

Human Performance Technology in ICT of Thai Higher Education Lecturers

Nikmarunee Hayeewangah, Namon Jeerangsuwan

King Mongkut's University of Technology North Bangkok, Thailand

0278

The Asian Conference on Society, Education and Technology 2013

Official Conference Proceedings 2013

Abstract

The research study was conducted to develop human performance technology in of Thai Higher Education Lecturers under three conceptual frameworks: input, process, and outcome. The input consisted of information and communication strategic plans of Thailand, those of the Ministry of Education and universities, and performance of organizations and their personnel. The process referred to the analysis of the input data. The outcome meant technology for developing human performance of tertiary lecturers, which covered analysis, design, development, drive of success and change management, and evaluation. The samples of the study were seven administrators of Rajabhat Universities (Southern region). The data from the in-depth interview were synthesized for the model development, which was evaluated by seven specialists afterwards.

Keywords: human performance technology, ICT performance, higher education

Introduction

Owing to the changing roles nowadays, lecturers should improve their ICT performance with constant assistance and support from the institutes for more efficient class organization and learning confidence of the students as shown in figure 1.

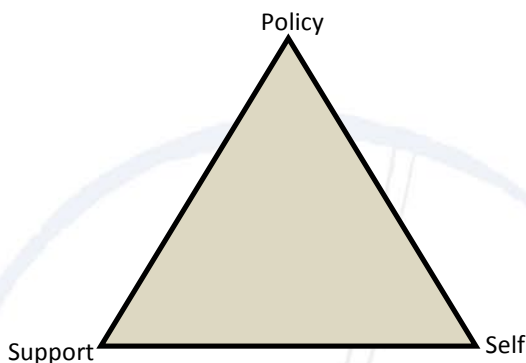


Fig 1 Personnel Development Relation

The figure demonstrated that organizations or universities had to develop personnel performance so as to demolish obstacles causing the lack of the organizations' performance (James A. Pershing, 2006, p. 573), or as called, a low level of capability achievement or quantitatively evaluated capability, performance outcome and its valuable effects on the organizations (Jerry W. Gilley and Ann Maycunich, 2000, p.179, Swanson, Gilbert, 1978). To develop ICT performance, elements of ICT working performance including working process, knowledge, skills, qualifications, resources, personnel, policy and operating systems should be considered. Meanwhile, personnel or lecturer development should also be involved for their effective use of ICT in organizing their class (James S. Pershing, 2006, p. 573).

Research Objective

The purpose of the research study, therefore, was to find out a guideline on personnel development plan, and effective ICT development policy and strategy. Concept of technology for human performance development was a systematic method, which connected personnel, strategy and goals of organizations including changes in learning and training environment and motivation system as a result of problem and opportunity analysis. Causes and effective methods of corrected performance should be stated and used for positive improvement of both personnel and organizations (Rothwell, 1996b, 5, cited in Jerry W. Gilley and Ann Maycunich, 2000, p.179).

Research Methodology

1. Population Identification and Sample Selection

1.1 Population referred to administrators from Rajabhat universities(Southern region), namely Nakhon Si Thammarat Rajabhat University, Phuket Rajabhat University, Suratthani Rajabhat University, Songkhla Rajabhat University and Yala Rajabhat University.

1.2 Seven research samples selected from southern Rajabhat universities

2. Research Instrument Development

The instrument used in the study was interview form, developed from the study of ICT strategic plans of Thailand, those of the Ministry of Education and the five Rajabhat universities (Southern region). Theory and literature related to human performance technology were reviewed. Questions were finally synthesized and identified based on the above strategic plans, theories and related researches.

3. Method

The first step of the research study was the input study. After that the first draft of research instrument was developed, submitted to the advisor and corrected as suggested. After the submission and correction of the second draft, the interview process was operated. The data received from the interview with the administrators were synthesized based on the theories and related researches. The developed model, however, should be related to and appropriate with Rajabhat university (Southern region) contexts, and should also be evaluated by human performance technology and personal development specialists from different sectors.

