

# **A Model for the Development of e-Learning by the Role Model Teachers of the Office of Vocational Education Commission, Thailand**

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## **ABSTRACT**

The sample group of role model teachers for the research study of the Development of e-Learning through role model teachers of the Vocational Education Commission was selected from the teachers of the following departments: Department of Agriculture, Department of Trade and Industry, and Department of Electronic Media. There were six subjects. For each subject, three teachers specialized in the content and one specialized in the electronics media were selected. Therefore, there were total of 24 teachers. Six subjects were: Post-Harvest Technology, Principle of Agricultural Extension, Plant Science, Electrical Instruments, Basic Electricity and Electronics, and Basic Auto-Mechanics. The role model teachers developed the e-Learning through the Learning Management System of Moodle. They developed the e-Learning followed the five steps of the guideline of technology for human performance technology (HPT) development including performance analysis, cause analysis, intervention selection and design, intervention and change, and evaluation. The study found that the role model teachers were able to develop the e-Learning in all six subjects according to the five steps of human ability development. The specialists evaluated and approved the quality of all subjects of the e-Learning in all four aspects.

## **Keywords**

e-Learning, Role model teacher, Moodle, Vocational Education, Human Performance Technology.

## **1) Introduction**

e-Learning becomes more and more important in the education system. The learning becomes no more taken place at the same time like in the past. The child-centered education through web-based instruction can be provided for all places, all learners and all the time. (Aggarwal and Bento, 2002) e-Learning cannot provide the real time communication. Reading the texts seem still the only one aspect in communication. (Liberati, 2004) Online learning might lead the students to be confused and difficult to make up their minds. It is also classify the contents and consider the suitable contents. Then the teachers should advise and suggest the students to get the most advantageous from online learning. (Bonk, Wisner and Lee, 2004) Web-based learning should provide the appropriate system design especially the content selected by the subject matter experts to produce the most qualified and the most appropriate instructional media to be the most effective media too.

There is the idea to improve Thailand, our country to be the knowledge society and values in virtue, moral, merit, and culture while the telecommunication system becomes influent. (The office of National Commission of Economy and Society, 2006) Several advances

grows incredibly because of the technology. The learning values the students or the learners to find their own knowledge and the teachers lost their importance to be the facilitators. (The office of National Education Commission, 2003). The communication gap between the teachers and the students gets wider. Electronic media becomes more importance in communicating, the students can communicate with the academic institute and their peers by this mean. (Monchai Tienthong,2005) The learning can be held and taken place at any place and anytime.

## **2) Role model teacher**

Role model teachers should be keen on child-centered learning and let the students to learn happily so the role model teachers should join the web-based instruction. The steps in joining are good behavior, good personality, and can be the model for other teacher. Although the teachers who are keen on their subject content, but it is not enough. The good role model teachers must be good at computer and information technology to join the web-based instruction. The committee of the vocational education had a lot of program to improve this kind of teachers (Chanoittha Chongpipatwanit and the others, 2006) to help improving the web-based instruction with the subject matter experts to get the most advantage. The role model teachers must be keen on child-centered education, creative thinking, good at the content and self-responsible. The ideal teacher must be both good at the content and information technology to be suitable in improving the web-based instruction.

## **3) e-Learning**

e-Learning must let the students to search and retrieve the information through the computer with the low expenses. (Tissana Kaemane,2004) In fact, the all teachers are not experts, then web-based instruction is one of the solutions to improve the human performance technology by good governance, means selection, persuasion, supporting and evaluation.( Van Tiem, Moseley, and Dessinger,2004) It was an applied process to

develop media systematically while the instructional design which were analysis, design, development, application and evaluation. It was the suitable to develop the web-based instruction by the role model teachers in the committee of vocational education to be advantageous and useful for teaching all over our country.

## **4) Research Area**

The research's population were the teachers who were responsible in the field of agriculture and in the field of industrial technology in 413 colleges of the committee of vocational education.

The samples were the 24 teachers who were responsible in the field of agriculture and in the field of industrial technology for 6 subjects and also were voluntary selected.

- 4.1 The 9 role model teachers in agriculture and could be divided in the role model teachers in Post harvest technology, the role model teachers in Principle of agricultural extension, and the role model teachers in Plant science.
- 4.2 The 9 role model teachers in industrial technology and could be divided in the role model teachers in Electrical instruments, the role model teachers in Basic electricity and electronics, and the role model teachers in Basic auto-mechanics
- 4.3 The 6 role model teachers in Electronic media who helped to develop E-learning for the certificate and high certificate level in 6 subjects; the course description, the content, the lessons, the exercises, the test, and the questionnaires.

## **5) Human Performance Technology**

To prepare the instruments followed the 5 steps of technology for human development ; performance analysis, cause analysis, intervention selection and design, intervention implementation and change and the evaluation.

