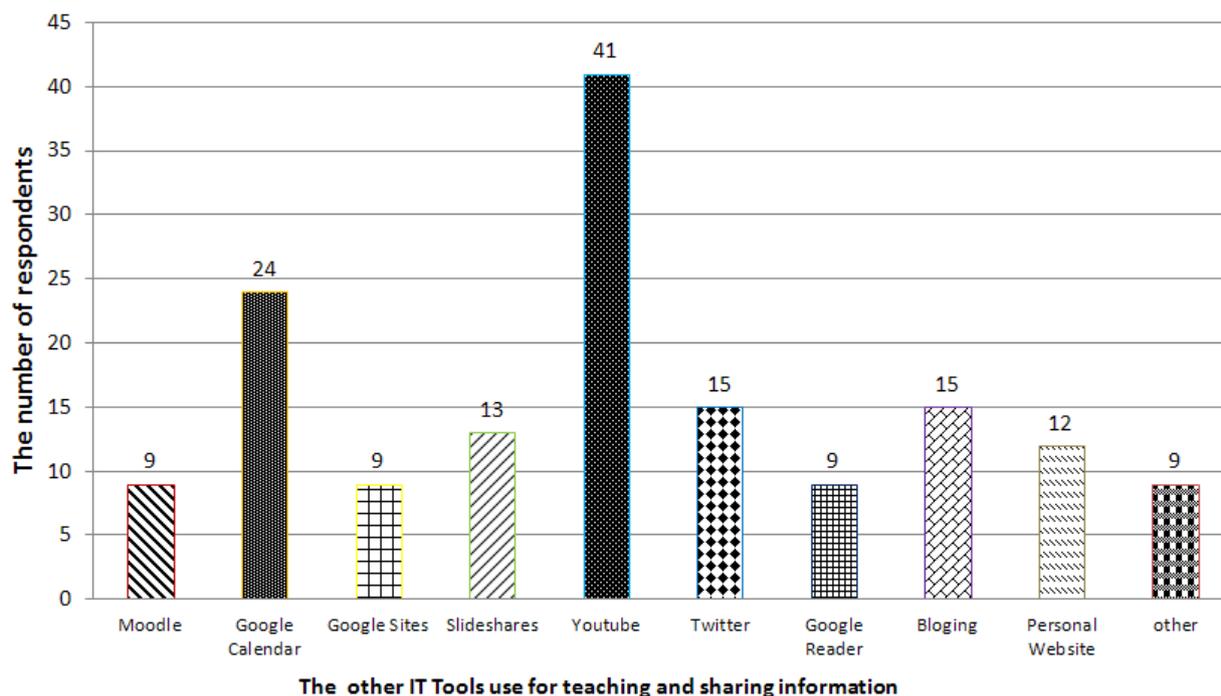


Figure 16: Other Social Media Tools Used by Respondents.

Figure 16 shows several other options of IT tools used for teaching and sharing information. We found that 65% of respondents have used YouTube, 38% have used Google Calendar, 24% have used blogs and Twitter, 21% have used Slideshare, 19% have used personal websites, and 14% have used Moodle, Google Sites, Google Reader and other tools. This means that YouTube and Google Calendar are used by more than half of respondents as learning and teaching tools. Note that respondents may select more than one tool choice for this question; thus the percentages are added up to more than 100%.

4. Conclusion

In this paper, we have presented an approach and have shared experiences in using Facebook and Google Docs for teaching and Sharing information. We show that many students quickly respond to teachers' posts and they also share useful information through the tools. We have also evaluated and analyzed the result of the survey that asked Facebook users about the advantages and disadvantages of using Facebook as well as users who adopt Google Docs for teaching and sharing information. We found that most users agree that the advantages of using Facebook is in terms of communication cost reduction, more participation, convenience and easiness, increasing collaboration, instant interaction, and courage to share. The disadvantages of Facebook are in terms of getting distracted easily and being too open to public. The advantages of Google Docs are in terms of collaborative documents, quick access, easy to share and convenience and easiness, while the disadvantages of Google Docs is in terms of the need to be connected to the Internet and the limited features compared to Microsoft Word and Excel.

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An institutional view of programme-level educational performance: Using student voice

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Abstract

This paper reports the results of a programme-level survey of student experience at key stages in their studies. Successfully piloted in 2003, the student experience questionnaire enables annual programme-level monitoring driven by standard datasets presented in time-series based on responses of first and final year students of all undergraduate programme. The data presented demonstrates significant progress in two key categories, graduate capabilities and the teaching and learning (T&L) experience. Consistent with literature that suggests educational process best predicts educational gain, there good evidence that significant benefits have accrued in the student learning experience. However, while the trend in graduate capabilities is strongly positive, the general trend in the teaching and learning environment is less convincing, particularly in the final years. The study highlights the benefits to programme-level performance for effective quality assurance and illustrates the value of evidence-based enhancement strategies in support of improved student learning.

The logo for iafor (International Association for Frontiers of Research) features the word "iafor" in a light blue, lowercase, sans-serif font. It is centered within a circular graphic composed of two overlapping, semi-transparent arcs: a larger light blue one and a smaller, slightly offset light red one, creating a sense of motion or a stylized 'i'.

Introduction

Of the three determinants of organisational success, *productivity*, *cost* and *quality*, Evans and Lindsay (2008) suggest the most significant factor is quality. High quality products (goods or services) provide an organisation with a competitive edge and this focus on quality is by no means a new idea in higher education. It is implicit, for example, in an institution's reputation. Yet, as is readily appreciated, reputation is hard to analyse and measure, and as a result, it is not surprising to hear that the concept of quality in higher education is also highly contested (Tam, 2001). As Brookes and Becket (2007) noted, quality-management in higher education is mainly an externally driven process, suggesting imperatives beyond educational gain represented by student learning. However, it is inarguable, as Harvey (1994) reminds us, that we need to move beyond debates over the relevance of quality in higher education, to pay more attention to content and substance.

Summarising multiple conceptions, we can say quality is a relative concept and must be seen in context to purpose (Harvey & Green, 1993). However, as Harvey and Williams (2010) recommended, quality involves everyone working in higher education and as evidenced in the emerging literature, quality is something that can and should be managed and improved. Reflecting this shared drive, there is widespread acceptance that universities must take responsibility for assuring the quality of the student experience and there is also a long history of research and debate into the use of student evaluations of teaching effectiveness (Ginns, Marsh, Behnia, Cheng, & Francesca, 2009). This paper reports the results of programme-level student experience questionnaire (SEQ) in a local Hong Kong based university. The paper presents longitudinal data to demonstrate educational performance in two key categories, graduate capabilities and the teaching and learning (T&L) experience. The data reveals a number of significant results that aside from the specifics, supports the argument for a better focus on evidence in order to understand quality and so to ensure institutional quality assurance (QA) processes are informed by practices known to sustain effective student learning.

Assuring quality

The perennial question is what constitutes quality in undergraduate education, particularly as interpreting and comparing institutional performance is difficult (Gibbs, 2010). The literature on the validity of indicators is vast, and as Gibbs (2010) notes mostly American. It tends to be focused on specific purposes, critiques of a university league table, a government-defined performance indicator or a particular student feedback survey. Yet, it is also very difficult to measure successful output and productivity of services in education (Blackmur, 2010). Consequently, as Blackmur (2010) argues, unless input and output relationships can be specified and assured, much of public QA can be a waste of time. Citing AUQA's approach

using a four-stage public higher education QA model, Blackmur (2010) suggested the model had weak conceptual foundations. As he argued, the approach emphasized process and required that these processes be evaluated using best practices and peer audit, the adequacy of which are contestable. In terms of assuring graduate outcomes, Blackmur (2010) considered the approach dangerous as it assumed that if processes meet best practices, then graduate qualities would somehow result, while also noting that judgments on quality by external audits typically had nothing to do with quality defined in terms of changes in student attitude and acquired graduates capabilities. Reinforcing this need for caution on asserting quality is research from the UK and US that highlights the impact of student quality on educational performance. In the US, school SAT scores on entering College suggests that up to 90 percent of all variation in student performance at university can be explained by performance before they entered university (Gibbs, 2010). In the UK, a study by Smith and Naylor (2005) provides a similar story, albeit a somewhat lesser impact of schooling, both in grades and schools, on later performance in university.

Perhaps it is for these reasons that the percentage of higher education institutions engaged in long-term efforts to measure and improve quality has been relatively small (Evans & Lindsay, 2008). Moreover, as Evans and Lindsay say (2008: 71), early projects have focused “on administrative systems and not in the core processes of teaching or research.” Side stepping these and other technicalities, the challenge is to inform debate on the educational practices that are known to have greatest impact on educational gain. Gain refers to the difference between performance on a particular measure before and after a student’s experience in higher education. Pointing a way ahead, Gibbs (2010) identifies three dimensions in quality: *presage*, related to the context before students start learning (funding, research performance and reputation), *process*, which is concerned with what goes on as students learn (pedagogical practices, student engagement, feedback) and *product*, which relates to the outcomes of that learning (usually employability). However, as Gibbs (2010) reported, presage and product variables are somewhat limited in explaining educational gain. Rather, what best depicts educational performance and educational gain are measures in educational process that involves such things as teaching and learning (T&L) or pedagogical processes and related environment that supports student engagement.

Context

The Chinese University of Hong Kong (CUHK) is one of the top universities in Hong Kong and Asia. Its stated aim is to nurture students with both discipline-based knowledge and generic whole-person development. The education experience is distinguished by a flexible credit unit system, a college system, bilingualism and multiculturalism. Eight Faculties include Arts, Business Administration, Education, Engineering, Law, Medicine, Science, and

Social Science, with each Faculty offering an array of undergraduate and postgraduate programmes. The student experience questionnaire or SEQ is a programme-level based survey endorsed by the University's Senate Committee on Teaching and Learning (SCTL) in 2008 (SCTL's circular No. 1 in 2008). The survey reports undergraduate students' reflections on their experience at key stages in their studies (Year 1 and Year Final). Piloted in 2003 (McNaught, Leung, & Kember, 2006), the purpose of the survey is to assure and enhance the quality of the educational experience for students.

This approach to gathering feedback from students is important for supporting the University's QA process of continuous improvement in the quality of educational programmes (Thomas, 2011) and the survey fits into an institution-wide structured quality assurance (QA) process based on annual Action Plans arising from six-yearly Programme Reviews, and annual Programme and Course level monitoring. As the University reported in a recent external audit by an independent panel for the Quality Assurance Council (QAC) of the University Grants Committee (UGC), the measured pace of change has won acceptance and ownership among the teachers and students (CUHK, 2008). Despite the positive commitment to teaching, consistent with findings reported in the United Kingdom (UK) and other countries (Harvey & Williams, 2010), the reality is a tendency to prioritise research that creates disincentives for the development of innovative teaching and learning processes.

Programme-level surveys

The central feature of internal to university QA process is diagnostic feedback, based on a suite of student questionnaires administered by the University's Centre for Learning Enhancement and Research (CLEAR). The principal survey is the SEQ, administered at the end of the academic year to First- and Final-Year undergraduates. According to Kember and Leung (2005), the SEQ provided comprehensive guidance for curriculum design, while QA was assisted through the generation of programme-level profiles in two broad categories: first, graduate (intellectual) capabilities that includes seven scales addressing such items as critical thinking, creative thinking, problem-solving and communication skills; and second, the T&L environment that includes nine scales covering various pedagogical practices such as active learning, teaching for understanding, assessment and coherence of curriculum. In each scale, two to three questions are asked. Kember and Leung (2005) checked all the scales and reported the reliability exceeded the normally accepted values. Triangulated against qualitative data and consistent with results from other projects there is considerable explanatory power in the SEQ.

In addition to the annual SEQ, but not included in this study is an annual graduate capabilities questionnaire (GCQ), administered to students one year after graduation and an alumni

questionnaire (AQ), administered five years after graduation. The SEQ is available in paper or online (soft copy) modes and in both English and Cantonese, depending on programme choice. Response rates for the surveys vary, from 65 percent and higher for the in-class paper versions that is the preferred option for the SEQ, to mid-30 percent for the online version of the GCQ. Alumni response rates are noticeably lower (12-28 percent) with online response rates noticeably reportedly depressed due to a lack of current email addresses, as well as the local practice to over administer online survey to students. Nonetheless, the overall design effect is that the same group of students/ alumni is surveyed over a time span of eight to ten years, depending on the length of the Ug programme. This process, which enables longitudinal tracking of student groups, is illustrated in Figure 1.

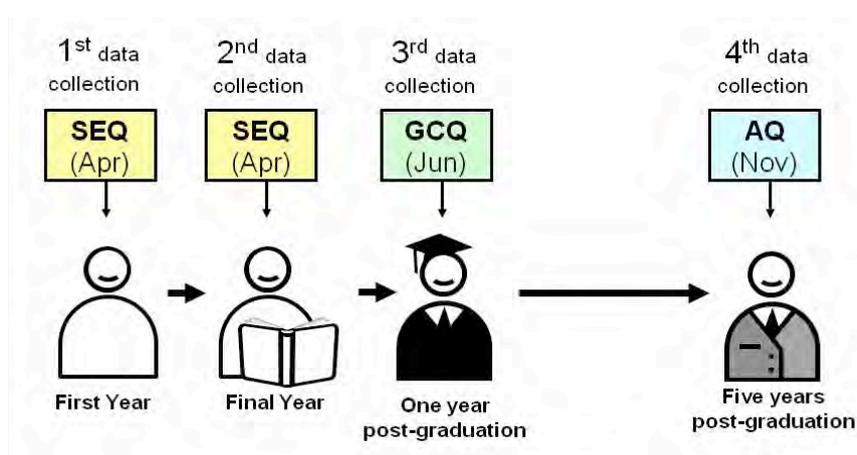


Figure 1: Longitudinal data collection process

Summary reports for the SEQ, GCQ and AQ (if responses rates are near or over 20 percent) are sent annually to each Programme Director and his/her nominated executive team only. The underpinning assumption is a guaranteed level of confidentiality that is central to initial engagement by academic stakeholders with the QA process. Student reflections are reported for single programmes relative to a University mean, allowing the programme to gauge their general performance relative to all other programmes across common metrics for the first and final year study experience.

Based on a response scale of 1-5 (where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is agree and 5 strongly agree), the respective profiles provide visual and numeric based information for programmes across first and final year of the respective Ug programme. Overall, assuming credible and well-intentioned staff, the data collection and follow-up consultative process is a time and labour intensive one. However, and most importantly, in a strategic sense, this process has been a necessary one that has helped shift cultural reservations and natural defensiveness across Ug programmes. Despite Kember's optimistic

view on the SEQ providing comprehensive guidance for curriculum development, it cannot be assumed that improvements at programme-level equate to achieving QE at institutional level. There was, for example, a gap between programme level and Department and Faculty levels, which collectively comprise the University. There was also variable uptake across disciplines, with the hard sciences perhaps more strongly engaged. Nonetheless, consistent with literature, involving internal stakeholders such as students and academics has helped to embed a culture of quality within most programmes.

Institutional view of programme performance

This next section gives an institutional view of programme performance for the components of the SEQ. What is readily evident in the selected items below is that there has been a general steady improvement in the reported categories, graduate capabilities and T&L environment. We begin first by reviewing graduate capability development.

Development of capabilities

Figure 2 illustrates summary results for first- and final-year Ug student experiences, across the seven graduate capabilities measured by the SEQ since the first pilot administration in 2003. These seven scales include critical thinking, creative thinking, self-manage learning, adaptability, problem solving, communication skills, and interpersonal skills and group work.

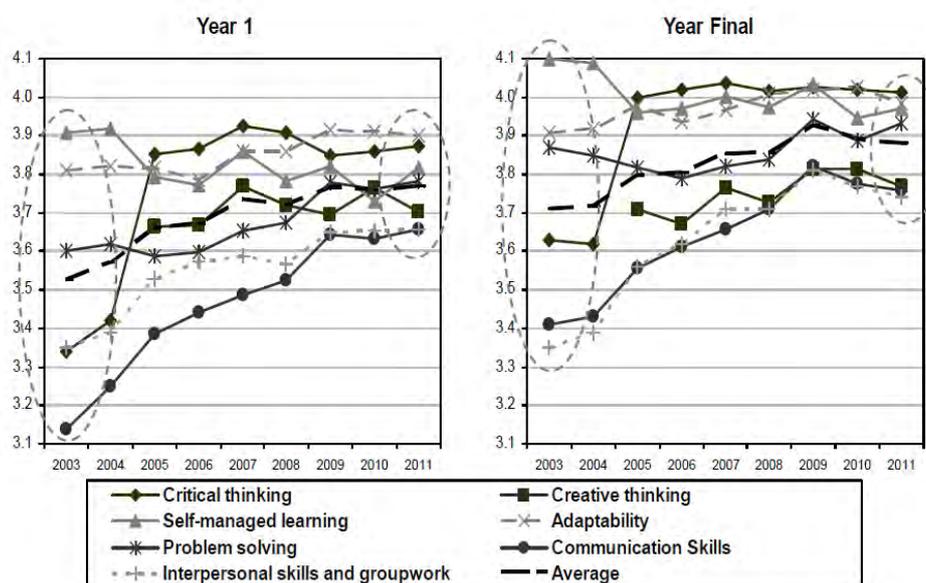


Figure 2: SEQ results – graduate capabilities from 2003 to 2011

As Gibbs (2010) noted, educational gain is well predicted by measures in educational process (pedagogical practices that engender student engagement). Accepting this analysis, the SEQ data reveals a number of significant results in Figure 2.

- As the dotted circles in grey indicate, both Year 1 and Year Final students report a shift from a generally diffuse performance to a more concentrated result across all scales (between 3.6 and 3.9 for Year 1, and 3.75 and 4.0 for Year Final) over the period. Overall, it is suggested that this result is the result of an outcomes-based approach (OBA) to curriculum design and greater alignment in the curriculum.
- There is some improvement in the relative assessment by Year 1 and Year Final students for graduate capabilities (mean of 3.75 in 2003 to 3.9 in 2011). This trend is consistent with an expected greater confidence in respective capabilities by more experienced and soon-to-graduate final-year students.
- A final trend that can be discerned is the steady improvement in the University mean for both Year 1 and Year Final results in terms of graduate capabilities.

These results can be broken down further into two categories, intellectual capabilities and working together. Aside from creative thinking, the data suggests intellectual capabilities development across the whole University is either on or above the University mean (shown in dotted black line). What is also evident is a general plateauing in reported performance for the majority of other intellectual capabilities between 3.9 and 4.0. This may suggest that further improvement is unlikely without greater innovation in the T&L environment. The focus of corrective action is highlighted in two scales – communication skills and, interpersonal skills and group work, which together reflect a capacity to work together – these scales are reported consistently below the University mean (Figure 3). Given that these two attributes are key workplace skills, the data suggest that programmes might give greater attention to the development of these capabilities across the University.