Result

Table1: The experts' opinions on the model to develop human performance in information technology and communications of Thai higher education lecturers

Agree ✓ Disagree ×

Issue /Experts	1	2	3	4	5	6	7	Recommendations
Analysis of actual state and expected state of personnel performance elements <ul style="list-style-type: none"> • Skill 	✓	✓	✓	✓	✓	✓	✓	There should be an analysis on performance information technology and communications related to teaching and learning. This included the use of information and communication technology for integrated learning, the use of information and communication technology as a tool to develop and facilitate learning, the use of information and communication technologies for their own performance development, and the use of information technology and communications as a communication channel.
<ul style="list-style-type: none"> • Knowledge 	✓	✓	✓	✓	✓	✓	✓	
<ul style="list-style-type: none"> • Attribute 	✓	✓	✓	✓	✓	✓	✓	
Intrinsic motivation <ul style="list-style-type: none"> • Raise career awareness. 	-	-	✓	✓	✓	-	-	This was an important point. The university and lecturers should analyze the motivation and recruitment factors causing intrinsic motivation. Most experts agreed on the motivation of personnel within the perceived benefits of using Information and Communication Technologies. Moreover, the university identified information technology and communication as a
<ul style="list-style-type: none"> • Recognize the benefits of using information technology and communications. 	✓	✓	✓	✓	✓	✓	✓	

technology as indicators for individual competency.								
Analysis of actual state and expected state of organization performance elements								
• Policy	✓	✓	✓	✓	✓	✓	✓	SWOT analysis conducted by the university should contain information about the level of individual lecturer performance or a progress rate of individual lecturer for future development as an explicit policy. The leader should initiate the using of information technology and communications for other personals to followed. The university should facilitate supportive factors of 5 information technologies infrastructure including standard equipment, software, standard network, human resources, and a considerate of tangible and intangible incentives to encourage the using of information technology and communications.
• Leader	✓	✓	✓	✓	✓	✓	✓	
• Infrastructure	✓	✓	✓	✓	✓	✓	✓	
Design								
• Identified performance	✓	✓	✓	✓	✓	✓	✓	The level of performance in information technology and communications should be considered. The university should consider the level of performance criteria and facilitate supportive factors, i.e., tangible incentives such as prize, reward, remuneration, bonus awards for innovative work practice, etc., and intangible incentives such as prestige announcement through the university's website or in the university board meeting, additional pointed in workload assessment, trophy, etc.
• Infrastructure	✓	✓	✓	✓	✓	✓	✓	
• Tangible incentives	✓	✓	✓	✓	✓	✓	✓	
• Intangible incentives	✓	✓	✓	✓	✓	✓	✓	
Development								
• Alert	✓	✓	✓	✓	✓	✓	✓	The expert agreed on the using of training starting by encouraging an awareness of a policy in assessing performance, the benefits of the using of information technology and communications, and study tour to the model university that employed effective IT system. There should be an evaluated to see the progress after training.
• Training	✓	✓	✓	✓	✓	✓	✓	
Drive of success and change management								
• Mentor	✓	✓	✓	✓	✓	✓	✓	The mentor was the one who driveed the change by transferring knowledge such as training, giving consultation, suggestion, and demonstration. There should be an incentive for the mentor team to developing staffs' IT performance.
• Knowledge transfer	✓	✓	✓	✓	✓	✓	✓	

figure 2 was comprised of (1) Analysis, (2) Design, (3) Development, (4) Drive to success and change management, and (5) Evaluation.