The process plan were as followed

- 5.1 The 1 st stage ( Performance analysis)  
The performance analysis can be classified

into 2 sections;

- 5.1.1 Organization analysis
  - mission
  - readiness
  - supporting factors
- 5.1.2 The evaluation before the development
- 5.1.3 abilities' analysis
- 5.1.4 organization's analysis
- 5.1.5 readiness' analysis

The teachers who wanted to joined the program had to apply for the development program and had to be evaluated by the qualification written in the application forms

## 5.2 The 2 nd stage (Cause Analysis)

Cause analysis to find out that why the role model teachers were lack of the chance to develop the instructional media, and also divided into 2 sections;

- 5.2.1 There is no supporting environment
- 5.2.2 lacking of the organization's support
- 5.2.3 lacking of the capitals
- 5.2.4 lacking of the chance in developing
- 5.2.5 There is no supporting behavior
- 5.2.6 lacking of the knowledge
- 5.2.7 lacking of the training course
- 5.2.8 lacking of motivation
- 5.2.9 lacking of hope

5.3 The 3 rd stage (Intervention Selection and Design), Intervention selection and design ( abilities' supporting, tasks analysis, role model teachers' abilities development, supporting factors such as document and the web's hosting, team teaching, training course about design and systematically develop, LMS Moodle training course)

The process was set into 2 sections; the first section was held on April 23-27,2007 at Agricultural Engineering Training Center Amphoe Muang,Pathumthani province. The selected role model teachers had to join a training course about LMS with Lect.Siam Juangprakon and a 5 day-training course about Web-based design and development with Dr. Prachyanan Nilsook from King Mongkut's University of Technology North Bangkok with the aims to work together.The second section

was held between May 8-9,2007 at Agricultural Engineering Training Center again to let the role model teachers to produce their web-based instructional media, presented, evaluated by the specialists.

## 5.4 The 4 th stage (Intervention and Change)

Intervention Interpretation and Change followed by the role model teachers, by changes from normal learning to the web-based instruction under the experts' help, Moodle's learning development, the simplification of the communicative administration and the networking. The system administration can be divided into 2 parts.

- 5.4.1 The media should be practiced in all 24 colleges by the role model teachers between May 23-August16 2007 ( the 4 th stage)
- 5.4.2 The media had to evaluated by 24 role model teachers, students using a set of questionnaires ( 30copies; 15 copies for the students and the rest 15 for the teachers). The evaluation valued in 3 aspects of qualification between May to August 2007.

## 5.5 The 5 th stage (Evaluation)

The research procedure must be constantly evaluated from the start until meet the end. After being completely evaluated, the role model teachers had to use the web-based instructional media, still being evaluated in class and presented on August 10-12, 2007. The educates ( educational experts ) were invited to take part in evaluating and using the standard evaluation form to check the points. The evaluation had to be constantly taken by considering the project's result of each group of the role model teachers which were consisted of 4 role model teachers in each subjects. There was also another kind of evaluation. It was the private evaluation. Each role model teacher had to indicate the part which he/ she took the responsibility because the role model teaching valued in co-operative working. The teacher supervisor and the committee were responsible in project's evaluation by considering, and all the web sites were systematically evaluated.

Research analysis and evaluation had to be constantly made. Web-based instructional

media, E-learning produced by the Academic department using in Electronic media evaluation made by Surachet Wejphithak, Boonlert Aroonphiboon, Prachayan Nilsook and Somkuan Pianphitak (2003). It was a kind of research in practicing web-based instructional media to develop the form and the procedure by the responsible in the committee of Vocational Education with the beliefs and reliance that it is potential and the officers in the department are qualified in doing good thing. But we should find out the appropriate procedure to persuade and motivate the role model teachers to show their best abilities.

## 6) Conclusion

e-Learning development by the role model teachers under the supporting of the committee of the vocational education was held to research and develop the form and the process in producing the web-based instructional media by the officers of the committee of the vocational education are all qualified and we should persuade and let them try their best abilities. The research results reflected that the systematic procedure the well formed process since the ability's analysis and the steps and design selection. The persuasion to the better changes and the whole system's evaluation and the last, integrated learning development (analysis, design, development, application and evaluation). These will lead the web-based instruction to be successful.

## REFERENCES

- Aggarwal, A.K. and Bento, R. (2002) "Web-Based Education." in Web-based Instructional Learning edited by Mehdi Khosrow-Pour. London : Information Resources Management Association.
- Bonk,C.J.,Wisher, R.A., and Lee,J.Y. (2004) "Moderating Learner-Centered E-Learning : Problems and Solutions, Benefits and Implications" in Online Collaborative Learning :Theory and Practice edited by Tim S. Roberts. London : Information Science Publishing
- Chanoittha, C, Prachyanun, N, Therapong,A. and Todsaporn, D. (2006). The Format of Developing for the Network Leading Teacher in Information Technology on Vocational Education. Bangkok : the Office of National Research Commission.
- Liberati,D. (2004) "Building Successful Online Relationships" Getting the Most from Online Learning (George M. Piskurich Editor) San Francisco : John Wiley & Sons, Inc.
- Monchai Tienthong. (2005).Distance Education Technology.Bangkok: King Mongkut's University North Bangkok.
- Surachet Wejphithak, Boonlert Aroonphiboon, Prachayan Nilsook and Somkuan Pianphitak (2003). The Media Development of Computer-based Instruction and Web-site for Quality of Learning . Bangkok : Academic Department , Ministry of Education.
- Tissana Kaemane. (2004) Instructional Science. 3th Edition. Bangkok : Chulalongkorn University Press.
- The Office of the National Education Commission .(2003) National Education Act of B.E. 2542 (1999). Bangkok : the Secretary-General Office of the Educational Council , Ministry of Education.
- The Office of National Economy and Society Commission. (2006 ) Annual Report of the Year 2006 and the 10<sup>th</sup> Development Master Plan . Bangkok : The Office of National Economy and Society Commission.
- Van Tiem, M.D., Moseley, L.J., and Dessinger, C.J. (2001) Fundamental of Performance Technology : A Guide to Improving People, Process, and Performance.Performance Improvement. March 2001 : p. 60-64.
- Van Tiem, M.D., Moseley, L.J.,and Dessinger, C.J. (2004) Fundamental of Performance Technology Second Edition. New York : The International Society for Performance Improvement.