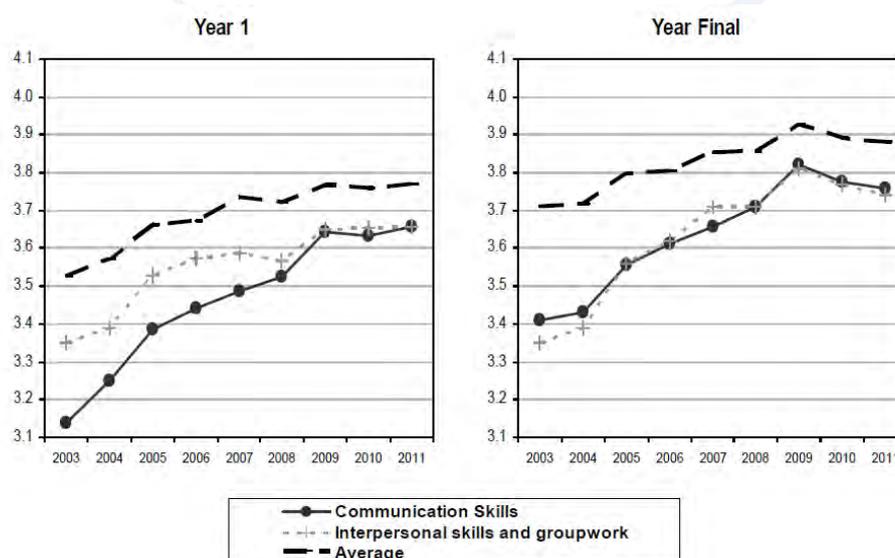


Figure 3: SEQ results – graduate capabilities (working together)

Teaching and learning environment

The nine scales seeking feedback on the T&L environment in Figure 4 show a general trend upwards but, unlike the data for graduate capabilities, there is a tendency for the reported student experience to remain somewhat scattered. The overall results of the teaching and learning environment suggest some slight improvement, although the general trend is for final-year students' to appear less satisfied with the T&L environment than Year 1 students. Closer analysis also reveals there are issues principally in two scales, active learning and workload, which are below and well below the University mean, respectively.

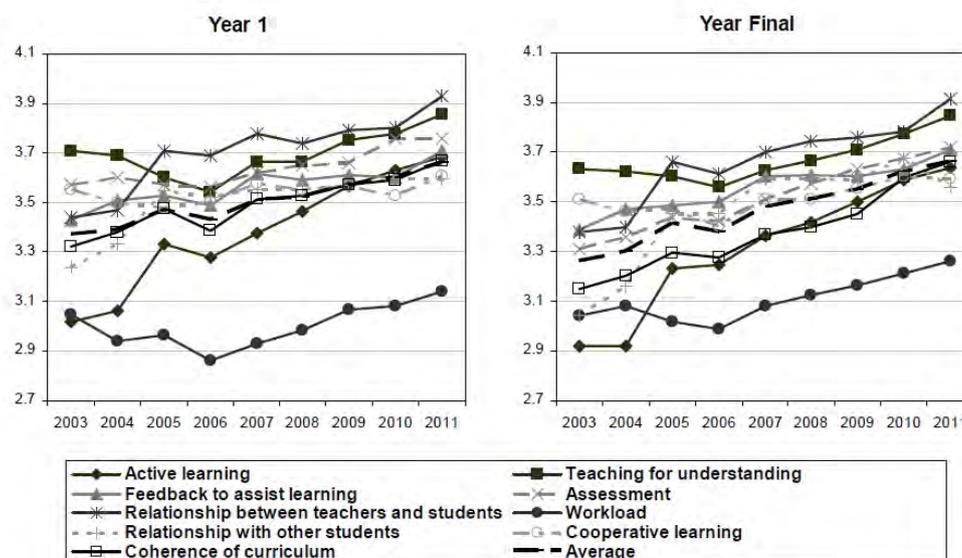


Figure 4: Results of the T&L environment from 2003 to 2011

The reported collective performance of programmes in the T&L environment can be summarised as follows:

Scale	Comment
1. Teaching	Reported performance is on the University mean, with the exception of 'active learning', which is well below the mean. Active learning remains a stubborn T&L challenge.
2. Teacher–student relationship	Reported performance is consistently above the mean.
3. Student–student relationships	Reported performance is on or slightly below the mean; this is a category that could be improved by encouraging more peer- and group-based learning.
4. Workload	Reported performance is well below the mean (see Figure 4). The perceived gap, based on student feedback is noticeable wider in Year 1, but still significant for both groups

Table 1: Reported performance in T&L environment (by categories)

Closing remarks

Quality is a much sought after attribute in higher education, but it is also a contentious subject. Accepting multiple conceptions, it is possible to conclude that quality is a relative

concept that must be seen in context of purpose. In this study, the SEQ programme-level evaluation is consistent with a process focus, looking at teaching and learning variables that impact on the quality and quantity of effort. As noted, both a presage and a product view did not allow the same capacity to discern between complex and overlapping relationships in a University. However, consistent with Harvey and Williams (2010) recommendation, quality is something that can and should be managed and improved, and within CUHK the purpose of the SEQ is to assure and enhance the quality of the educational experience for students. This programme-level approach to gathering feedback from students supports the University's QA process to continuous improvement of educational programmes.

Literature supports educational process as best predicting educational gain. The SEQ data over the past years provides good evidence that significant benefits have accrued in the CUHK student learning experience. Moreover, evidence-informed discussion based on the SEQ is important for the effective monitoring and follow-on enhancement of the student learning experience. To this end, the SEQ is now well integrated into QA at CUHK and the longitudinal data presented here demonstrate progress in two key categories, graduate capabilities and the T&L experience. Overall, the data reveals a number of significant results that aside from the specifics, supports the argument for a better focus on evidence in order to understand quality and so to ensure institutional QA processes are informed by what is known to constitute effective practice.

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“Global education: Location or Locomotion?”

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Abstract:

Global education is the current trend in many educational institutions throughout the developed world. It is approached in various ways such as foreign language classes, cultural sensitivity training opportunities, travel courses, exchange programs, partner schools, and the like. However, not all students exposed to the above studies become internationally thinking individuals or globally involved professionals. Conversely, some people who never leave their national soil can be other-oriented, multilingual and knowledgeable of foreign countries and cultures. What, then, are the factors in educational contexts that enhance the development of multicultural and multilingual, global, people?

This study reports on research findings about undergraduate university students' views regarding their acculturation and language learning progress on an international campus. The study was conducted at Akita International University (AIU), which claims as one of its major goals to educate global citizens. One of the distinguishing features of the university is to offer all instruction in English. The campus, although remotely located, is a microcosm of various languages and cultures at any given time. This would seem to be the ideal environment to develop global mindsets, multilingual skills and cultural competencies.

The survey used to collect the study data was given to English and Japanese as foreign language students at AIU. The students were asked to report on their language learning experiences and their on-campus social networks. The results demonstrate that location alone – no matter how international – is insufficient in fostering meaningful linguistic and cultural growth opportunities. The challenges of global education reach far beyond location.

Introduction:

The northwestern prefecture of Akita is home to a unique university established in 2004: Akita International University (AIU). Its uniqueness lies in the fact that it is an international liberal arts institution where all instruction takes place in English. Although located in a relatively rural and forested location, the student population has passed 800 in total, approximately one fourth consisting of international exchange students from more than 20 countries. The university requires its Japanese students to study one year abroad in order “to produce future leaders of the 21st century international societies and organization,” according to the university President Mineo Nakajma.

Central to the curriculum is foreign language education: Japanese students are all enrolled in English for Academic Purposes (EAP), their study during typically ranging from one semester to a year, depending on the students’ linguistic skills upon entering AIU. Similarly, exchange students from various foreign countries take classes in Japanese language and culture while at AIU. Both sets of students are housed together to increase opportunities for mutually beneficial linguistic and cultural enrichment. About half of the faculty is international, so opportunities exist for international experiences on campus.

The questions that inspired this study in the summer of 2011 were the following: AIU promotes international communication and globalization on campus and beyond; is it succeeding in its goal? Is globalization more than rhetoric? Do the students really find their environment to be international? And if so, might there be any differences in the experiences of the Japanese and the international students?

Method:

A group of graduate students created a survey of 20 questions in class (see Appendix 1), administered it to first semester Japanese students of English as a foreign language (N=147) and recently arrived international students of Japanese as a foreign language (N=63). The surveys were distributed to the participants during their language classes, so everyone present filled the survey out the returned to the classroom teacher.

Besides basic demographic data, students were asked to respond to the question prompts on a 5-point Likert scale (strongly disagree to strongly agree). The questions were written to elicit the following information from the Japanese as foreign language and English as foreign language students:

- self-assessment of second language study motivation and ability
- level of confidence and frequency in the second language use
- satisfaction with the learning environment,
- perception of the international nature of campus

The data were tabulated and averages between the two groups compared. Some clear patterns emerged from the initial data analysis.

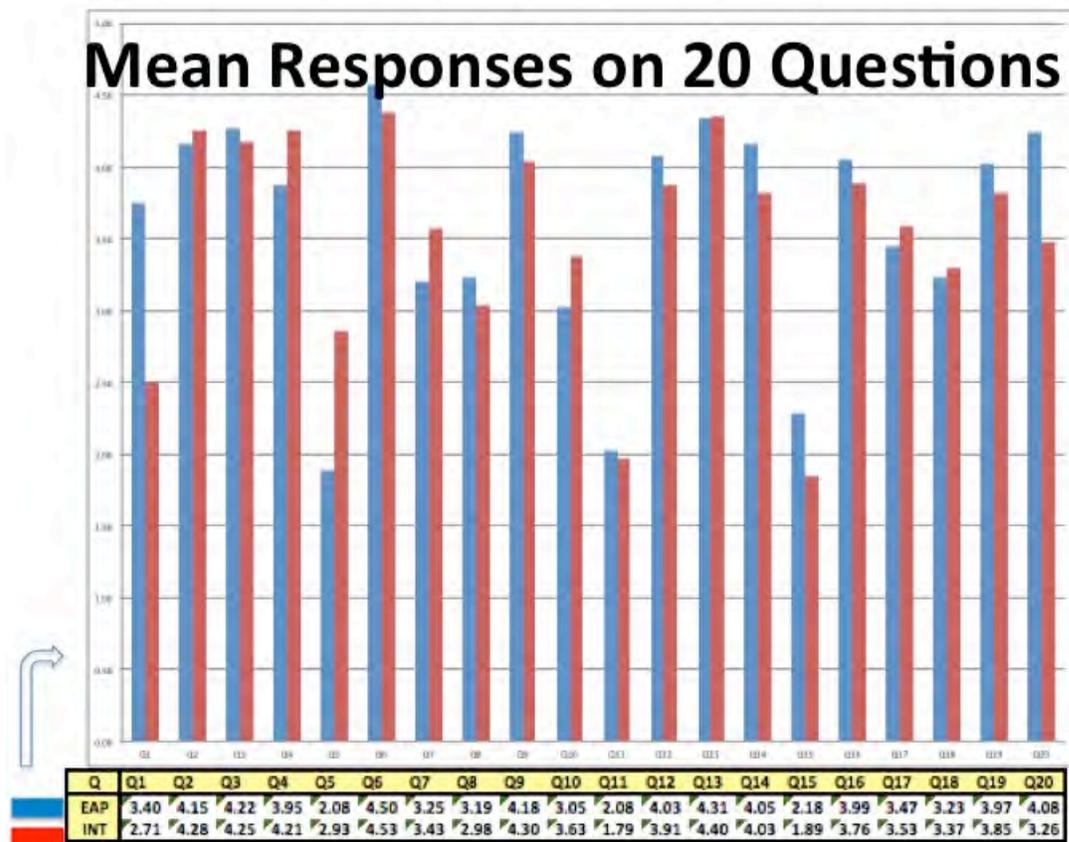
Results:

Generally speaking, the responses of the Japanese and international student groups mirrored each other. Both students of English as a foreign language and Japanese as a foreign language seemed to hold similar views about their language learning and cultural exchanges at AIU, as demonstrated in the chart below (Figure 1).

According to the results, AIU Japanese and international students deem the campus to be an international learning environment (Q3 and Q19) where, in their experience, communication takes place primarily in English (Q7). Students say they use their (second language) L2 not only in class (Q15) but also have opportunities to practice their target language in other places on campus besides the classroom (Q17).

The student groups differ in the way they spend their free time. "I prefer to spend my free time with people from my own country" (Question 1) demonstrates that Japanese students seek out each other's company on campus whereas the foreign students are less likely to do so. This is evident again in students' response to Question 16: "Japanese students spend their free time with other Japanese students. Most participants regardless of their country of origin say this is the case. "Birds of feather" do indeed seem to "flock together."

Figure 1.



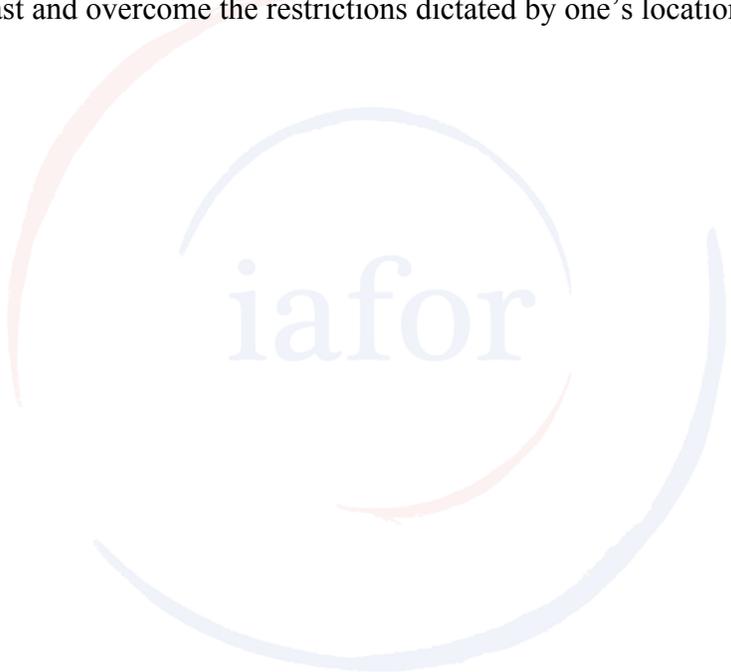
Where the students differ is their comfort level with their language use and their estimation of their own ability. Consider the information in Figure 2. Interestingly, Question 5 (“I am satisfied with my L2 ability”) received a positive response from the international students who are studying a very challenging language on a foreign soil away from home and friends. Although Japanese students have labored on English for six years in the public school prior to coming to AIU, they find their own language proficiency level unsatisfactory. International students (Q4 and Q5) believe themselves to have progressed in Japanese and feel satisfied with the language skills they have achieved so far. They also say they are more comfortable using their target language than the Japanese peers seem to be.

Discussion of Findings:

Preliminary findings of the study suggest that there are many similarities but also significant differences between Japanese as foreign language and English as foreign language students. A campus, deemed international by both groups, does provide opportunities for target language study and intercultural communication as promised by the President

Those who are in the midst of their study abroad experience, namely the international students, seem prepared to take risks in practicing their language and feel comfortable in their new linguistic environment. The Japanese students, however, most of whom arrived at AIU directly from high school, find the campus international, indeed, but are unprepared to take advantage of all it offers. These students “stick together” in the linguistic and cultural comfort zone of their own peers, and display critical tendencies toward their own second language achievements.

Further study of the data is required, but it seems that locomotion rather than location is the faster and surer way to globalization. It is the process of leaving “the old” and familiar and negotiating “the new” that provides the needed freedom to experiment with other ways of communicating and being. It is the blurring of the lines between “us and them,” that once felt, may be the springing board for developing a new linguistic and cultural identity. Once this process has been set in motion, it is conceivable and hopeful that its effects last and overcome the restrictions dictated by one’s location.

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Figure 2.

	EAP English for Academic Purposes			INT International Students			t-Test, Difference in Means (Assuming Unequal Variances)		
	N	Mean	Var	N	Mean	Var	t_Stat	P(T<t 1-tail)	Signif.
Q1	147	3.74	0.74	63	2.51	0.87	9.00	0.00	**
Q2	147	4.16	0.56	63	4.25	0.61	-0.84	0.20	-
Q3	147	4.27	0.48	63	4.17	0.53	0.84	0.20	-
Q4	147	3.87	0.74	63	4.25	4.25	-3.05	0.00	**
Q5	147	1.88	0.98	63	2.86	1.38	-5.75	0.00	**
Q6	147	4.56	0.44	63	4.38	0.34	2.01	0.02	**
Q7	147	3.20	1.34	63	3.57	1.25	-2.16	0.02	**
Q8	147	3.23	1.30	63	3.03	1.26	1.18	0.12	-
Q9	147	4.24	0.64	63	4.03	0.61	1.80	0.04	*
Q10	147	3.02	1.25	63	3.38	1.37	-2.07	0.02	**
Q11	147	2.03	1.00	63	1.97	0.74	0.43	0.33	-
Q12	147	4.08	0.77	63	3.87	0.60	1.72	0.04	*
Q13	147	4.33	0.51	63	4.35	0.30	-0.18	0.43	-
Q14	147	4.16	0.93	63	3.81	0.96	2.36	0.01	**
Q15	147	2.29	1.07	63	1.84	0.68	3.30	0.00	**
Q16	147	4.05	0.48	63	3.89	0.91	1.19	0.12	-
Q17	147	3.44	1.04	63	3.59	0.92	-0.98	0.16	-
Q18	147	3.23	0.89	63	3.30	0.73	-0.53	0.30	-
Q19	147	4.03	0.57	63	3.81	1.03	1.53	0.06	-
Q20	147	4.24	0.61	63	3.48	1.51	4.58	0.00	**

Appendix

Questionnaire for Foreign Language Learners of English and Japanese at AIU.

*Thank you for your participation in our survey and assisting with graduate students' research (ENG 610).
Upon completion please return to your teacher.*

A) Please fill in the blanks.

I am from _____ (country).

I am female/male.

My first language (L1) is _____.

I am studying _____ as my foreign language (L2).

I have studied my L2 for _____ years.

I have lived in the following countries: _____ (total: _____ years)

I have been at AIU _____ years/ _____ months.

With my roommate, I speak _____ and _____ (languages).

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B) Please check the one that most applies.

	5: Strongly agree	4: Agree	3: Don't know	2: Disagree	1: Strongly disagree
1. I prefer to spend my free time with people from my own country.					
2. I am happy I am studying at AIU.					
3. AIU provides an international learning environment.					
4. I have progressed in my L2 skills at AIU.					
5. I am satisfied with my L2 ability.					
6. I look for opportunities to improve my L2 ability.					
7. Students and staff at AIU communicate mostly in English.					
8. I am afraid of making mistakes in my L2.					
9. I want to practice my L2 whenever possible.					
10. I feel comfortable using my L2 to communicate.					
11. I avoid using my L2 on campus.					
12. I look for opportunities to meet with foreign students.					
13. I like foreign language study.					
14. The goal of my foreign language study is to use it in my future job.					
15. I use my L2 only in class.					
16. Japanese students spend their free time with other Japanese students.					
17. I have many chances to practice my L2.					
18. Students on campus are segregated by their L1.					
19. AIU is a bilingual campus. (English & Japanese)					
20. My friends speak L1 with me.					

The Humanities Education of Universities in Thailand: A Reflection of Commoditized Knowledge

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ABSTRACT

The paper discusses the issue of the humanities education as one of the western concepts brought to Thai universities. The humanities education clearly reflects the status of universities as a source of academic knowledge.

According to attempting to get the world top 500 in the Time Higher Education-QS World University Rankings, the major role of universities in Thailand has been reformed to be the business sector to respond the need of global market. This is mainly due to the weakness of the humanities education within our intellectual communities. The changing of the Humanities' curriculum is obviously cited as a good example so as to indicate the new role.

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The Humanities Education of Universities in Thailand: A Reflection of Commoditized Knowledge

I Introduction

In the past decade, National Education Act of B.E. 1999 requested Thai universities to improve their Humanities education in accordance with the index of Time Higher Education. In doing so, objective considerations play the major role. They have seen their products with a numerical data so as to easier to measure. An indicator is the number of their graduates employed in the market places. Therefore most of Thai universities produced their new courses of Humanities studies in order to respond to that policy. They included the career-oriented courses such as language for business, for translation, for traveling and tourism in their curriculum as major subjects. Not only will the students study the traditional humanities courses such as the Thai and foreign language, literature, arts, history, philosophy and religion but will also they have more a chance to study the new major subjects which can make them get a good job. Undoubtedly, most students are more interested in these career-oriented courses than the traditional humanities courses. All traditional humanities courses, except foreign languages, are determined by the students as useless subjects, because they cannot apply them with their careers. Maintaining such career-oriented courses in the Humanities' program clearly reflects the changing of the humanities ideal from the education aimed at training intellectual skills to prepare graduates for well-paid occupations that satisfy the market demand. Furthermore, this change also brings about the new role of Humanities education which is considered as the means to the end.