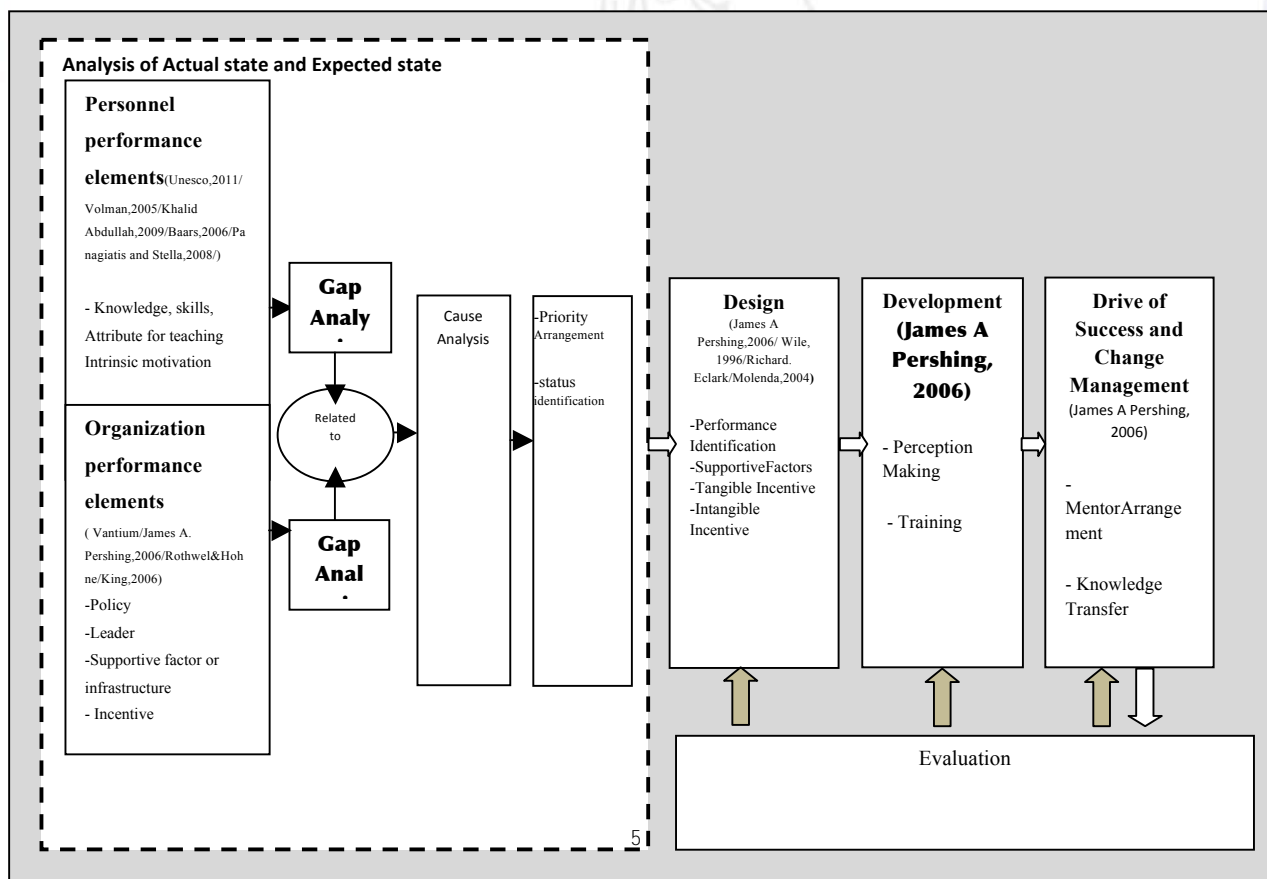
The analysis covered current and expected performance analysis, gap analysis, cause analysis, priority arrangement and status identification.

The design process, including performance identification, supportive factors, tangible incentive, and intangible incentive, produced a method in filling gaps from analysis findings, which should be compatible with capability and policies of the organizations as well as needs of the lecturers.

The development process was completed for the development of lecturers through methods, which were appropriate with the lecturers and the university context like perception making and training.

The drive to success and change management step, which covered mentor arrangement and knowledge transfer, was operated for the changes of the universities.

The evaluation focused on the examination of performance development outcome through formative and summative evaluations



DISCUSSION

Technology model for developing ICT performance of tertiary lecturers developed for effective class management consisted of analysis, design, development, drive of success and change management, and evaluation. The element in each step was related to theories and many researches such as the relation between the analysis and gap analysis of Fred as shown in figure 3 Fred Nickols (2010, p.3-p.4).

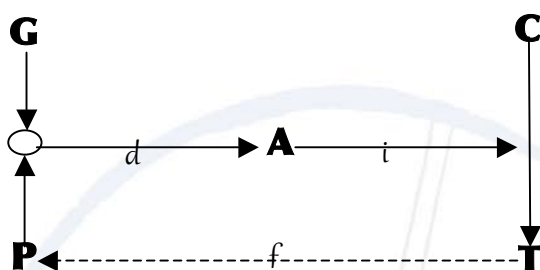


Fig 3 Gap Analysis Model of Fred Nickols (2010, p3-p4).

According to Fred Nickols (2010, p3), G (Goal) was expected performance, P (Perception) was the perception of current status, black circle between G and P was discrepancy between goal and status perceived by the personnel, D (Discrepancy) led to A (Act) for solving problems or connecting G (Goal) and P (Perception) through I (Intervention) for target completion. To achieve the target, C (circumstances) or appropriate management of related circumstances such as environment, equipment and administrators' support was employed. Personnel of the organizations would receive F (feedback) on the status of organizations or universities after the Target (T) result found. Moreover, other elements, including design, development, drive of success and change management were all related to Chevillier's concept, which defined specific qualifications of human performance development technology (Chevillier, 2004 cited in James A.Pershing, 2006.) as follows: (1) human performance Technology focused on the outcome, (2) human performance technology used system perspective, (3) human performance Technology added values, (4) human performance technology produced cooperation, (5) human performance technology was a need and opportunity evaluation system, (6) human performance technology was a system used to analyze performance and identify causes or factors, limitations and performance, (7) human performance technology was a system used in designing problem solutions, (8) human performance technology was used in developing solution methods either for overall or partial problems, (9) human performance technology was used in problem solution process, and (10) human performance technology was used in process and outcome evaluation.

Acknowledgement

The researchers would like to express the sincere thanks to the Office of Higher Education for supporting the scholarship of the Development of Instructors and Staff of the Higher Education in the three Southern areas. The researchers also would like to thank King Mongkut's University of Technology North Bangkok for the research

REFERENCES

- Fred Nikols. (2010). *The Gap Act Model*. [Online] Available from: <http://www.nickols.us/gapact.pdf> . [Accessed 18 November 2012].
- James A. Pershing. (2006). *Handbook of Human Performance Technology Third Edition Principles, Practices, and potential*. Pfeiffer A Wiley Imprint.
- Jerry W. Gilley and Ann Maycunich. (2000). *Organizational Learning, Performance, And Change* . Persus Publishing Cambridge, Massachusetts.
- Khalid Abdullah Bingimlas, (2009). *Barriers to the successful Integration of ICT in Teaching and Learning Environments: A Review of the Literature*. *Eurasia Journal of Mathematics, Science & Technology Education*, 2009, 5(3), 235-245. [Online]. Available from: http://ejmste.com/v5n3/EURASIA_v5n3_Bingimlas.pdf. [Accessed 18 November 2012].
- Panagiotis Giavrimis, Stella Giossi, Adamantions Papastamatis. 2011. *Teachers attitudes toward training in ICT: a critical approach*. [Online]. Available from: www.emeralinsight.com. [Accessed 8 Jan 2013].
- Unesco. 2011. Unesco ICT Competency Framework for Teacher. *The United Nations Educational, Scientific and Cultural Organization*. [Online]. Available from: <http://unesdoc.unesco.org/images/0021/002134/213475E.pdf>. [Accessed 24 December 2012].