This paper focuses on the importance of humanities education in supporting the role of Thai universities to conserve the task of being the source of academic knowledge. The effects of change in the Humanities' curriculum and recommendations for teaching-learning the humanities courses are also discussed.

II The Humanities Education: The Search for Knowledge

The humanities education is closely related to the background of western social and cultural circumstances at that time. In the analysis of this topic, therefore, we are necessary to know it from the relations of those factors.

The evolution of the humanities education originally concerned with the Liberal Arts education which has played an important role in western academic education since the ancient Greeks. In the golden age of Greek civilization, the philosopher Plato (c.427-c.347 B.C.) found the first educational institution of the western world, which was called Academy. His purpose was to be the school of the one who loves knowledge. The curriculum of Academy was stressed so much in the worth of mathematics and philosophy subjects, since Plato believes that both of them can help the student be an intellectual one who completes the philosophical terms; truth, goodness, and beauty. In the period of Aristotle (348-322 B.C.), he; Plato's pupil, had opened his own school called the Lyceum. This great philosopher has

added the subject which was later called the natural sciences in the curriculum of Lyceum. In examining the background of both schools, we have clearly seen that their common purpose was to be the school of academic education, that is, all subjects were compared as the catalyst for training intellectual skills rather than training occupational skills.

In the Middle Age when the Christianity had much influence in managing the educational system of the western world (1050-1300), there was the teaching of the seven subjects called Liberal Arts. Those subjects consisted of Latin, rhetoric, logic, mathematics, geometry, astronomy and music. Those seven Liberal Arts subjects were offered to support the secular knowledge for Christian missionaries to be the leaders of academic communities. Later, in the Renaissance (1350-1550), Liberal Arts was the name of all sciences teaching in European universities. Besides the seven Liberal Arts, those universities have included literature, philosophy, and history in their curriculum and called the group of those subjects as Liberal Arts education. The objective of Liberal Arts education in European universities was to produce aristocrats in order to be the leader of his own community especially in the manner of gentlemanly behavior, dressing and taste.

Liberal Arts education continued to be a leader of education for about 200 years until the numbers of the middle class in Europe were increased. Instead of aristocrats, the middle class men and women believed that they were the necessary key to the progress of the human race. At the same time, the natural sciences progressed unceasingly which made not only the aristocrats but the Liberal Arts also lose their major role in educational system. Apart from Liberal Arts, most people had been excited by new scientific discoveries. Scientific method was also considered to be the new implementation of the search for knowledge. Those middle classes, moreover, were industrialists and merchants who needed some useful courses rather than traditional ones to advance their own business and to develop the urban city in which they lived. The growth of the middle class also caused the emergence of new special branches of knowledge which had been advanced by scientific methods, such as psychology and sociology, had kept apart. Up to the present, Liberal Arts education, therefore, still consists of the group of subjects, i.e. language, literature, history, arts, music, philosophy and religion which was called collectively the Humanities.

III Humanism : Confidence in Human's Intellect

Humanism is a great concept in that everyone who completes the humanities school should be cultivated, since it is a philosophical point of the Humanities. It, although, has various meanings depending on the interpretation of many philosophers, those meanings are inevitably to focus on man, his value and aspiration. In order to understand clearly this philosophical term, we need to review it from the viewpoint of some great philosophers who set it up. Let us start to consider the basic concept of Humanism.

Socrates is not just the first Greek thinker who denies an existence of supernatural power, nevertheless he is surely considered as the first Greek thinker who emphasized so much the

excellence of man by his own nature having the knowledge. He, furthermore, believed that only human wisdom can save oneself from all dangers in the sense of ignorance. Knowledge is also the character of the human soul existing in man as a natural quality. In other words, the human soul that Socrates mentioned, has been known as a human intellect to grasp the essence of being, namely the absolute Truth. In addition, Plato, Socrates's follower, adopted not only the idea of soul relied on Socrates but he also created his own philosophy which stressed seriously the immortality of the soul being the source of all ethical values, especially truth, goodness and beauty. On the other hand, Aristotle's philosophical idea concerning the human soul are more concrete than the previous one. He described that the soul, the essence of human nature, is man's rational character as he defined; man is a rational being. As a result of those Humanism's concepts, we can clearly define that it is the confidence in man's own intellect and capacity to not only create himself to be a moral man but also adapt the world so far as possible to suit himself. This basic concept of Humanism later caused the emergence of the modern natural sciences. For instance, both Galileo and Newton have illustrated that man can discover the Truth, namely the law of nature by the method of observation and experimentation. It is noteworthy that, up to the present, the production of the modern natural sciences; namely material things such as technologies and machines has reduced the human value from being their creator to being their slave. Even though, those material things are truly produced by the man's hands and wisdom which is still a slave to them, for example, as in the case of the Frankenstein's creator.

As discussed in the earlier section, if we succumb to the dominance of all technologies, the natural sciences itself cannot advance anymore. Consequently, we should support and nurture Humanism; confidence in man's intellect, so as to develop the natural sciences and all the technologies to respond to human needs.

IV The Humanities Education of Thai Universities

Under the Thai economic and sociocultural circumstances, a problem of our education system is to apply the educational concept of the western countries suitably to Thai students. The Humanities are inevitably faced with this problem in the same way.

In 1957, the Faculty of Arts of Chulalongkorn University may be called the first school to adopt the humanities education from the West. Originally, its purpose was to produce intellectual persons to be the bureaucrats who stayed in the high rank of Thai society at the earlier time. In the first step, it opened six major subjects, i.e. the eastern language, western language, Thai language, geography, history and library sciences. Although, there are many the Humanities' programs offered later in many Thai universities, they still called themselves as either Faculty of Arts or Faculty of Liberal Arts rather than Faculty of Humanities.

Chiangmai University was considered to be the first university dividing the academic disciplines into three following fields like the western ones, i.e. Natural Sciences, Social Sciences and Humanities. Hence, Faculty of Humanities of Chiangmai University, the first school under the name of Humanities was set up in 1969. Later on, by accepting this academic discipline, 52 School of Humanities and Liberal Arts were founded by both the

state and the private universities. Those humanities schools mainly relied on traditional ideal as that in the West.

Until the past decade, most of them have improved their humanities courses in relevance to the need of the job market, as a result of the economic expansion of our country. This job market needs the persons who have the occupational skills rather than the ones who complete the intellectual skill.

V The Effects of The Commoditized Knowledge on Humanities Education

With regard to philosophy of the Humanities, it is notable that the goals of modern teaching-learning process are the education for the global market. In surveying the Humanities' curriculum of Thai universities, I have found that the traditional humanities subjects, such as literature, history, arts, musics, philosophy and religion, hardly get the attention as in the past. Most of the Faculties of Humanities have contained those subjects as the courses of basic studies which all students must study, but they are limited in a few numbers of credits, approximately 5-15% of the total credits. This limitation shows that the humanities subjects have become the foundation courses for supporting all major courses. Therefore, it is not too much to say that, the humanities ideal, to search for knowledge, is less important than to work in a career.

Truly speaking, none can deny that nowadays the career education is necessary for students, especially in modern life. However, more interest in studying vocations reflects the changes of value in Thai students from the value of knowledge and wisdom to the value of benefit.

- (i) In a philosophical viewpoint, the search for benefit will lead to great harm to each man because it makes his living the same as those who hold that the end justifies means. Those are the ones who like to do as much as possible as they can for their own interest which is the end, without worry about the morality or righteous standard of life. This is the value of the industrial society, the so-called consumerism, that is trying to find happiness in possessing material things thereby justifying happiness as consumerable goods (Adler 1981 : 94).
- (ii) Besides the changes of moral value in Thai students, a serious problem is the lack of the ability to learn by themselves. According to training in a special field, they are familiar with the occupational skill without knowledge outside their field. In fact, no academic discipline can cultivate each student to be a knowledgeable man and to have a critical mind better than the Humanities, since knowledge is an end in itself (Collini 2009).

VI Recommendations for Teaching-Learning the Humanities Courses

Although, the humanities courses are considered as the fundamental courses in Thai universities, the humanities education should be conserved. So the aim of teaching-learning the fundamental course is to convey a clear understanding of human value to the students namely justifying knowledge as a basic need of human life. However I would like to recommend that, a large number of students in each class of the fundamental course continue

to be a great obstacle for approaching this aim. The humanities way of learning should be the following.

Subjects of arts and literature should be easier to spark the fire of feeling and thinking emerging within the students rather than to indoctrinate them with ideas or beliefs of the creators. In a similar way, history should reflect the ability of man in adapting his own self and society under his ideal ceaselessly rather than remembering the historical series of events. Religion should relate closely to the existence of man in the present world rather than talks about the supernatural powers and mystics. In this case, the Buddhist concept of man should be offered. With regard to the Buddhist perspective of liberating knowledge, each student should realize in his own wisdom as a catalyst for increasing knowledge and emancipating ignorance, stemming from aspiring to possess material things. As the arts of criticism philosophy, furthermore, should not discuss the abstract issues. Philosophical topics should relate closely to the crisis of modern life so as to prepare the students for facing economic problems bravely.

Most of all, the development of creative thinking is necessary for the humanities way of learning. In teaching those humanities subjects, the teacher should tolerate different opinions of the students through critical discussions between them. By not justifying the diversities of attitudes and thinking of the students, their mutual sharing in search for knowledge should be happened.

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Enhancing learning experience of students with specific learning difficulties with augmented reality: a pilot study

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Abstract

Providing additional sensory input is one of the frequently used strategies to enhance learning experience of learners suffering from specific learning difficulties (dyslexia). Augmented Reality (AR) is a technology that integrates real-world environment with computer generated graphics and video. By using AR, a simple, text-based learning material on text book can be converted into a three-dimensional moving object on the screen of a personal computer or a mobile device, and the learner will then able to control how the model moves and appears on the screen: this provides the learner multiple sensory inputs simultaneously. 12 school students in Hong Kong, in which half of them are suffering from specific learning difficulties, participated the pilot study and see how AR affects their learning experience in learning new vocabulary. It was found that AR able to assist the learners to learn in a more effective manner and learners found that AR technology is interesting and significantly enhanced their learning experience. The study also found that the effectiveness of AR is stronger for students suffering from dyslexia than other students.

Keywords

Augmented reality, computer assisted learning, specific learning difficulties (SpLD), dyslexia.

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Introduction

Specific Learning Difficulties (SpLD), or dyslexia, is a learning difficulty which hinders students' language acquisition. It affects students' reading ability and thus adversely affects their vocabulary building (Lam 2001). According to a study, the prevalence rate of dyslexia in Hong Kong is 9.7% (Chan et al. 2007), which means the language development of around one-tenth of Hong Kong students' are affected by dyslexia.

In order to enhance the language learning of these students, various strategies can be used. Fernald (1943) proposed the use of "Auditory, Lip-throat-, and hand-kinesthetic Methods", or so-called *Fernald Method*, in 1943. This technique utilizes multiple sensory channels of the student including hearing (audition), reading (vision) and touch (tactition/ kinaesthetic) so that these channels can interact with each other simultaneously, and it subsequently helps strengthen students' language learning. Birsh (1999) raised that although experimental evidence of effectiveness of multiple sensory techniques (or multisensory instruction) is absent, there are still several theoretical support in various areas of study – including nature of memory, functional neuro-imaging and principles of cognition – supporting the application of multisensory approach for language teaching and learning. Berninger and Wolf (2009) suggested that students with dyslexia are often benefited from activities with hands-on elements and these students are thus so-called *kinaesthetic learners*. Multisensory approach facilitates capturing and maintaining students' attention during the teaching process, which also enhances students' engagement in learning.

With the development of information and communication technologies, we can now use computer to generate multimedia contents and provide auditory and visual inputs to assist students learning. However, traditional computer applications rely on inputs by using keyboard, mouse, joystick, and touch screen for more modern computers. These input devices are not able to provide direct, real life computer-human interaction and thus the role of touch, as an important sensory channel, was not fully utilized. The development of voice input of computers of course enhances the direct interaction between human being and computers, but the usage of sensory channels are then limited to auditory and visual, the tactition input is, still, absent.

In order to revitalize the multisensory inputs to enhance the language learning of students suffering from dyslexia, the research team proposed to use Augmented Reality as a method to improve computer-human interaction and let the students control how an AR elements – a visualized learning object in form of 3-D graphics or video – shown on their computer, so as to enhance their learning experience by providing additional sensory input as well as a more interesting learning interface.

Augmented Reality (AR)

AR is a technology that merges computer graphics with the reality. Traditionally, computer graphics appeared on users' computer screen are totally separated from the real world. In an AR enabled user interface, AR objects merges with the real world, in other words, these objects appear "superimposed" over real objects

(Billinghurst, Grasset & Looser 2005). The following images illustrate how AR merges with the real world.



Image 1, a. Reality (left): real plant on real pot; b. traditional computer graphics or virtual reality (centre): computer generated plant on computer generated pot; c. augmented reality (right): computer generated plant on real pot.

To control how the computer generated AR element appeared on the screen, we need to use a personal computer or a hand-held mobile device equipped with a camera. By showing a pre-recognized graphical code (we call it *a marker*) or graphics before the camera, a pre-assigned AR object, either in form of 3-D graphics, a video or a flash movie, will be shown on the screen, replacing the marker/graphics. The following images are 2 examples showing how AR elements appear on a user's computer screen:

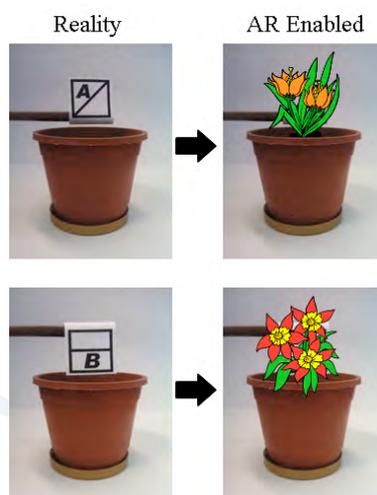


Image 2, Reality (left) and AR enabled graphics (right).

Depending on the nature of the AR element, students can zoom in or out the AR element by bring the marker nearer or farer to the camera. If the AR element is a 3D-object, the orientation and direction of the object will be changed in three-dimensional manner in accordance to the position of students showing the marker to the camera. AR interface enables students to interact directly with the computer without using other traditional input devices. Its 3D ability also increases students' interest in learning, captures their attention in the learning process and enhances their learning experience.

The Study

As we have seen in the above paragraphs, there are several arguments supporting the use of multisensory instruction to enhance the learning of dyslexia students. However, as a new technology, could AR play a role in helping students suffering from dyslexia to learn in a better manner? To answer this question, the research team prepared to conduct a pilot study to see if AR can be an answer of enhancing teaching and learning of students suffering from dyslexia. The study tries to answer:

- Can augmented reality enhance students' learning experience?
- Can augmented reality to help students suffering from dyslexia to learn in a more effective manner?

To answer these questions, a group of 12 secondary school students, aged 13 to 15 and attending Secondary 2 and 3, were recruited to participate an experiment. Among these students, 6 of them are suffering from dyslexia. In the experiment, these students were randomly divided into 2 groups (X and Y). Each of these groups consists of 3 dyslexia students and 3 average students. The following table shows the distribution of students.

Group X			Group Y		
A(1)	A(2)	A(3)	A(4)	A(5)	A(6)
D(1)	D(2)	D(3)	D(4)	D(5)	D(6)

A(n) = Average students. D(n) Dyslexia students.

Table 1, Grouping of participants.

There were 3 rounds of the experiment. In each round of the experiment, participants are given 90 seconds to memorize 3 new vocabularies. These words are provided to students either in paper-form or in a graphical representation by using AR as shown in **Table 2**. After 90 seconds, students are required to write down the words that they have just been given. If any of the students cannot write down all of the words successfully, they will be asked to try again, until they are able to write down all the words in one single attempt. In order to investigate the difference between learning in traditional means (paper-based) and learning with the support of AR, both Group X and Group Y students have chance to utilize both methods. The following table shows the method that the students use in each round:

Round – Testing Method – Group	Group X	Group Y
1	Paper-based	Paper-based
2	AR	Paper-based
3	AR	AR

Table 2, Arrangement of experiment.

Results of the Experiment

After 3 rounds of the experiment, we have the following findings:

- In Round 1 (paper-based test), students of Group X took 2.33 attempts in average to complete the tasks and students of Group Y took 2.50 attempts. There

- is no significant difference between the results of the groups in the paper-based test, suggesting that the standard of both groups of students were similar.
- In Round 2, Group X learned the words with the support of AR and took an average of 1.67 attempts to complete the tasks. Students of Group Y took the paper-based tasks and took 1.83 attempts to complete. Although the average number of attempts of Group X was lower than Group Y, the difference is not statistically significant.
 - In Round 3, both groups of students took the tests with the assistance of AR. Students of Group X took an average of 1.17 attempts to complete the tasks and students of Group Y took 1.50 attempts. For students suffering from dyslexia, they took 1.67 attempts less than they worked in Round 1 and average students took 1.00 attempts less.
 - All students were able to complete the tasks within 4 attempts. When taking AR tests, all students were able to complete their tasks within 3 attempts; in contrast, 2 students (both suffering from dyslexia) needed 4 attempts in taking paper-based tasks.
 - Students taking AR tests takes 1.44 attempts in average to complete their tasks while students taking paper-based tests takes 2.22 attempts in average.

Students' Experience

At the end of the experiment, we also asked the students to rate their learning experience of using AR. They were asked to respond to 4 questions by using a 4-point scale in which 4 means *strongly agree* to the given statement and 1 means *strongly disagree* to the statement. The following table summarizes the results of their experience:

Question	Average Rating*		
	A	D	All
It is hard to memorize English vocabulary.	2.33	3.17	2.75
I prefer to learn through computer.	2.67	3.33	3.00
It is easier to memorize English vocabulary with the assistance of AR.	3.17	3.33	3.25
It consumes more time to learn with computer than using traditional methods.	2.17	3.00	2.58

* 1 = strongly disagree; 2 = disagree; 3= agree; 4 = strongly agree.

Table 3. Students' experience

From the above table, we can see that students suffering from dyslexia tended to agree that it is hard for them to memorize English vocabulary (mean =3.17) and they also tended to agree that AR is a technology that can help them to memorize English vocabulary (mean = 3.33). They further indicated that although it is more time consuming for them to use computer to learn (mean = 3.00), they still prefer to learn through computers (mean = 3.33). In contrast, member of group of average students indicated that it is less hard for them to memorize English vocabulary (mean = 2.33). They also think that AR is a technology that can help them to memorize English vocabulary (mean =3.17), although they are not as much prefer to use computers as a medium of learning (mean = 2.67).

Conclusion

As we have presented in the above paragraphs, we are confident to say that AR is a technology that able to enhance students' learning experience. We can also say that AR able to help students suffering from dyslexia to learn in a more effective manner. However, we needed to be cautious as the population of this experiment is rather small and the test questions (the words used in the tasks) were not moderated nor aligned to the standard of the participants. Nevertheless, the result of this experiment provides a good foundation for our further investigations in application of augmented reality in teaching and learning in school setting for both average students and students suffering from dyslexia. It is also encouraged that similar investigation can be done in difference setting and cultural background to see whether there are other inferential factors that affect the result of the experiment.

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Attitudes of Pre-service Teachers towards Inclusive Education in UAE and Jordan (a comparative study)

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Abstract

The aim of this study was twofold; namely, to investigate: (a) the effect of gender and nationality on the general beliefs of pre-service teachers towards inclusive education, and, (b) their perception regarding the availability of resources and teacher preparation in relation to gender and nationality. A total of 300 participants from the United Arab Emirates University in UAE and Mutah University in Jordan participated in this study. A questionnaire developed by the researchers was used as a measuring instrument. Results indicated that Jordanian students tended to have more positive attitudes towards inclusive education than their UAE counterparts; the results also indicated that there were no significant differences due to gender. Furthermore, the results indicated that there were significant differences due to teacher preparation and availability of resources. The study suggested that most in most instances pre-service teachers have more positive attitudes towards people with disabilities and inclusion, when they have had additional training and knowledge with people with disabilities.

Introduction

Inclusion is an educational practice based on a notion of social justice that advocates access to equal educational opportunities for all students regardless of the presence of a disability. Inclusion represents the belief that students with special educational needs should be fully integrated into

general education classrooms and schools and that their instruction should be based on their abilities, not their disabilities (Al Zyoudi, 2006; and Forlin, 2004), an emphasis that is becoming more prevalent (Ivey & Reincke, 2002; Hanwi, 2003; and Abedallah, 1998).

Preparing teachers for regular class teaching has undergone a major pedagogical shift in recent years. Training institutions are now required to ensure that pre-service teachers are competent to cater for the needs of an increasing range of diverse learners (Al Tarwana, 2008). This move has been furthered by international recommendations from UNESCO to include content on inclusion as part of teacher training programs (UNESCO, 1994). In preparing teachers for inclusive classrooms their attitudes, beliefs, expectations and acceptance of people with diverse needs may well be challenged.

A sizable number of studies have sought to understand teachers' attitudes towards inclusive education (e.g. Arif & Gaad, 2008; Jung, 2007; Al zyoudi, 2006; Avramdis, 2001; Van Reusen, Shosho, & Bonker, 2000; Choles, 2000; Gordon, 2002; Kgare, 2000; Bothna, 1998; Van Staden, 2001; Hyan, 2001; Makunga, 2002; Siebalak, 2002, Al-Khatteb 2004, AlKhatani, 2003). A few have investigated pre-service teachers' attitudes using instruments used for teacher attitude studies, mostly in Western cultural contexts (e.g. McHton & McCary, 2007; Shippen et al., 2005; Kearn & Shevline, 2006), with little in developing countries.

There is some evidence that an important predictor of successful integration of students with disabilities in regular classrooms is the positive attitude of teachers (Sharma, Florin, Lowerman & Earle, 2006; Al-Khatteb 2004;

Avramidis, 2001; Mowes, 2000; Elloker, 1999; Gadium, 2002; Dover, 2002; & Mckeskey & Waldrom, 2002). Research evidence also suggests that positive teacher attitudes towards inclusion often begins during pre-service teachers' preparation (Jung, 2007; Avramisids, Bayliss, & Burden, 2001; Campbell, Gilmore, & Cuskelly, 2003; Shippen et al., 2005). Subban and Sharma (2007) pointed out that if teachers leave from the university with negative attitudes then those attitudes are difficult to change. Consequently, positive attitudes can and need to be fostered through both training and positive experiences with students with disabilities.

Given that very little research in developing countries has been carried out to study attitudes of pre-service teachers, the general purpose of this study was to investigate the effect of gender and nationality on general beliefs of pre-service teachers towards inclusive education.

Education Policies in UAE and Jordan

Education policies in both the United Arab Emirates (UAE) and Jordan are aligned with the United Nations Convention on the Rights of Persons with Disabilities and its Optional Protocol adopted 2006, and coming into force in May 2008.

The UAE signed the optional protocol to the UN Convention on the rights of people with disabilities and Federal Law 29/2006 mandated changes in the educational system to provide free education for people with special needs. The Ministry of Education is also adapting special education standards for inclusion in order to ensure non-discrimination evaluation, physical accessibility, economic accessibility, acceptability and adaptability in

education. To smooth the way for inclusion, the Ministry of education is providing training programs for administrators, teachers, and parents of students with disabilities about including students with disabilities into regular schools. Acceptance of students with special needs is a priority (Arif & Gaad, 2008; Al Roumi, 2008).

Jordan signed the Convention in 2007, and ratified it on 31 March, 2008. The Convention was then integrated in the domestic legal system through its publication in the National Gazette of Jordan, and replacing an earlier law with the Law on Disabled People Rights (no. 31 of 2007) which, amongst other provisions, recognizes the rights of persons with disabilities to education (Article 24) (Ministry of Social Development, 2008). With a view to realizing this right without discrimination and on the basis of equal opportunity, States Parties shall ensure an inclusive education system at all levels and lifelong learning directed to: bullets

- The full development of human potential and sense of dignity and self worth, and the strengthening of respect for human rights, fundamental freedoms and human diversity;
- The development by persons with disabilities of their personality, talents and creativity, as well as their mental and physical abilities, to their fullest potential;
- Enabling persons with disabilities to participate effectively in a free society.
- States parties shall enable persons with disabilities to learn life and social development skills to facilitate their full and equal participation in education and as members of the community. (Higher Council for Disabled People, 2008; Ministry of Social Development, 2008)

Approaches to Teacher Preparation

The model for pre-service teachers training in UAE and Jordan combines theory and practice. They receive preparation to teach students with disabilities either in general education or special education programs. At the final year the placements serve to provide the pre-service teachers real life experience as a practicing teacher within a school.

In Jordan and the UAE, as elsewhere, general and special education training traditionally have been separated from each other. These two streams of teacher preparation are known to have different focuses and priorities, with marked disparities in content and pedagogical approaches. Brownell and Carrington (2005) and Sharma, et al, (2006) reported that general education programs were found to have little focus on the provision of knowledge and training in the area of managing children with disabilities. In contrast, special education preparation programs had pronounced emphasis on inclusion and diversity, and differed in teaching philosophy as compared to that of general education teacher preparation.

How to bridge that gap has been the subject of some consideration. A variety of factors make it difficult to recommend specific content for general education programming appropriate for the practice of inclusion (Al-Tarwana, 2008; Hamre & Olyer, 2004). In the absence of sound research evidence, recent restructuring of pre-service teacher preparation programs in countries which adopted the inclusion model have been motivated primarily by prevailing government policies that encourage the increased participation of children with disabilities within regular school settings. This move towards educational inclusion has seen several pre-service general teachers'

preparation programs include components traditionally limited to special education (Al Roumi, 2008; Sharma, et al., 2006).

Though seen as generally beneficial, the introduction of special education content into general education teacher preparation programs has met with conflicting responses, with studies contesting the number of courses needed to effect changes in teacher attitudes toward inclusion. For example, Shippen et al. (2005) and Pace (2003) have reported that the inclusion of a single course on students with special needs is sufficient to improve teacher attitudes, while others (e.g. Al Tarwana, 2008; Romi & Leyser, 2006; Martinez, 2003,) revealed that a single course makes no significant difference. Other studies include general education courses, as well as the incorporation of field experience to ameliorate fears pertaining to inclusion of children with disabilities (Alkhatteb, 2003)

Recognition of the potential impact of pre-service teacher preparation has sparked several studies, in which models have been proposed to improve pre-service teacher education for inclusion in the schools (Mastropieri, et al., 2005). The collaboration between schools and universities as a model of pre-service teacher training has also been explored by several researchers (Al Tarwana, 2008; Naicker, 2002) where field experience of pre-service teachers has allowed for exposure to teaching within an inclusive classroom.

While it is important that restructuring of teacher preparation programs consider the formulation of effective models to deliver content on inclusion, it is equally essential that these programs take into consideration the training needs of existing teachers. Several studies have reported that their areas of need include content on classroom management strategies, adaptation of

curriculum and materials, and the roles and responsibilities associated with cooperation between general and special education teachers (Abdallah, 1998; Alkhatteb, 2003; Al Zyoudi, 2006). The needs indicated by existing general and special education teachers should be incorporated into pre-service teacher training in order to address and alleviate potentially similar concerns by future teachers. An examination into the attitudes of current teachers towards their teacher preparation experiences for inclusion may also prove beneficial in better determining the subjects relevant to practice in the inclusive classroom. Attitudes toward the perceived adequacy of pre-service training for inclusion would also contribute to the formulation and development of teacher preparation programs that would better cater to, and address the needs of teachers (Alzyoudi, 2006, Jung, 2007; Arif & Gaad, 2008).

Several studies (e.g. Jung, 2007; Elhoeris & Alsheikh, 2006) have examined attitudes of teachers and pre-service teachers towards the integration of children with special needs into regular schools across the UAE. Their studies indicated common concerns such as teachers' time taken away from the rest of the students, class size, lack of training and resources. The above studies also, indicated that teachers are often not prepared to meet the needs of students with significant disabilities. Therefore, these studies made serious recommendations for future practice focusing on initial teacher education

The specific purpose of the present study is to measure attitudes of pre-service teachers towards inclusive education in two developing countries by providing a comparative perspective. The following research questions were posed:

- What are the general beliefs of pre-service teachers towards inclusive education in relation to gender and nationality?
- What are the perceptions of pre-service teachers regarding resources for inclusion in relation to gender and nationality?
- What are the perceptions of pre-service teachers regarding the preparation they have received during their study in relation gender and nationality?

Method

Participants

A total of 300 undergraduate students studying in the Faculties of Education at the UAE University in UAE and Mutah University in Jordan completed the survey questionnaire. All were enrolled in a four-year BA of Education degree program, and were studying special education, early childhood or elementary education. All had completed six semesters of study. Participants were predominately female (92 %), and all were between 18 and 24 years. Pre-service teachers apply to the undergraduate teacher education program in the faculties of education after graduating from high school. They receive preparation to teach students in general and special education programs.

Instrument and Procedure

A survey instrument of 20 items was developed by the researchers based on previous studies (e.g. McHton & McCary, 2007; Scruggs et al., 2007; Shippen et al., 2005, Kearn & Shevline, 2006). It was administrated to the participants during the academic year 2008/2009. The instrument consists of two sections: the first asks for demographic information such as gender,

nationality and college; the second invites the rating of pre-service teachers to 20 statements using a 5-point Likert-type classification ranging from 1 (strongly agree) to 5 (strongly disagree) with the mid-point 3 (undecided) (Table 1). The scale yields score values ranging from 20 to 100 points, with higher scores indicating more favorable attitudes. The content validity of the scale was assessed by a panel of educators and experts in the field of special education.

The instrument examined the following three dimensions:

- General beliefs: This dimension was assessed by 8 items (1, 2, 3, 4, 5, 6, 7 and 8), with scores having the potential to range from 8-40.
- Availability of resources: This dimension was assessed by 7 items (8, 11, 12, 15, 16, 19 and 20) with scores potentially ranging from 7-35.
- Teacher Preparation: This dimension was assessed by 5 items (10, 13, 14, 17, and 18), with scores ranging from 5-25.

Table 1. Survey instrument of teacher attitudes towards disability

	Item	1	2	3	4	5
1	I respect students with disabilities as individuals with differences as I respect all children in my classroom					
2	I believe all children are capable to learn in inclusive setting					
3	I am aware that the individual capabilities of students					
4	I believe that I can employ classroom management					
5	I expect the best from all students in the classroom and I am aware of their capabilities					
6	Students with disabilities should be excluded from mainstream classes as they disrupt other students					
7	I think it is impossible to try and accommodate too many differences in one classroom					
8	I am comfortable communicating with special education teacher					
9	I help students to find appropriate avenues to express their feelings					
10	Pre-service training is necessary to teach effectively					
11	No sufficient equipments to facilitate learning for students with disabilities					
12	Most schools use education corners					
13	I think you need to be a special kind of teacher to teach students with disabilities					
14	Education has a first duty to look after the interest of students with disabilities					
15	Most schools do not have related services (i.e. speech and language specialist, occupational therapist)					
16	Most schools are not prepared to include students with disabilities					
17	There is a gap between theory and practice					
18	The period of practicum is too limited					
19	I would prefer to teach in special school if I have the choice because it has more facilities than regular schools					
20	It is necessary to make modifications in the school to meet the needs of each student with disabilities					

Instructions: Dear pre-service teacher, Please rate the following from 1 to 5 where 1=strongly agree, 2=agree, 3=undecided, 4=disagree, and 5=strongly disagree

Reliability

The internal reliability of each of the dimensions was determined by using Cronbach's Alpha. Results indicated high Alpha coefficient reliability scores for the three scales of 0.84, 0.83, 0.79 and a total score for the scale as a whole of 0.86.

Results

To answer the first research question on general beliefs of pre-service educators towards inclusive education by gender and nationality, an independent t-test was conducted on gender and nationality separately. As for gender differences the mean of the general beliefs for male participants was 29.97 (SD = 10.07) and for female participants 30.60 (SD = 10.06), with a t of 0.433 ($p = .665$). In other words, there were no discernable differences.

The results when examined on nationality were completely different. The mean general belief score of the UAE group was 21.66, (SD = 5.24) and for the Jordanian group 38.90 (SD = 9.19), with $t = 16.112$ ($p < .000$). Jordanian students were found to have more positive beliefs than those of UAE.

The second question asked about perceptions of pre-service educators regarding resources for inclusion in relation to gender and nationality. Again there were essentially no differences between male and female participants, but significant differences based on nationality. The mean rating of male participants was 19.09 (SD = 8.47), and of female participants 18.65 (SD = 8.55), with $t = 517$ ($p = .605$). In contrast, mean scores on perception of the

availability of resources of the UAE group was 13.09 (SD = 4.99), and the Jordanian group 23.84 (SD = 7.42), with the $t = 15.62$ ($p < .000$).

Results were similar for the third research question on perceptions of pre-service educators regarding the preparation they have received during their study. Again, there was little gender difference ($t = .338$; $p < .735$), with mean male score 13.26 (SD = 6.44) and the female score 13.06 (SD = 6.60), but there was a significant difference based on nationality ($t = 14.23$, $p < .000$). The UAE group mean score was 9.88 (SD = 3.58), and the Jordanian group mean 16.45 (SD = 5.78).

Discussion

The aims of this study were to investigate the effect of gender and nationality on general beliefs of pre-service teachers towards inclusive education, and the perception of pre-service teachers regarding the availability of resources and teacher preparation by gender and nationality. The literature reviewed suggests these factors to be highly interdependent, and thus it is impossible to isolate these variables. The effect of teacher preparation for inclusion is known to have significantly affected pre-service teachers' attitudes in both Jordan and UAE. Teacher efficacy in implementing inclusion directly affects their practices and attitudes toward including students with disabilities in general education (Sharam, et al., 2006; Pace, 2003).

Given the general cultural context of Jordan and the UAE, it was assumed that gender would affect the general beliefs of pre-service teachers; however, the findings of this study indicated no significant differences based on

gender. This result amplifies findings in previous studies (Alghazo et al., 2003, Arif & Gaad, 2008) that both males and females had negative attitudes towards people with disabilities in both Jordan and the UAE. One reason for the negative attitudes of males and females could be that pre-service teachers in this study had not been informed that students with special needs would be included in their classrooms and that, as general educators, they do not prefer to be responsible for teaching students with disabilities in the regular classroom. Other reason could be attributed to the fact that the number of male students in this study was small.

However, there were significant differences attributable to nationality. Although, both Jordan and UAE societies share many similarities, yet there were significant differences in pre-service teachers' attitudes from the two countries. It is important to note that the cross-cultural literature supports the notion that practicing teachers and pre-service teachers differ in their disposition toward inclusion, more specifically in terms of the structure of their education systems. Jordanian pre-service teachers had more positive attitudes than their counterparts in UAE. This result could be attributed to the fact that UAE as a nation is relatively new, having been established in 1971; hence, much of its effort has been devoted to creating new programs and services in all aspects, particularly in education. These efforts are still in early stages and need more time to prove their effectiveness. In contrast, Jordan has a long history of providing education for all students. Education in Jordan has received much attention and improvement including preparation of teachers, programs and curriculum. These developments play a major role in improving the quality of services and programs which reflects on improving pre-service teachers attitudes towards inclusive

education. This interpretation seems supported by Sharam et al., (2006) who concluded that pre-service teachers from Western countries (i.e. Australia, and Canada) had more positive attitudes toward students with disabilities than their Eastern counterparts (i.e. Hong Kong and Singapore).

There were also significant differences in general beliefs and the availability of resources. Pre-service teachers in the UAE considered the absence of appropriate materials and equipment as barriers to successful inclusion. Pre-service teachers in this study were critical of the services provided for students in general education classrooms. On the other hand, in Jordan, pre-service teachers showed positive attitudes towards inclusion, because they found appropriate resources that facilitated successful inclusion. This result is supported by Alzyoudi (2006) who found a strong relationship between sufficient resources and successful inclusion.

With the increase of educating students with disabilities in general education classrooms in the UAE, general education teachers will encounter students with disabilities during their carrier in teaching. This requires that teacher education programs prepare future teachers to accept students with disabilities and to provide them with the necessary skills to work effectively with those students. This concern along with other quality concerns was realized by the UAE University in seeking accreditation from the National Council for Accreditation of Teacher Education (NCATE). The college of Education at UAEU now requires that all students take an introductory course in special education entitled Education of Exceptional Children.

Conclusion

It is clear from the preceding discussion that the sampled participants are generally positive about inclusive education. Pre-service training in inclusive education and continued professional development are of paramount significance if inclusive education is to be successfully implemented.

The resourcing of schools is essential if anxieties around the implementation of inclusive education are to be addressed. The fact that the literature seems to reveal both negative and positive attitudes towards inclusive education is indicative of the fact that a lot of work needs to be done nationally and internationally. It should be acknowledged that Jordan is one of the leading countries in the Middle East in terms of the implementation of inclusive education. Community mobilization and advocacy work are needed for the UAE population to be able to adapt into this new concept of inclusive education.

An observation has been made that teachers, students and parents are not fully aware of inclusive education. It seems as if there is an assumption that students would readily accept inclusion. Such an assumption could be inappropriate since some students might have negative attitudes towards inclusive education. Therefore, teacher education program must focus on promoting positive attitudes to improve pre-service teachers attitudes toward inclusion. First increasing the knowledge base of educators about students with disabilities and methods to meet their specific learning needs and use of successful inclusive teachers as guest speakers could be a good strategy to promote positive attitudes toward inclusion.

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**TEACHER DEVELOPMENT PROGRAMS AND TEACHER PRODUCTIVITY IN SECONDARY SCHOOLS
IN EDO STATE, NIGERIA**

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ABSTRACT

Teacher development programs are vital instruments for ensuring the continuous growth of teachers in knowledge, skills and attitude in line with the changes in the education system and the expectations of the society. Also, educational administrators, scholars and other stakeholders in the education system believe that teacher productivity can be achieved through the use of valuable teacher development programs. The study therefore examines the relationship between teacher development programs and teacher productivity in secondary schools in Edo State. The design of the study was descriptive while the random sampling technique was used to get the study sample of 125 from a population of 250 principals. The respondents rejoined to a thirty-two item scale tagged teacher development programs and productivity scale (TDPTPS). The indices for the development programs included supervision, in-service training and co-teaching while those of teacher productivity included motivation, high teacher performance and high students' success rate. The results showed that there is a strong correlation between development programs and teacher productivity in secondary schools in Edo State. Therefore, It was recommended that school administrators should endeavor to avail teachers the opportunity to make use of identified teacher development programs. This will keep teachers abreast of current developments in their fields and will help to boost their continuous productivity in their jobs.

Keywords:

Development programs, Teacher productivity, Secondary schools, Edo State, Nigeria

INTRODUCTION

There is an increasing awareness of the nations of the world in trying to achieve millennium development goals as they affect the education of their citizens, with the intention to wipe out illiteracy and poverty. In Nigeria, the federal government views education as an instrument par excellence for achieving national development (FRN 2004). If national development must be achieved through education, then there is need for a strong teaching force to handle the teaching in the education industry. No nation can rise above the quality of its teachers (Okeke, 2004). The teaching force in the nation's education system should remain productive if it must achieve national development (Okeke, 2004). Little (2001) opined that professional development is a process of inspiration and goal setting objectives that are used to motivate teachers. One way to enhance teachers' productivity is to develop the teachers to be productive. This could be achieved through valuable staff development programs. According to Glatthom (1995), teacher development is the professional growth a teacher achieves as a result of gaining increased experience and examining his or her teaching systematically. When looking at professional development, one must examine the content of the experiences, the processes by which the professional development will occur and the context in which it will take place (Ganser 2000; Fielding and Skhalou 1985). Educational productivity on the other hand is the efficient production of educational outcomes (Rolle, 2001). Teacher productivity can be achieved through the use of valuable staff development programs which are vital instruments for ensuring the continuous growth of teachers in knowledge, skills and attitude in line with the changes in the education system and the expectations of the society (Ornstein and Levine, 2006; Afangideh, 2010). Staff development programs are very important for teachers, particularly in this era where emphasis is now on computer assisted instruction. Data from the US National Science Foundation (NSF) Teacher Enhancement program show that the degree of professional development to which teachers are exposed is strongly linked to both inquiry-based teaching practice and investigative classroom culture (Supovitz and Turner, 2000).

Professional development programs for teachers include supervision, in-service training, capacity building, seminars, workshops, conferences, fellowship programs, study leave, retraining and skill upgrading courses (Afangideh, 2010). These development programs also include teachers' meetings, study circles, training sessions , peer assistance and review, mentoring, book clubs, teachers' net work and curriculum materials design (Nnabuo and Onyeike, 2007).

The general philosophy behind staff development programs in secondary schools is to raise the productivity level of teachers (Hoyle, 1980). Increase in productivity generally means increase in output per person which is similar to the increase in productivity of the farm worker, construction worker and manufacturer (Babalola, 2009). However, in the case of institutions of learning, increase in productivity means better school leavers and graduates who are morally, spiritually, physically and mentally able to fit into the society

as well as the labor market (Babalola, 2009). A productive teacher is one who is able to improve students' reading and writing skills, work with students with special needs and employs active learning strategies (Duffield, 1997). Also, a productive teacher puts up good teacher performance, achieve high student success rate, achieve general organizational success, ability to manage available human and material resources in the school (Okeke, 2004, Robbins and Decenzo, 2008). Babalola (2009) presents what may be seen as the productive indices in the 21st century teacher. These are that the teacher should be prepared to work with speed and accuracy, pay attention to unmotivated learners, customized teaching and learning to fit an environment of speed where everybody is in haste and the ability to produce lateral thinkers not ignorance. This research therefore assessed two development programs in relation to teacher productivity. These were supervision and teacher in-service education.

Nwagwu (2008) identified six benefits of supervision as a professional development service to the teacher. These were the assessment of teachers recruited in the school system, helping teachers to solve day to day problems, helping teachers to discover special abilities they possess, assessing their classroom management effectiveness, providing opportunities for their growth, acquisition of knowledge and encouragement by young teachers.

Bourke (2001) is of the opinion that supervision is an inspectional model that is completed by an administrator who comes to a classroom, either to take notes or check a list of criteria whether a teacher is achieving all the necessary requirements and then leaves the classroom, giving no feedback to the teacher. Based on this brief evaluation, the teacher may receive or be denied promotion, tenure, or even a renewed contract for the following year (Bourke, 2001). Iyewarun, (1989) views the benefits of supervision as teaching teachers how to teach and acquiring professional leadership in the educational system.

With regards to in-service education, Abokwara (2010) found that it had a positive correlation with teacher performance. During in- service education, teachers are taught new methods of teaching, new strategies for managing classrooms, techniques for handling special needs children in the class in line with the current emphasis on inclusive education. Teachers also share experiences and learn from the experiences of others during in- service training. Berry (2001) referred to it as a crash course on pedagogical knowledge that is completed within a very short period of time.

PURPOSE OF THE STUDY

The purpose of this study is to explore the extent to which teachers' development programs perceive the attainment of teachers' productivity in secondary schools in Edo State. This will be achieved through this study's research by identifying development programs such as

supervision, in-service training and co-teaching while teacher productivity included motivation, high teacher performance and high students' success rate.

RESEARCH QUESTIONS

To investigate the problem identified the following questions were raised and answered.

1. What teacher development programs can boost teacher productivity?
2. What are the indices for teacher productivity?
3. How does supervision ensure teacher productivity?
4. What are the contributions of in- service education to teacher productivity?

METHODOLOGY

The design for the study was descriptive. As a result, answers were sought to the research questions and the results explained as they occurred. The population comprised of all the 250 principals of public secondary schools in Edo State out of which the stratified random sampling technique was used in choosing a sample of 125. The research instrument for the study was a thirty-two item questionnaire tagged, Teacher Development Programs and Productivity Scale (TDPPS) designed by the researcher using the modified Likert scale model whose reliability index stood at 0.90. The instrument was divided into two sections, sections A and B. Section A sought for the bio data information on the respondents while section B, elicited the variables of teacher development programs in relation to teacher productivity. In answering the research questions, scores and mean scores of individual item and aggregate mean scores of groups of items were used.

RESULTS

The results of the analysis are presented in the tables below:

Research Question 1:

What teacher development programs can boost teacher productivity?

Table 1: Opinion of Principals On the Teacher Development Programs for Teacher Productivity

S/NO	ITEM	RESPONSES		
		SCORE	MEAN	RESULT
	Teacher development programs that can boost productivity include the following			
1.	Supervision	435	3.36	Agreed
2.	In-service education	403	3.36	Agreed
3.	Capacity buildings	376	3.13	Agreed
4.	Workshops / conferences	395	3.29	Agreed
5.	Training meetings	411	3.43	Agreed
6.	Training sessions	380	3.17	Agreed
7.	Academic study circles	365	3.04	Agreed
8.	Mentoring	398	3.32	Agreed
9.	Book clubs	412	3.43	Agreed
10.	Teachers networking	391	3.26	Agreed
11.	Curriculum material design	403	3.36	Agreed
12.	Seminars	396	3.30	Agreed
13.	Peer assistance and review	414	3.45	Agreed

Criterion Mean 2.50

Aggregate Mean 3.32

Scale

1.00 - 2.49 -disagreed 4.00-agreed

Table1 shows that the item had mean scores above the criterion mean of 2.50. They indicated that the teacher development programs can boost teacher productivity. With an aggregate mean score of 3.32, principals of secondary schools agreed that teacher development programs can boost teacher productivity

Research Question 2:

What are the indices for teacher productivity ?

Table 2: Opinion of Principals On the Indices for Teacher Productivity.

S/NO	ITEM	Responses		
		SCORE	MEAN	RESULT
	Indices for teacher productivity include the following			AGREED
14.	Teacher 's ability to improve students skills in reading and writing	413	3.44	AGREED
15.	Ability to work with special needs and inclusive students	396	3.30	AGREED
16.	Ability to use active learning strategies	412	3.43	AGREED
17.	Teachers ability to put up good teacher performance	399	3.33	AGREED
18.	Achievement of high student success rate	380	3.17	AGREED
19.	Ability to prepare to value speed and accuracy	394	3.28	AGREED
20.	Teachers ability to pay attention to unmotivated children	420	3.50	AGREED
21.	Ability to produce lateral thinkers.	408	3.40	AGREED
22.	Ability to customize teaching and learning to fit an environment of speed	405	3.38	AGREED

Criterion Mean 2.50

Aggregate 3.36 - Agreed

Same scale as in table 1

Table 2 shows that all the items had mean scores above the criterion mean of 2.50 and were therefore accepted as the indices for teacher productivity. With an aggregate mean score of 3-36, the principals agreed on the indices for teacher productivity in secondary schools.

Research Question 3:

How does supervision ensure teacher productivity?

Table 3: Opinion of Principals on the Contributions of Supervision to Teacher Productivity

S/NO	ITEM	Responses		
		SCORE	MEAN	RESULT
23.	Teachers who have access to the assessment of their classroom performance are bound to put up better class performance.	399	3.33	AGREED
24.	Teachers who are provided with incentives to solve day to day classroom problem can provide lateral thinkers.	409	3.41	AGREED
25.	Teachers who are helped to discover the special abilities they have are those who can customize teaching and learning to fit the environment.	385	3.21	AGREED
26.	Information on teachers classroom management effectiveness is vital for improvement in teachers classroom activities.	392	3.27	AGREED
27.	Teachers who have the opportunities for professional growth through supervision are sure to raise good products in line with current needs in the society.	412	3.43	AGREED

Criterion Mean 2.50

Aggregate 3.33

Same scale as table 1

Table 3 shows that the items had mean scores above the criterion mean of 2.50 and were accepted as the contributions of supervision to teacher productivity. With an aggregate mean score of 3.33, the principals agreed on the contributions of supervision to teacher productivity.

Research Question 4:

What are the contributions of in service training to teacher's productivity?

Table 4: Opinion of Principals On the Contributions of In-service Training to Teacher Productivity

S/NO	ITEM	RESPONSES		
		SCORE	MEAN	RESULT
28.	Teachers who are taught can improve their teaching performance	406	3.38	AGREED
29.	Teacher who have learnt new strategies for manning classrooms are sure to route out disciplinary problems to ensure effective teaching	435	3.63	AGREED
30.	Teachers who are exposed to techniques for handling special children can excel in inclusive education.	400	3.33	AGREED
31.	Teachers who have opportunities to share their professional experience with others transfer same to their class activities	404	3.36	AGREED
32.	Teachers who learn from the experiences of others are bound to do effective work	390	3.25	AGREED

Criterion Mean 2.50

Aggregate 3.39 -Agreed

Table 4 shows that all the items had mean scores above the criterion mean of 2.50 and were accepted as the contributions of in-service training to teacher productivity. With an aggregate mean score of 3.39, the principals agreed on the contributions of in-service education for teacher productivity.

DISCUSSIONS OF RESULTS

The study sought to examine the relationship between teacher development programs and teacher productivity. The findings revealed that principals agreed on teacher development programs and believe that they can boost teachers productivity. These findings agree with those of Borko and Putnam (1995) who offered evidence in support of the fact that professional development plays an important role in changing teachers' teaching methods which have a positive impact on students' learning. They also agree with the work of Gusky and Huberman (1995) who believe that professional development opportunities are needed for teachers because they promote recognition as professionals and create new opportunities for growth, exploration, learning and development.

Another concern of the study was finding out the type of teacher development programs that would lead to teacher productivity. The findings revealed that the principals agreed there are many valuable staff development programs. They identified two that could lead to teachers' productivity. These were supervision and in-service education.

The findings agree with those of Nnabuo and Onyeike (2007) who identified supervision as one of the teacher development programs. They also confirm the findings of Afangideh (2010) who listed these programs to include in-service education, capacity building, seminars, workshops, conferences and others. With continuous emphasis on the achievement of the millennium development goals, school heads are given directives to allow their teachers access to professional development programs in order to boost their productivity. It also implies that the principals are already making use of the development programs in their schools.

The second finding of the study revealed that the principals agreed on the various indices of teachers' productivity in the school system which agrees with Duffied's (1997) definition of a productive teacher as one who is able to improve his students' reading and writing skills, work with students with special needs and applies active learning strategies.

The finding of the study also reveals that the principals agreed that supervision plays a crucial role in teacher productivity. This is in line with the suggestion of Nwagwu (2008) that supervision includes assessment of teachers recruited, helping them to solve day to day problems, helping teachers to discover special abilities, assessing classroom management, among others.

The findings of the study also showed that the principals agreed that in-service education contributes to teacher productivity. This agrees with the findings of Abokwara (2010) that in-service education is the basic instrument for raising teacher productivity in Delta State.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the study, it was concluded that school administrators are well informed on the development programs that can boost teacher productivity in secondary schools. There was a unanimous agreement on the indices for teacher productivity in the school system. Supervision and in-service education are major strategies to adopt in order to raise teacher productivity. It can then be recommended that school administrators should avail their teachers access to the various development programs. They should also provide conducive environments to enable their teachers attain the indices for productive teachers. Supervision and in-service education should be encouraged and emphasized by the Ministry of Education.

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A Construction of News about the May 19 Crackdown as Reported on CNN Online: A Semiotic Analysis

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Abstract

As news is a narrative, this paper aims to study the construction of it. Four online news reports from the CNN.com website about the crackdown on the “Red Shirts” protracted demonstrations in Bangkok on May 19 2010 are selected to study. The “quest model” and “semiotic square”, which are proposed by A J Greimas, whose ideas are influenced by Ferdinand de Saussure, the founder of Structuralism, are used to analyze how the news is constructed. Understanding its deep structure and its grammar that derive the surface structure, the news we read, can help explain Thai political ideology that crackdown by military forces on uprising has always been implemented in order to restore peace and bring back normalcy to the country.

Key words: construction of news, the May 19 crackdown, quest model, semiotic square, Structuralism

Introduction

News is not fact about the world. It is not neutrally reflecting what has happened. It is, rather, a selection of information that is sensational, familiar and timely. There is a complex and artificial set of criteria for selection in order to operate and transform the contents of the news. (Fowler 1991:2) Thus, news is constructed.

Bell (1991) and Fulton et al (2005) proposed that journalists tell stories professionally and they do not write articles but they write stories. They are story tellers of our age. “Getting and writing stories” is journalists’ work (Bell 1991:141). News writers try to make dry informative news to be engaging, absorbing and interesting texts by borrowing structure and techniques of storytelling from fiction. News becomes “narrativised” non-fiction which involves, entertain, inform and persuade readers. Moreover, today’s world is dominated by media including print and electronic media, “our sense of reality is increasingly structured by narrative.....Print journalism turns daily life into a story”. (Fulton et al 2005:1)

The news about the crackdown on May 19 in Bangkok, which is a part of the ongoing political crisis in Thailand, was also reported on media websites worldwide and inevitably follows this ideology. Four online news articles about the May 19 crackdown in Bangkok from the CNN website were taken to study. As the website is one of the most popular online global news websites reporting the situation in Thailand, it is interesting to see how the mayhem was reported through the eyes of foreign reporters, the third party, who do not gain or lose any benefits from the situation.

Greimas’s quest model and semiotic square are chosen to examine the underlying structures that make the news as presented to readers and to understand what social or cultural

ideology they can reflect. Both models are influenced by structuralism. Hawkes (2003: 69) clarifies that Greimas's work '*attempts to describe narrative structure in terms of an established linguistic model derived from Saussurean notion of an underlying langue or competence which generates a specific parole or performance, as well as from Saussure's and Jakobson's concept of the fundamental signifying role binary opposition.*'

The political situation in Thailand after the 2006 coup and the May 19 crackdown

Thailand has been in years of political instability and chaos since 2006, a year when the military staged a bloodless coup. As a result, Mr. Thaksin Shinawatra, the prime minister at that time, who was well-known for his populist policies, was ousted by the army. In that year a political group who supported Mr. Thaksin but opposed the military coup and the military government was formed under the name "Democratic Alliance Against Dictatorship" (DADD), then changed to "the United Front for Democracy Against Dictatorship" (UDD). The group's supporters are commonly called "Red shirts". The UDD or the Red shirts organized rallies against the military government in 2006-2007 and in 2008 against the "Yellow shirts", another political group who was believed to support the 2006 coup. Mr. Thaksin's two allied governments won elections under the People Power Party and then were thwarted by court actions. Mr. Abhisit Vejjajiva, who is the leader of the Democrat Party, then took office to be the prime minister and was in office from December 2008 to July 2011.

In early April 2009 the Red shirts disrupted the 14th ASEAN summit in Pattaya and caused the summit to be cancelled. In Bangkok they held a mass rally and wreaked havoc across the city. The government declared a state of emergency in Bangkok and surrounding areas. On Monday 13 April, the military forces with policemen cracked down on the red shirted protesters which caused deaths and injuries. On 15 April, the Red shirts leaders asked the protesters to leave their protest site and end their rallies.

In February 2010 Mr. Thaksin Shinawatra, a self-imposed exiled ex-prime minister was found guilty of abuse of power and unusual wealth while taking office. His assets were, then, seized. He was also banned from politics for five years.

In March the Red shirts held a large scale of protest against the Abhisit government and demanded the House dissolution and new election. For them the current government was not democratically elected. Sporadic clashes between government troops and the anti government protesters were widespread and also caused deaths and injuries. These were reported in local, international and online newspapers. From April 3, 2010, the Red shirts were occupying Rajaprasong, a major commercial area in central Bangkok, and being in the area from that day till the May 19 crackdown. On May 17 the Abhisit government ordered the protesters to leave the demonstration area by 3 p.m. warning that who did not do so would face a two-year imprisonment. Still, the protesters held their ground. Clashes between Thai military troops and the protesters continued together with vandalism and shootings. It was reported that the clashes

between the Red shirts and security forces from May 14 to 17 left 35 people dead and over 270 people including 7 foreigners injured, according to the Erawan Emergency Centre.. (Bangkok Post 18 May 2010). On May 19, the military troops moved to disperse the main rally site at Rachaprasong, forcing the Red shirts leaders to surrender. Shortly after that Bangkok was in chaos. More than ten buildings including a theatre, shopping malls together with a bank were set on fire and looting was widespread around the city. After the military operation at Ratchaprasong, chaos broke out in several provinces in the North and Northeast which were Red shirts strongholds. The Abhisit government, therefore, announced a curfew as well as imposed an emergency decree in Bangkok and in some provinces. The situation, later gradually turned back to normal. In Bangkok buses were provided for protesters to leave the rally site and go home.

The May 19 crackdown news on the CNN website

The situation in central Bangkok on May 19 was reported on the CNN website like a war movie which runs from an introduction, rising action, climax and falling action. The news begins from describing lives of people who were living close to the protest site of the Red shirts anti government protesters. These people interviewed by the CNN reporters talked about their daily lives as if they were in a battle field. The news reported about one landlord who is 64 years old and owns a five-story building. He and his workers together with their families hid themselves in his house to protect property. (**Trapped in Bangkok's protest zone: Hunkering down**, 2010)

*The men rotate on guard duty throughout the night.
Siripanich said he trained the women how to fight back
if any of the demonstrators, known as "Red Shirts," try to break in.*

They have been holed up for a full week now.

Moreover, identification documents have to be shown to soldiers when getting in or leaving the building. Gunfire was heard all the time.

*Siripanich's crew buys food daily at a market downstairs,
but they must show their identification documents to soldiers
to get in and out of the building....They could hear gunfire
"all day, all night," he said.*

*Residents in Thailand's capital took to rooftops on Wednesday,
anxiously watched news reports and one family fled their home with precious
keepsakes as government troops moved in to evict thousands of anti-
government protesters from a downtown district.*

They hear gunfire crackling every night and big blasts.

The situation became tense when the military troops began to disperse the Red shirts. This can be seen as a rising action in this news. (**Violence unabated in Thailand**, 2010)

The army surged into Lumpini Park, the area where Red shirt demonstrators had amassed. Armored personnel carriers crushed bamboo and their barricades; the protesters hurled M79 grenades at soldiers. The May sky quickly turned black from thick smoke billowing from landmark buildings set ablaze.

The climax comes when the protest leaders surrendered and declared an end to the protest. (**Violence unabated in Thailand**, 2010)

After hours of intense street battles, seven anti-government protest leaders were taken into custody. Three more turned themselves in Thursday. Red Shirt leaders called off the protest, but it seemed as though many did not heed the call. By Friday, however, three more Red Shirt leaders turned themselves in.

However, instead of moving to the resolution, the situation turned worse again when a large group of protesters ignored their protest leaders plea, that is stop protesting and return home. Instead they went on the rampage by triggering fires. More than ten buildings including a bank, a police station, a local television station together with Bangkok's biggest shopping mall were set ablaze. However, the military troops kept on cracking down to end a tense standoff which troubled the capital of Thailand for weeks. Moreover, a number of deaths and injuries were reported. As mentioned on the CNN, the government considered the Red shirts 'terrorists' and their rampage was labeled 'organized crime'.

Greimas's quest model and semiotic square

Algirda J. Greimas (1917-1992), a Lithuanian linguist and narratologist, like other structural linguists, tries to look for deep structures of all narratives, or what might be called 'the underlying grammar of narrative'. He is influenced by Vladimir Propp's work that analyzes a large number of Russian fairy tales, *Morphology of the Folktale*. In his work, Propp comes up with a basic plot component of narrative which consists of seven 'spheres of action'. Greimas develops and refines Propp's analysis. He proposes the 'actantial model' that breaks an action down into six actants. Greimas makes the distinction between actors and actants. Actors refer to the actual characters that appear in a narrative while actants are 'functions' or 'roles' that the characters maintain in the narrative deep structure. An actant can be anything from mankind to

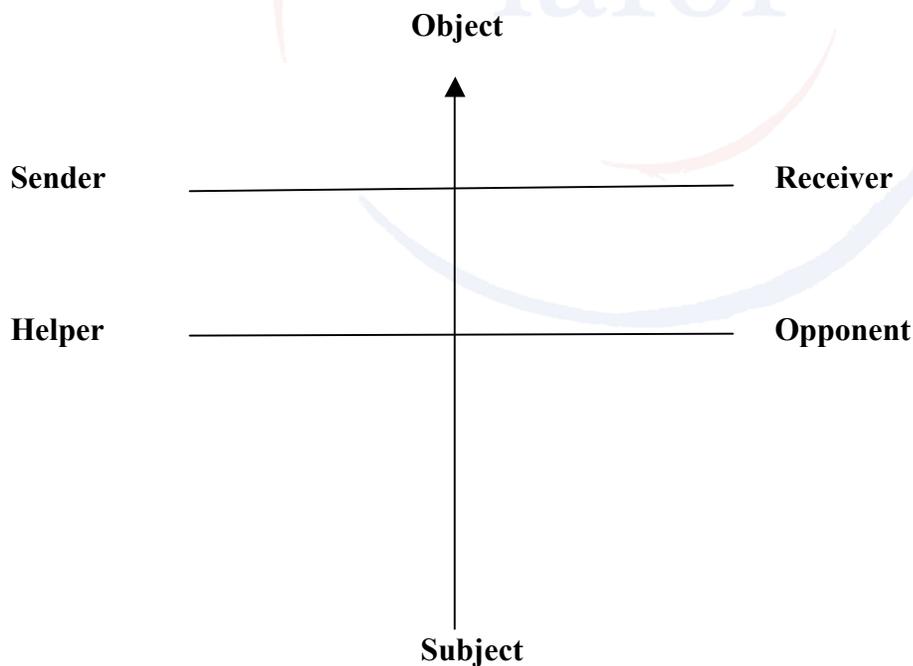
the natural world including concrete or abstract notions. The actants that Greimas proposes are as follows.

1. Subject versus Object: this is an axis that generates stories of quest or desire. The Subject searches for a goal or object of desire. The relationship established between the Subject and the Object can be classified as a conjunction or disjunction.

2. Helper versus Opponent: the Helper assists the Subject to achieve what the Subject desires. The Opponent hinders the Subject from fulfilling his/her desire. The conflict between the two actants moves the story forward.

3. Sender versus Receiver: the Sender allows the Subject to obtain the means to deal with the Opponent in order to get successful results. The Receiver benefits from the victory of the Subject.

Below is the model representing Greimas's quest model or actantial model.



conflict between these two actants, Helper and Opponent, moves the narrative on. They fight against each other to achieve their goals. In order to make the crackdown on the protesters possible, the military troops and police (Sender) have to be with the government and join hand. If the crackdown is successful, the Receiver which includes residents and business owners in Bangkok including the Abhisit government can live in their normal way of life.

In the deep structure of the news all of the six actants perform their functions or roles to complete the story plot paradigm. The Abhisit government can be both the Subject and the Receiver. Moreover, the Helper and the Sender have close relationship. The Abhisit government cannot alone take severe action to restrict activities or people opposed to it. Large group of soldiers with specialized training in using weapons to control people behaving violently must be on duty. In other words, the crackdown (Helper) is not possible without the involvement of the military troops and police (Sender). This may imply Thai political ideology that the crackdown which is always bloody is likely to be a sole way to efficiently deal with political unrests in Thailand. The CNN news report writes: (**Violence unabated in Thailand**, 2010)

*The military operation was the government's last stand against protests that paralyzed parts of Bangkok for months, Thai officials said.
But on Wednesday in Bangkok, as bullets rang out, black plumes of smoke rose and soldiers crept forward toward a showdown, it seemed that the time for talking had passed.*

Major political crisis in Thailand such as the ones on 14 October 1993, 6 October 1976 and the 'Black May' 1992 confirm this political ideology. In addition when focusing particularly on the Sender-Receiver axis, it is obvious that though the government has authority to maintain the country's law and order, it cannot exert its authority to the fullest. It has to deploy the military troops together with the police to successfully disperse a solid mass of protesters. This may imply the social hierarchy which may be the 'latent meaning' that for Thailand the army and its military forces has higher level of importance than that of the government (Receiver). It may also imply that the Sender has accomplished admirable mission. (Nopporn Prachakul 2552: 253)

In conclusion, the actantial model reveals the structural roles performed in a certain narrative. Such an actant or role fulfills an integral component of the story to make a complete narrative plot paradigm. Without the contribution of each actant, the story might be incomplete. To sum up an actant is an integral structural element that the narrative revolves upon.

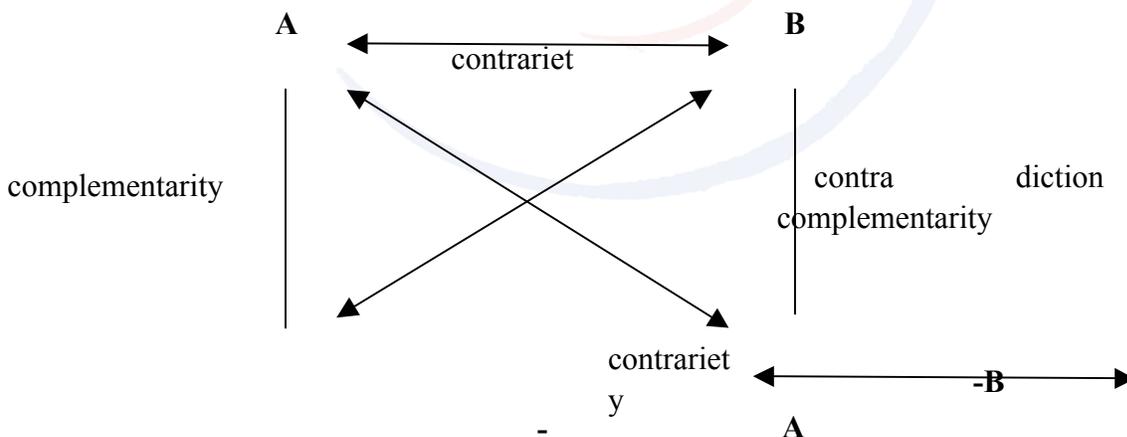
Semiotic square

According to the Structuralism ‘everything is what it is by virtue of contrasts or differences within a system. Identity is a matter of relations.’ (Culler:2006,3) Greimas was inspired by this precept. In his book, *Semantique Structurale*, he writes: ‘*We perceive differences, and thanks to that perception, the world ‘takes shape’ in front of us, and for our purposes.*’ (cited in Hawkes 2003:71)

Adapted from the ‘logical square’ of scholastic philosophy and from Jacobson’s distinction between contradiction and contrariety, the semiotic square later was introduced. Greimas considers it to be the ‘elementary structure of signification.’ Hawkes explains the semiotic square as follows.

‘The differences we discern between these basic ‘semes’ involve, at an elementary level, four terms, seen as two opposed pairs, which our ‘structuring’ perception requires us to recognize in the following form: A is opposed to B as –A is to –B. In short, the ‘elementary structure’ involves recognition and distinction of two aspects of an entity: its opposite and its negation. We see B as the opposite of A and –B as the opposite of –A, but we also see –A as the negation of A and –B as the negation of B.’ (Hawkes 2003:70)

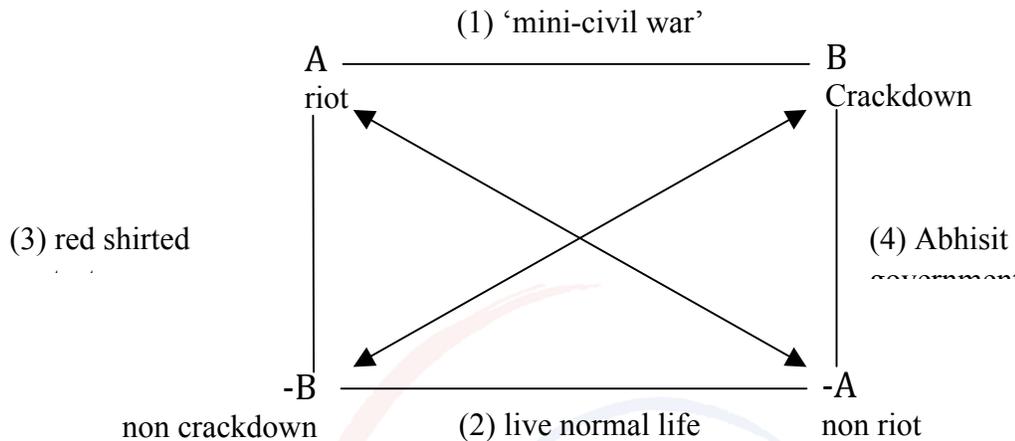
The figure below shows the semiotic square.



The four corners can be taken up by concrete or abstract notions. The double headed arrows portray bilateral relationships. Chandler (Daniel Chandler เกิด/ตาย) notes that ‘Greimas refers the relationships between the four positions as: *contrariety* or opposition (in this figure:

A/B and $-B/-A$); *complementarity* or implication (A/-B and B/-A); and *contradiction* (A/-A and B/-B)' (Chandler 2002, 119)

To apply 'Greimasian' square with the May 19 crackdown, 'hidden' underlying theme in the news can be highlighted. The semiotic square may look like this.



The initial pair of 'semes' or semantic units which are 'riot' (A) and 'crackdown' (B) are a pair of the binary opposition that forms the basis of a deep-lying grammar of the news, zone 1. From this deep structure, the superficial surface structure of the May 19 crackdown news is derived and generated.

On May 19 the Abhisit government cracked down on the red shirted protesters. The crackdown turned the situation in Bangkok to be a 'mini civil war' and turned the capital itself to be a 'war zone'. (**Violence unabated in Thailand**, 2010)

'We Thai people never experienced this kind of situation before', said Sirinun Siripanich, the assistant secretary to the Bangkok governor. 'This is like a mini civil war'.

Bangkok turned into a war zone Wednesday, as Thai military forces cracked down on anti-government protesters, ending a tense standoff that has troubled the capital for weeks.

The news reported that the government was confident that they could bring back peace to the country by cracking down on the protesters. (**Violence unabated in Thailand**, 2010)

Thailand's prime minister sought to calm public fears with a televised address in which he expressed confidence that peace would soon be restored. 'I would like to give moral support to officers who are doing their duties now and would like to reassure you', Prime Minister Abhisit Vejjajiva told citizens. 'And I am confident that we can overcome all the problems and bring the country to a long-lasting peace.'

The red shirted demonstrators, rioting in order to oust prime minister Abhisit from being in office, were also perceived as ‘the terrorists’ by the government. (**Violence unabated in Thailand**, 2010)

The government considered the demonstrators to be terrorists, and army Col. Sansern Kaewkamnerd said that growing violence necessitated the use of force. He said soldiers were given the all-clear to fire if they faced a clear threat.

‘The terrorists have created further situations of violence by torching government and business buildings,’ Sansern said. ‘It was therefore necessary for the police and military to put further pressure.’

When considering zone 2, the negation of the first pair of the binary opposition, ‘non crackdown’ (-B) and ‘non riot’,(-A), the situation became different. If there had been no riot, there certainly had not been any crackdown. People in Bangkok could have lived their normal lives. This is the situation that the Abhisit government needed it to be.

The vertical relationship, zone 3, shows the ‘implication’ or ‘complementarity’ relationship type. The notions ‘riot’(A) and ‘non crackdown’ (-B) are what the red shirted leaders need. There is, however, an attempt to hold a talk between the protesters and the government. Nevertheless, it never happens. (**Violence unabated in Thailand**, 2010)

The violence prompted the United Nation’s top human rights official to implore anti-government protesters and government officials to resume talks.

The CNN reports the failure of the talks by citing a statement issued by the prime minister’s office. (**Violence unabated in Thailand**, 2010)

‘Negotiations failed because core (opposition)leaders are not to be able to make decisions by themselves,’ the statement said, alluding to an outside force influencing the protesters. ‘(We) ask core leaders to stop the rally and surrender.’

As things went in an opposite way, they canceled the protests and told the demonstrators that they did so in order to prevent the killing of people. (**Bangkok residents: This is a ‘mini-civil war**, 2010)

Several Red shirt leaders called off their protests Wednesday

afternoon after a large military offensive routed their supporters from a city park where they had amassed.

The leaders could be seen on television addressing a crowd in Lumpini Park, saying they wanted to avoid further bloodshed and wanted to turn themselves in.

The notions taken up in the other vertical relationship, zone 4, are ‘crackdown’ (B) and ‘non riot’ (-A). The crackdown might be, in the government point of view, the sole way to restore peace and bring back normalcy to the capital of Thailand. Nonetheless, it is difficult to avoid the bloody crackdown.

Culler (Jonathan Culler 1944-present) points out that ‘Structuralists reject causal analysis and any attempt to explain social and cultural phenomena one-by-one, focusing rather on the internal structure of cultural objects and, more important, on the underlying structures that make them possible.’ He further notes that ‘Linguistic analysis, on which structuralism modeled itself, does not try to tell us what sentences mean but seeks to explain how these sequences are constructed and how they can have the meaning they do for speakers of a language.’ (Culler 2006: 3-4)

From the analysis of the May 19 crackdown news presented on the CNN website through the semiotic square framework, the Thai political ideology obviously reveals itself. Military forces are always deployed in order to disperse and suppress the protesters. This inevitably leads to bloodshed which has occurred several times in Thailand. If looking back to the past, there have been major dates in Thai history that people have struggled for democracy. They are October 14, 1973, October 6, 1976 and May 17, 1992 (Black May). Military forces played crucial roles in these three military operations in order to restore peace. Violence means which cause casualties and injuries have been used to stop terrified circumstances and bloodshed in these three situations including the one on May 19. The May 19 crackdown, again, reconfirms this ideology.

Moreover, from the quest model framework mentioned earlier, in order that the Abhisit government can ‘bring the country to a long-lasting peace’, ‘the crackdown’ is as ‘Helper’ actant while ‘the military troops and police’ is as ‘Sender’ actant. These two prominent actants assist the Abhisit government to achieve its goal. Both the semiotic square and the quest model support each other and prove that the Thai political ideology discussed above is definitely true. Violently bloody means become Thai political dominant ideology when dealing with political uprisings.

In addition, the two models also prove the wisdom of telling stories of mankind as Greimas puts it:

'These articulations of meaning could be explained, we thought, as the result of combinatorial operation carried out on the basis of a limited inventory of semic categories.'
(Greimas 2006:91)

Conclusion

Every narrative has its deep structure which is a mechanism that generates it as it is at its surface. Quest model and semiotic square show how this mechanism operates. The two models represent idea that contrast or differences is the key for generating its basic plot paradigm and an underlying structure of narratives. Moreover, by examining the underlying structure, social and cultural phenomena can be understood. In brief, the two models not only show how the news create meaning for their readers but also show how that meaning works to reinforce values about that society.

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Bangkok Post 18 May 2010

**“Brokeback Mountain” เมื่อพื้นที่เป็นผู้เขียนบท โดยกฤษณา ขำยัง หน้า 100-127
วารสารอักษรศาสตร์ ฉบับวาทกรรม ภาพแทน อัตลักษณ์ ปีที่ 37 ฉบับที่ 1
(มกราคม-มิถุนายน 2551)**

**นพพร ประชากุล. 2552. ยอกอักษร ย้อนความคิดเล่ม 2 ว่าด้วย สังคมศาสตร์.
พิมพ์ครั้งแรก. กรุงเทพมหานคร.สำนักพิมพ์อ่าน และสำนักพิมพ์วิภาษา**

นปก. เปลี่ ยนชื่อเป็น นปช. ยกระดับการต่อสู้ คนวันเสาร์ฯ เตรียมถอดนายกา.

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เข้าถึง**

จาก: <http://sff3.blogspot.com/2010/01/2549-2551.html>.



Submission Reference Number: 0115**Paper Title:**

Reading and writing in the subject areas: targeted, discipline-based interactive resources for 1st year UG students

Abstract

As Basil Bernstein's (1971) seminal work has demonstrated, students from low socio-economic status (SES) backgrounds can often come to the schooling context disadvantaged by a lack of familiarity with the elaborated codes utilised in schools. Students entering universities from a low SES background can also often be challenged by the elaborated codes of the higher education system and by the discipline-specific discourses to which they are exposed.

In 2008, the Australian Government initiated a *Review of Australian Higher Education* to examine the future direction of the higher education sector, its fitness towards meeting the needs of the Australian community and economy, and the options for ongoing reform. This paper reports on a funded project under the University of Technology, Sydney (UTS) Widening Participation Scheme (WPS), which arose out of the recommendations of the *Review of Australian Higher Education*. This project seeks to address the significant challenges facing first-year undergraduate students in regard to discourse and rhetorical structure and the genres of specific disciplines. The project involves firstly conducting a needs analysis and, on the basis of this analysis, providing genre- and discipline-specific online support materials and activities which scaffold students' first attempts at reading and writing in the discourse of their chosen discipline.

Presenter Bios:

Dr. Terry Royce is a Senior Lecturer and Research Coordinator at the University of Technology, Sydney (UTS). At UTS Terry works across the university with postgraduate research students and staff in a range of faculties on research literacy, as well as developing research and publication writing syndicates for staff to develop their research outputs. He supervises doctoral students in the Faculty of Arts and Social Sciences in language education (TESOL) and applied linguistics (discourse analysis, multimodality). His research interests include forensic linguistics (specifically with critical incident policing and authorship identification), the analysis of multimodality, discourse and cohesion analysis across disciplines (specifically scientific and economics discourse), the application of systemic-functional linguistics to discourse varieties, and TESOL education.

Mr. Marc Sakaguchi is a Lecturer at the University of Technology, Sydney (UTS). At UTS Marc teaches academic and professional skills courses in both undergraduate and post-graduate education programs. He has also taught visiting foreign exchange students in the Advanced Diploma in Australian Language and Culture (ADALC) program. He has a Master's Degree in Teaching English to Speakers of Other Languages (TESOL) from Columbia University. Prior to moving to Australia, he taught English and academic skills at secondary and tertiary education institutions in Japan for 14 years. Marc's research interests include discourse analysis, particularly critical discourse and systemic functional linguistic analysis in the field of forensic linguistics, and the acquisition and development of second language reading skills in the field of TESOL education.

4897 words

1. Introduction

In 2008, the Australian Government commissioned a *Review of Australian Higher Education* (commonly referred to as the Bradley Review) to examine the future direction of the higher education sector, its fitness for the purpose of meeting the needs of the Australian community and economy, and the options for ongoing reform. Two key targets recommended by the Bradley Review and subsequently adopted by the Australian Government are particularly relevant here: (1) that by 2025 40% of 25- to 34-year-olds should have attained at least a bachelor-level qualification and (2) that by 2020 20% of undergraduate enrolments should be students from low socio-economic status (SES) backgrounds. Associated government budgetary measures in support of reforms aimed at achieving these targets have focussed primarily on providing student income support, scholarships, institutional performance targets, increased funding to student places, and a new quality and regulatory agency (for a review of these aims see Birrell & Edwards 2009).

In recognition and support of these announced targets and policy and budgetary changes by the Australian Government, the University of Technology, Sydney (UTS), in the state of New South Wales, implemented its Widening Participation Strategy (WPS). The WPS recognises, however, that simply building aspiration and enrolling students from low SES and Indigenous backgrounds will not ensure the successful completion of university study for those students; a whole-of-university approach is required. The Bradley Review emphasizes that once enrolled, those students 'require higher levels of support to succeed, including financial assistance and greater academic support, mentoring and counseling services' (Australian Government, 2008, p. 28). The WPS therefore has funded projects over the two-year period, 2011-2012, across the university in four strands or themes: *Building Aspiration*, *Widening Access*, *Inclusive Community*, and *Retention and Success*.

This paper reports on the recently completed pilot stage of a two-year funded WPS project focused on the fourth of the WPS themes: *Retention and Success*. As the Bradley Review highlights, university students from low SES backgrounds must be supported in their *transition* to university study and provided with the assistance they need to succeed in completing their university study. One of the issues facing these students is that they often enter the university context disadvantaged by a lack of familiarity with the elaborated and discipline-specific codes utilised there (Bernstein, 1971; Hood, 2011). The central aim of the project described in this report is to address the related challenges facing these students in their first year of university undergraduate study by providing genre- and discipline-specific online support materials and activities to scaffold the students' first attempts at reading and writing in the discourse of their chosen discipline. The paper outlines the background and context of the project, the project itself, and the development and trialling of materials in the first-year pilot stage. Examples of these materials are presented with an associated critical and evaluative discussion.

2. Background and Context

As Basil Bernstein's (1971) seminal work in *Class, Codes and Control* has demonstrated, students entering universities from a low SES background can often be challenged by the "elaborated codes" of the higher education system, and by the discipline-specific discourses to which they are exposed. As a result of a lack of familiarity with those discourses, due perhaps in part to their previous social and educational experiences, these low SES students may find it difficult not only to learn and understand the theory and concepts of their new discipline, but also to communicate effectively in the academic and discipline-specific genres they encounter. Bernstein found that even though the low SES pupils in his UK study performed relatively poorly in language-based subjects, these pupils were achieving just as well as their higher SES counterparts on mathematical work. His study focussed on examining the reasons why this was occurring, and suggested that two codes are at work which might explain the situation: the "*restricted*" code, and the "*elaborated*" code (see Bernstein, 1964, pp. 57-67).

For Bernstein, the "*restricted*" code draws on a store of shared meanings and background knowledge in the contexts in which it occurs. It carries a social message of inclusion, of implicitly acknowledging another's status as being "one of us". It can perhaps be thought of as a private rather than public code, and commonly referred-to contexts are family or friendship groups. Restricted code can also be typically seen in the use of 'group' jargon, as in a trade-based workshop (e.g. mechanics in a garage). Essentially the code operates within, and is tuned into a restricted (or bounded) community or group. On the other hand, the "*elaborated*"

code has been developed for contexts where new or challenging knowledge in a field is presented, and requires full explication because it is socially necessary for all participants to understand the content and the concepts on offer. Unlike the restricted code, it does not draw on agreed shared meanings and background knowledge that is integral to the social interaction.

Bernstein's research argued that while low SES students had access to their restricted code(s), higher SES students had access to and experience with both restricted and elaborated codes, because the higher SES students were more geographically, socially and culturally mobile (Bernstein, 1971). This also supports the findings from his earlier work (Bernstein, 1964, pp. 66-7). This finding is important for the WPS project described here because schools and universities in the Australian context (and indeed around the world):

- are concerned with the introduction of new knowledge which goes beyond existing shared meanings,
- are relatively anonymous institutions which do not share many taken-for-granted meanings in their formal structures (except perhaps in informal structures within the staff and student groups), and
- consequently, use the elaborated code to ensure 'everyone gets the message'.

The assumption underlying this project is that it is vitally important to recognise that *if a student is not familiar with the elaborated code, he/she will find it very difficult to succeed in the educational system*. This may be especially true for the first year undergraduate low-SES-background student, confronted with the codes and complexities of a large university, and the requirement to start producing academically appropriate output from the first weeks of the first semester. The disciplinary 'shock' that the student experiences may lead to a sense of or fear of failure, actual failure, and dropping out.

This WPS-Retention and Success project is therefore concerned with supporting low SES students in their transition from high school contexts to university contexts, and their need to cope with *disciplinarity*, or the conventions of disciplinary knowledge (Hood, 2011). The project's specific aims are to address:

- the challenges for students entering universities from a low SES background
- the elaborated codes of the higher education system
- the discipline-specific discourses encountered in lectures and tutorials
- the requirement to read textbooks, journal articles, and other academic/professional texts
- the requirement to write using the accepted and elaborated conventions of each discipline

The institutional context for this WPS Project is the University of Technology, Sydney (UTS), in New South Wales, Australia. UTS is a member of the Australian Technology Network (ATN), a coalition of five Australian universities which stress that their graduates and resultant research are closely aligned to the needs of industry and the wider society. Their undergraduate student bodies typically consist of local and international students, and the institutions emphasise the practical application and practical outcomes of tertiary studies and research.

3. The Project: Targeted, discipline-based interactive resources for 1st year UG students

The results of university-wide after-enrolment language assessments of commencing students at UTS have shown that students assessed as being at particular levels (here labeled Levels 1, 2, and 3) tend to represent certain groups of students with their attendant needs. The level 1 students tend to be students who do not require much additional support to succeed in the university context in terms of learning to read and write in their chosen discipline. The level 3 students tend to be international students who have specific language and academic literacy needs that are often associated with the fact that their first language is not English. UTS' specialised academic literacy unit and other support bodies are currently addressing these specific language and academic literacy needs.

The level 2 students on the other hand have needs that seem to be related to discourse and rhetorical structure, and the genres of specific disciplines; and while there is a significant proportion of international students in this group, there also seems to be a significant number of students who are Australian and

whose first language is English. There is also a proportion who do not use English in their home, or who are second-generation immigrants. Many of these students may indeed be low SES students.

This project seeks to address the challenges related to discourse, rhetorical structure, and genres of specific disciplines faced by these level 2 students by establishing via a needs analysis the particular needs of this group and, on the basis of this analysis, providing genre- and discipline-specific online support materials and activities which scaffold students' first attempts at reading and writing in the discourse of their chosen discipline. The aim is to develop online support activities for the specific reading or writing tasks required of students in particular core, first-year subjects. Students can access these activities on their own time with links to the website on each subject's homepage and the university library's website. Students from low SES backgrounds (and indeed NESB and other students) in each faculty area can access the interactive resources, view annotated text samples extracted from their core, first-year subjects and related to their assignment tasks, learn to negotiate the generic conventions of the texts, and apply the skills which are demonstrated in the activities.

The primary objectives of this project therefore are to:

1. conduct a needs analysis to confirm the specific needs of low SES students.
2. develop a web site which would allow low SES students to look up and work with sample texts.
3. develop interactive learning or text-approach resources which are discipline-specific.
4. develop interactive exercises which guide students on the reading and writing text approach techniques needed for study in their first-year core subjects.
5. promote these online resources both in class and through clear and prominent access links to the site on each subject's homepage and the university library's website.

The outcomes of this project have been set up to be realised in three stages over two years as illustrated in Figure 1 below.

YEAR 1 – 2011	
Stage 1: Initial concept testing	The collection of a set of texts and resource/activity ideas that can be made available online, and the testing of the relevance of these with a sample of low SES students.
Stage 2: Pilot site creation and trialling	The development, implementation and review of a pilot version of the site aimed at two subjects with low SES students.
YEAR 2 – 2012	
Stage 3: Expansion	Based on the results of the review of the pilot version, modify, prepare and implement a full version of the site for the remaining faculties at UTS.

Figure 1 - Stages of the project

It is expected that one of the main ongoing benefits of this project is that it will address the WPS theme of “retention and success”. If students from low SES backgrounds can easily obtain access to effective interactive support resources in their specific disciplines, then their ability to go beyond the first year of study with confidence will be greatly enhanced, and they will have the necessary foundational understandings to help them deal with the discourse of their discipline and the assignments which require that they demonstrate a familiarity with the disciplinary writing conventions. In addition, an important ongoing effect of this work is expected to be faculty staff professional development, as the existence of these materials and the questions that they may generate in classes should lead to an increased awareness on the part of the staff of the ways that their discipline organises its discourse and the kinds of demands that

this discipline-specific discourse can make on new students. It is expected that the project will benefit not only low SES students, but all students who have to read and then write in the subjects they study.

4. The Pilot Stage

The remainder of this report will discuss the creation and trialling of the pilot website – Stage 2 of the project. This stage involved the selection of two first-year, core subjects for the trial, initial information gathering regarding the subjects and their reading and writing tasks/assignments, the writing of materials and activities to support students in their understanding and completion of the tasks/assignments and learning of the genres they represent, creation of the pilot website including backend and frontend functionality and design, and the trialling of the online materials with students enrolled in the subjects. First-year, core subjects were selected as they are required for all students enrolled in a particular course of study and are often prerequisites for subsequent subjects.

On the basis of internal faculty statistics and course of study requirements, two core subjects in the Faculty of Engineering and Information Technology (FEIT) were selected: one from Engineering (Physical Modelling) and one from Information Technology (Networking Essentials). After briefing the Associate Dean for Teaching and Learning in FEIT on the aims of the WPS Project, initial meetings were organised with the two Subject Coordinators concerned, and their cooperation and support was readily obtained once they were informed of the project's aims and parameters. The subject coordinators were especially supportive of the eventual possibility of integrating the online activities into the assessment regimes of the subjects. A series of discussion meetings were then held to gather information regarding the subject requirements and reading/writing tasks.

As a result of these discussions, it was decided that two modules of activities would be developed and trialled for Physical Modelling (an Online Logbook Entry module and an Extended Report module), and one module of activities for Networking Essentials (a Case Study Report module). The next stage of the pilot was development: this involved the design and writing of materials and activities for each module and, once these began to take shape, the creation of an online interface – for this latter activity a private web developer was engaged and tasked with the development of the backend architecture and the frontend interactive interface. Once this pilot site was developed, edited and debugged, the subject coordinators informed their students of the site and asked them to complete the activities as part of their assignment preparation tasks.

To get a sense of the nature of this pilot site, please see the following screenshots of some of the pages and activities the students needed to read and complete, starting with the “Welcome” screen and the request to choose a discipline, and then a subject (Figure 2).

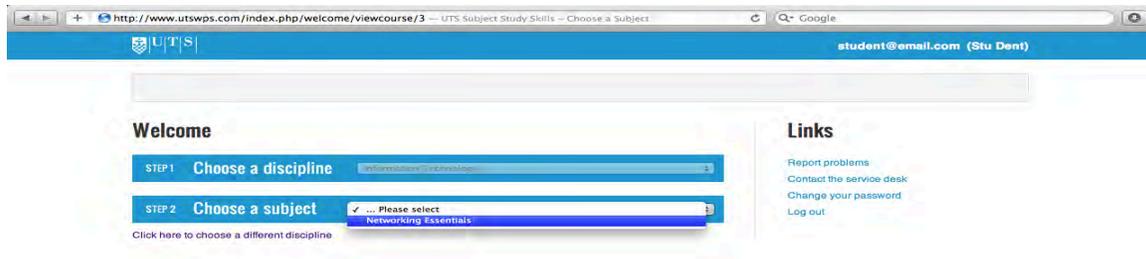


Figure 2 - Website 'Welcome' screen

Figures 3 and 4 show an extract from the Case Study Report module for the IT subject: here the students are asked to read a preamble on the role of consultants and then, on the basis of this reading, to select an answer from four choices.

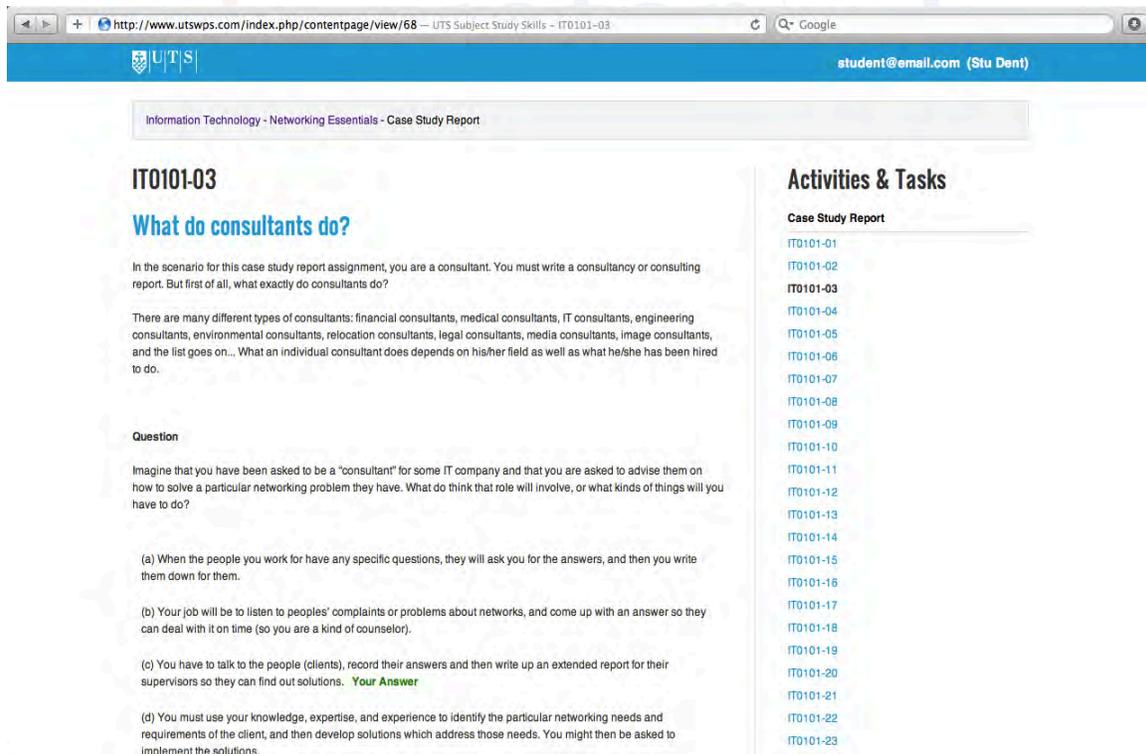


Figure 3 - Information + multiple-choice question page

report: But first or an: What exactly do consultants do?

There are many different types of consultants: financial consultants, medical consultants, IT consultants, engineering consultants, environmental consultants, relocation consultants, legal consultants, media consultants, image consultants, and the list goes on... What an individual consultant does depends on his/her field as well as what he/she has been hired to do.

Question

Imagine that you have been asked to be a "consultant" for some IT company and that you are asked to advise them on how to solve a particular networking problem they have. What do think that role will involve, or what kinds of things will you have to do?

(a) When the people you work for have any specific questions, they will ask you for the answers, and then you write them down for them.

(b) Your job will be to listen to peoples' complaints or problems about networks, and come up with an answer so they can deal with it on time (so you are a kind of counselor).

(c) You have to talk to the people (clients), record their answers and then write up an extended report for their supervisors so they can find out solutions. **Your Answer**

(d) You must use your knowledge, expertise, and experience to identify the particular networking needs and requirements of the client, and then develop solutions which address those needs. You might then be asked to implement the solutions.

◀ Previous Next ▶

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Figure 4 - Answer-selection

The student's answer is recorded when the student clicks on the Next button, and the next page provides an explanation of the correct answer.

Figures 5 and 6 illustrate another interactive exercise which focuses on the semantics of each "move" in a sample text excerpt from a case study report (see Dudley-Evans, 1987; Swales, 1990; Martin, 1992, 2008). The students are asked to read the sample text and to pass the cursor over each of the highlighted sections. When they do so, an explanation of the semantic function of each highlighted part is presented in a text box. It is important to note that the students cannot proceed to the next page until they have passed the mouse cursor over each of the highlighted sections and viewed the information for all of the moves in the text.

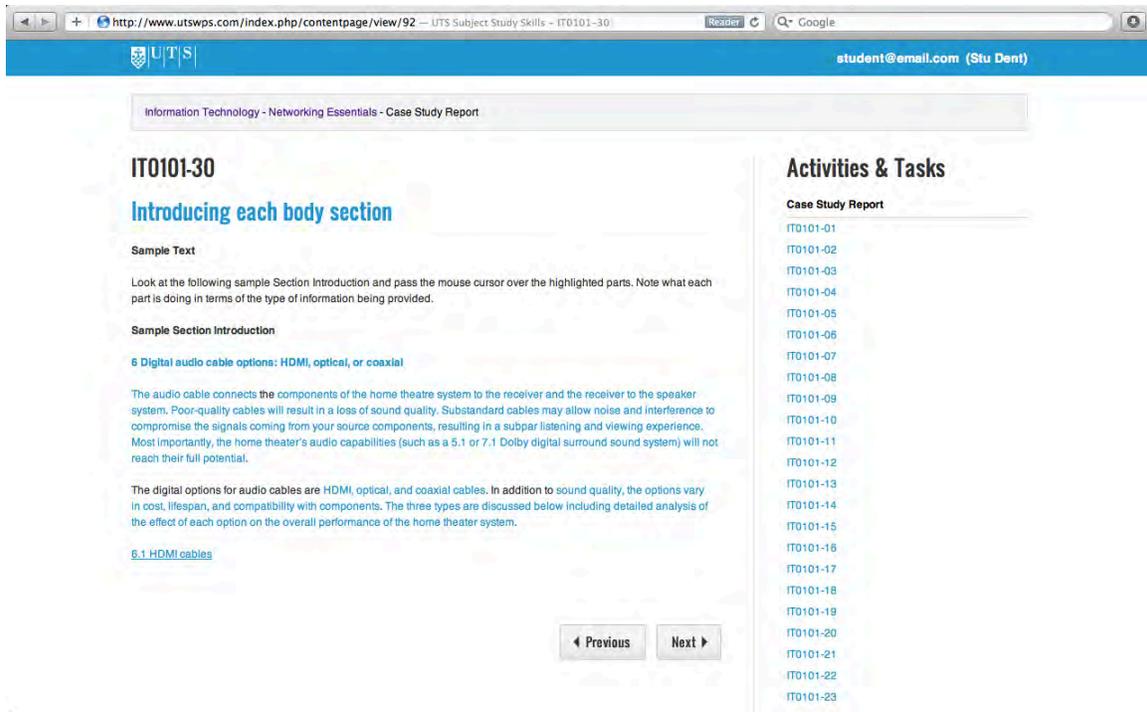


Figure 5 - Sample text page

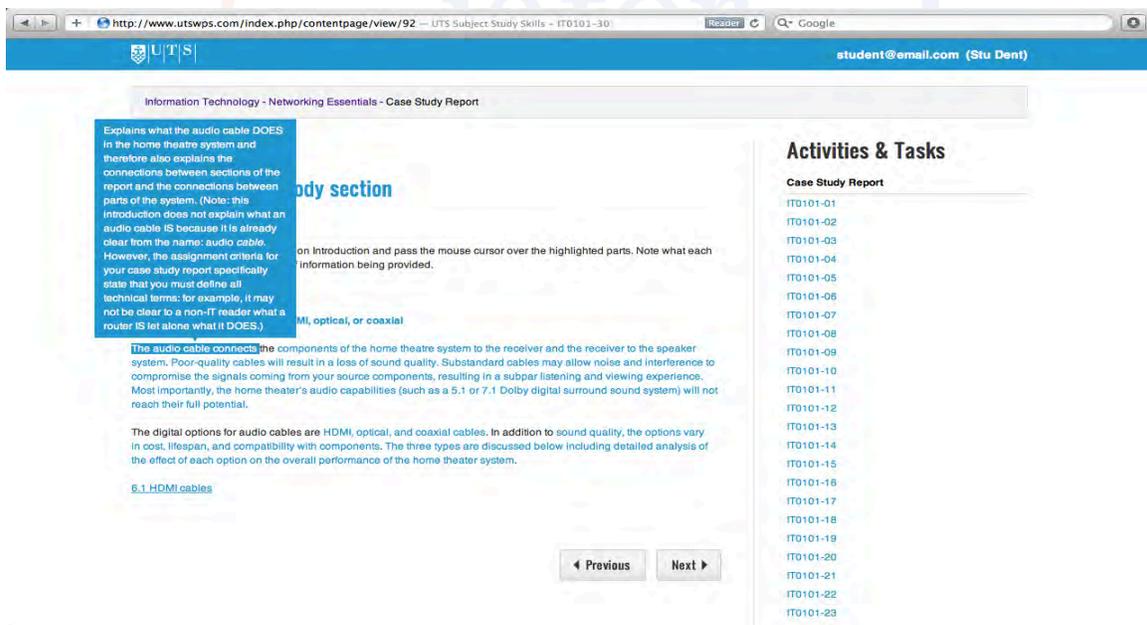


Figure 6 - Pop-up text box presenting an explanation of the highlighted portion of the sample text

Multi-modal sample texts are highlighted and annotated as well, as illustrated in this next set of screenshots of a page on the use of tables and figures in a case study report (Figures 7 and 8). Note again that the students must pass the mouse cursor over each of the highlighted sections in the sample text to be able to continue to the next page.

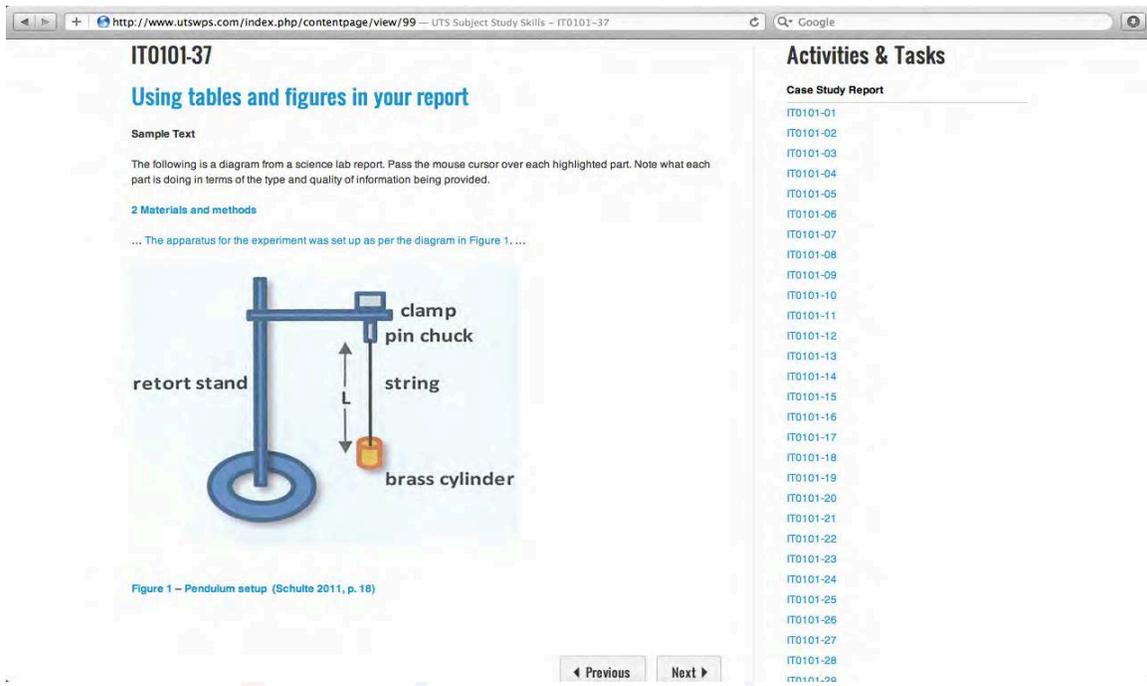


Figure 7 - Sample text page

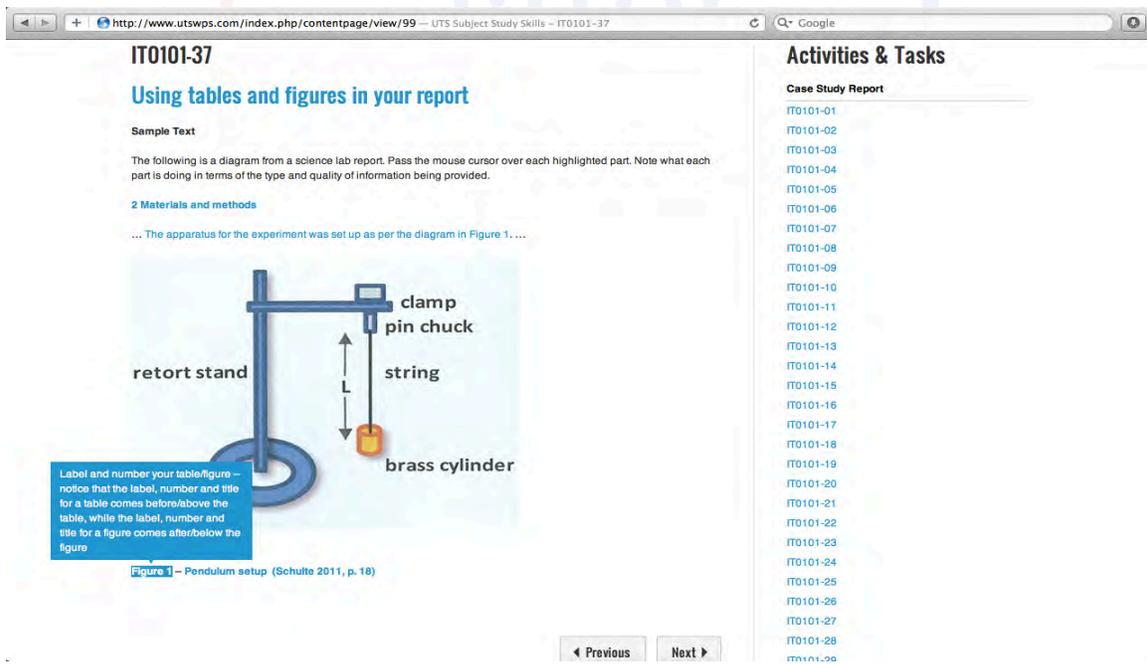


Figure 8 - Pop-up text box presenting an explanation of the highlighted portion of the sample text

5. Evaluation and Discussion

A crucial aspect of the development of these interactive resources at the end of this pilot stage is the evaluation of the online interactive materials and the website's usability for the students. The results from

this evaluation will of course inform the next, final stage of the project, where the basic pilot versions of the site's backend and frontend designs will be re-developed and improved, and interactive resources will be produced for selected core subjects across the remaining faculties at UTS.

The first aspect of this evaluation reviews the access/usage data for the two subjects and their modules. This is summarised below in Tables 1 and 2.

Table 1 - Physical Modelling access/usage figures

Physical Modelling (Engineering)		Percentage
Online Logbook Entry module	75 students out of 155	48.4%
Extended Report module	30 students out of 155	19.4%

The figures for the two modules in the Physical Modelling subject (Table 1) show that the students did not really engage with the site –less than 50% of students enrolled in the subject accessed the first module and even fewer accessed the second. The reasons for this were felt to be related to (1) problems with the site's materials and activities, functionality, and usability resulting from development timing pressures and (2) minimal promotion of the site to students.

Table 2 - Networking Essentials access/usage figures

Networking Essentials (IT)		Percentage
Case Study Report module	129 students out of 218	59.2%
	34 of the 129 students stopped at 5 pages or less	26.4%
	54 of the 129 students completed all 53 pages	41.9%
	14 of the 129 students stopped at the 10 th page	10.9%

The module for Networking Essentials was created after the modules for Physical Modelling and benefitted from lessons learned from the development of the earlier modules and ongoing improvements to the website's functionality and usability. In addition, the subject coordinator and instructors actively promoted the site to students in their lectures and tutorials and through the subject's homepage. Finally, students were informed that they would need to go through the module in order to finish their case study report. As Table 2 indicates, site usage for this subject surpassed that of the other subject, reaching almost 60% of students. It is hoped that after further development of the website and its materials and activities, access/usage figures will improve even more in the final stage of the project.

In addition to overall access data, usage figures also reveal the viewing history of each user, indicating which pages were viewed, re-viewed, passed through rapidly, and viewed for a longer period of time. The usage data also indicates the completion rate of each user in terms of how many pages of each module the user viewed, and at which point the user decided to end the session. In examining these usage figures, it was found that 34 students left the site after viewing just 5 pages or less – those students perhaps decided early on that the site was “not for them”, and so they stopped viewing the module. This is, of course, unfortunate, but it is possible that those students already had an adequate understanding of the assignment and the genre it represents, and so felt that the online module would present them with nothing new. The module consists of 53 pages, and this may have discouraged those students from continuing to view the module further. On the other hand, 54 of the 129 students who accessed the module viewed all 53 pages, a

figure that again is hoped will increase with further improvements of the module's activities and interface along with increased promotion of the site to raise the estimation of the value of the modules in the eyes of the subject instructors and students.

The remaining students were relatively evenly spread out in terms of the point at which they decided to discontinue viewing the module and leave the site; however, the number of students who stopped at the tenth page of the module was unusually high at 14 students. This attracted our attention and we realised that many students may have left the site at page 10 because they were not able to access the next page. On page 10, students encounter a sample text page for the first time. As described in the previous section, students must pass the cursor over all highlighted sections of the sample text to view all pop-up text boxes before they are allowed to continue to the next page of the module. Until they have viewed all pop-up text boxes, the Next button remains inactive. However, in this pilot version of the module, there are no instructions informing users of the requirement to view all pop-up text boxes before proceeding, nor is there any indication of which highlighted sections and corresponding pop-up text boxes have been viewed and which have not. It is understandable, therefore, that some students, not realising that they had not yet viewed all of the text boxes or not knowing that they needed to do so, may have attempted to proceed to the next page by clicking on the still-inactive Next button. When nothing happened, even after repeated attempts at clicking on the Next button, they would soon come to the conclusion that there was something wrong with the site and end their session. The problem is now being addressed and future versions of the sample text activity will clearly inform the user when he/she has viewed all pop-up text boxes and is able to proceed to the next page. In this way, review of usage data has revealed problems with the site and the modules and continues to inform the evaluation and re-design of the online materials and activities. This type of feedback has thus proven to be extremely useful and is not always available in more traditional modes of presenting teaching and learning materials.

The second and perhaps most important resource aiding evaluation of the pilot site was a set of survey questions which students were asked to complete at the end of each module. The surveys consisted of 3 questions: two Likert Scale questions and a comments box. The questions were:

Question 1 – The website and its activities were easy to use and understand (Figure 9)

Question 2 – The information and activities helped you to understand and complete the assignment requirements better (Figure 10)

Question 3 – Comments (Figure 11)

The screenshot shows a web browser window with the following content:

- Address bar: <http://www.uts.wps.com/index.php/contentpage/view/119> — UTS Subject Study Skills – Survey – Question 1
- Page Header: Information Technology - Networking Essentials - Case Study Report
- Page Header: student@email.com (Stu Dani)
- Section: Survey - Question 1
- Question: What do you think of this website?
- Text: Now that you have finished the activities, please answer the following questions. For each question, select the choice which best matches your opinion.
- Question: The web site and its activities were easy to use and understand. (select one)
- Response Options:
 - Strongly agree (Selected)
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
- Buttons: Previous, Next
- Right Sidebar: Activities & Tasks, Case Study Report (listing items ITD101-01 to ITD101-23)

Figure 9 - Survey question 1 – Perceived usability of the website

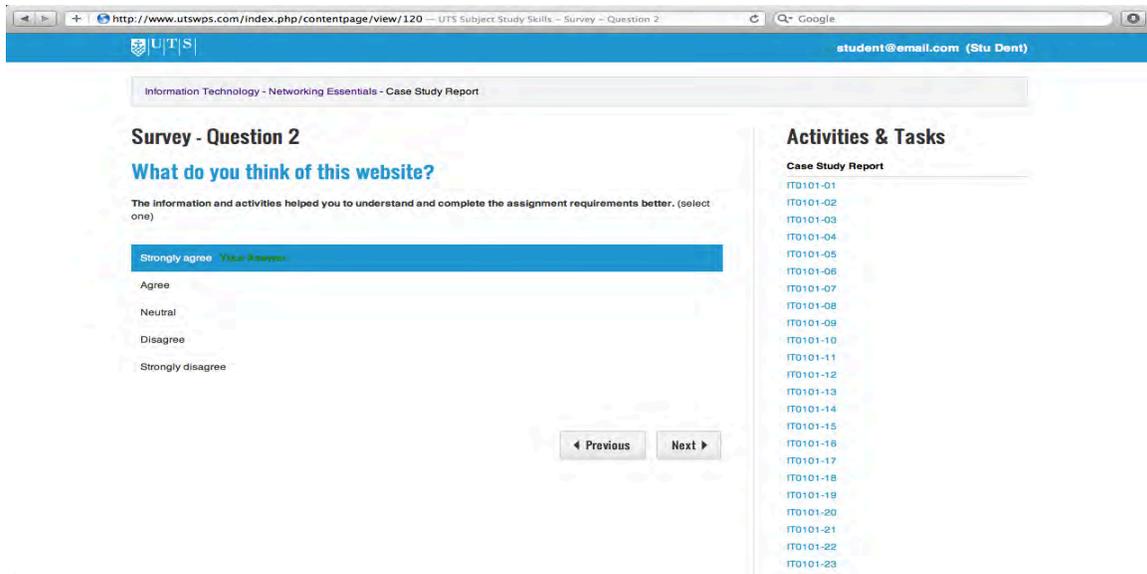


Figure 10 - Survey question 2 – Perceived usefulness of the online materials and activities

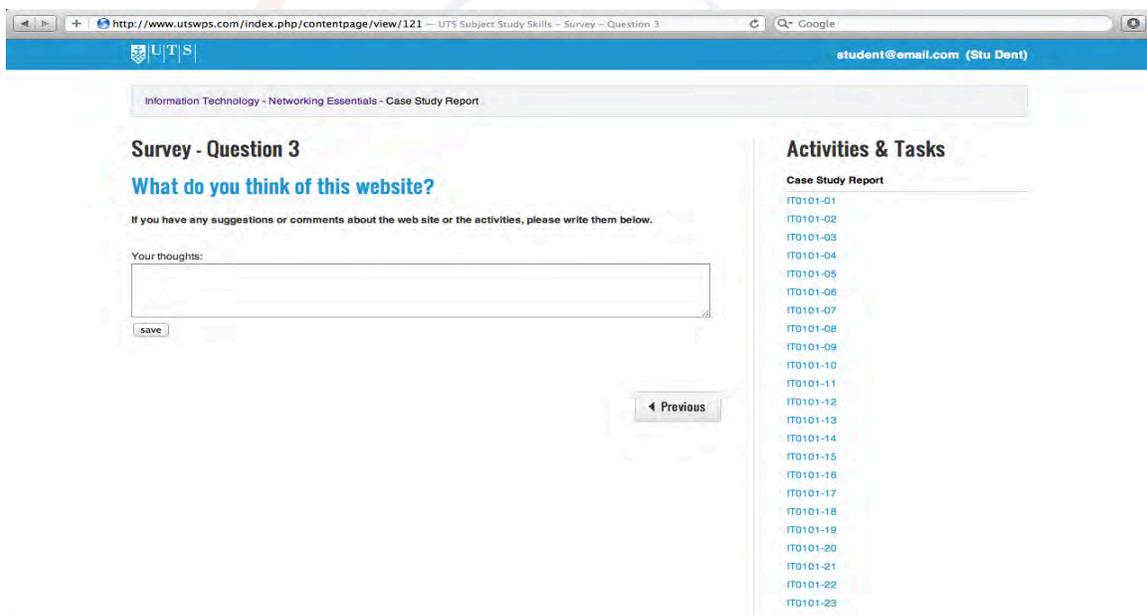


Figure 11 - Survey question 3 - Comments and suggestions

The results of the first two survey questions are summarized below. Although they are clearly the responses from those students who were motivated to complete the modules to the end, they are encouraging in that they reveal a positive reaction to the site’s activities, relevance and usefulness.

Question 1 – The website and its activities were easy to use and understand

- Strongly agree 37
- Agree 44
- Neutral 9

- Disagree 1
- Strongly disagree 0

Question 2 – The information and activities helped you to understand and complete the assignment requirements better

- Strongly agree 35
- Agree 42
- Neutral 9
- Disagree 2
- Strongly disagree 1

The open-ended responses to Question 3 were most useful for site development and change, as they contain suggestions on ways to improve the site and its usefulness. Excerpts from responses are provided below.

Question 3 – Comments (phrases)

- *'very informative', 'great idea', 'good stuff'*
- *'the next button doesn't always work'*
- *'multiple choice questions could provide feedback'*
- *'I'd like a way to export this out, so that we can refer to it for future use.'*

In addition, these responses sometimes commented on the assignment itself or the subject in general, rather than on the website's modules and activities, and so provided feedback for the subject coordinator as well. In the response below, the student has identified an issue related to the fact that information and resources for a single assignment were perhaps not easy to find as they were not all located in a single place.

Question 3 – Comments (extended)

'This site was useful in gaining extra knowledge about the assessment. Though I would make sense if all of this information was in a single place. I felt as though we had to use multiple resources to get a full understanding of the requirements, and this made it difficult to ensure everything was sufficiently covered from all resources.'

Based on these survey results, student comments, and the results of debriefing meetings with the FEIT subject coordinators, the next step for this WPS Project will involve revision of the online materials, further development of interactive features, and preparation for the website to be housed within the university library online system. Once this is complete the final aspect of the project can commence, which focuses on expanding the site to include core subjects in the remaining faculties at UTS. A user-friendly subject- and module-creation interface is also in the works so that subject coordinators can create and edit their own modules for their subjects in the future.

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2012 Events

March 2012

March 30-April 1 2012: ACP2012 - The Second Asian Conference on Psychology & The Behavioral Sciences

March 30-April 1 2012: ACERP2012 - The Second Asian Conference on Ethics, Religion & Philosophy

April 2012

April 5-8 2012: ACAH2012 - The Third Asian Conference on Arts & Humanities

April 5-8 2012: LibrAsia2012 - The Second Asian Conference on Literature & Librarianship

April 26-28 2012: ACLL2012 - The Second Asian Conference Language Learning

April 26-28 2012: ACTC2012 -The Second Asian Conference on Technology in the Classroom

May 2012

May 3-6 2012: ACSS2012 - The Third Asian Conference on the Social Sciences

May 3-6 2012: ACSEE2012 - The Second Asian Conference on Sustainability, Energy and the Environment

June 2012

June 1-3 2012: ACAS2012 - The Second Asian Conference on Asian Studies

June 1-3 2012: ACCS2012 - The Second Asian Conference on Cultural Studies

June 15-17 2012: ACIST2012 - The First Asian Conference on Innovation, Science and Technology

June 15-17 2012: ACCOMS2012 - The First Asian Conference on Computer Science

October 2012

October 25-28 2012: ACE2012 - The Fourth Asian Conference on Education

November 2012

November 2-4 2012: MediAsia2012 - The Third Asian Conference on Media & Mass Communication

November 2-4 2012: FilmAsia2012 - The First Asian Conference on Film and Documentary

November 16-18 2012: ABMC2012 - The Third Asian Business & Management Conference

November 16-18 2012: ACM2012 - The First Asian Conference on Marketing and Social Media

