The Development of Online Training Model for Srinakharinwirot University in Thailand

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Abstract

In 21st century, Information Communication Technology (ICT) was important for long life learning. This paper aimed to design and to develop online training Model for blended learning in traditional classroom and in the job training for students, teachers and educational officers by using mix-method. Data was analysed by using Percentage, Mean, Standard Deviation and content analysis. The result found that Online Training Model consisted of 5 key elements; 1) Creativity, 2) Learning Management System (LMS) 3) Instruction Media 4) Interactive and 5) Evaluation. The Online Training Model was beneficial for appropriate instructional design and online training curriculum development go to long life learning in 21st century.

Keywords: online Learning; Blended Learning; Online Training

1. Introduction and Background

1.1 Background

Training Perspectives in the United States More than 100 OSHA standards for controlling workplace hazards contain requirements for worker training to reduce risk factors for injury and disease. Other standards limit certain jobs to workers considered competent by virtue of special training. However, the documented outcomes of occupational safety and health training are varied and inconclusive. Moreover, the newly proposed OSHA Occupational Safety and Health Program Rule redirect compliance audits to training outcomes and impacts (in the past, such audits focused on hours of training delivered). Given this shift in priority, research will be needed to

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identify strategies for improving the measurable performance of mandated training programs. Each year, corporate America provides nearly 2 billion hours of training to approximately 60 million employees at a cost of $55 to $60 billion (Industry report; 1997). Effectiveness research can maximize the impact of this investment on worker safety, productivity, and profits. To equip America's workforce with the skills necessary in today's economy, the U.S. Departments of Education and Labour have recently cosponsored several initiatives that reflect the national importance of worker training. Examples of such programs follow: School-to-work established through the School-to-Work Opportunities Act of 1994, links school programs to local businesses and civic organizations. Employers and educators combine resources to provide skill training and job placement. Currently, funding for School-to-Work programming is being transferred to State and local authorities. Tech-Prep is a broad initiative of the Carl D. Perkins Vocational and Technical Education Act of 1998. This program teaches students transferrable skills and abilities that employers favor when selecting personnel. These include the “hard” skills needed to perform tasks and the “soft” skills such as problem solving, teamwork, and leadership.

National Skills Standards Board (NSSB), a provision of the National Skills Standards Act of 1994, establishes competency standards for defined occupational sectors. The goal of NSSB is to help schools provide relevant vocational education, reduce job training costs, and fill industry's needs for skilled workers. The Workforce Investment Act of 1998 (WIA) takes a holistic approach to training. WIA has consolidated 60 Federal job training programs into three block grants targeting disadvantaged youth, adult workers, and families. WIA requires participating programs to integrate job training, placement, and family support services into a “one-stop” system of career development. The American Competitive and Workforce Improvement Act of 1999 funds training programs in mathematics, engineering, and science. Such programs are designed to prepare the domestic workforce for high-technology work environments and to reduce U.S. dependence on imported labor. These initiatives illustrate the growing emphasis on occupational skill development and worker readiness. Although it may seem logical to assume that an educated workforce will be safer and more productive, researchers do not fully understand precisely how training influences the actions of workers. Educational research should be conducted to investigate this relationship so that optimum training effectiveness can be achieved. (National Institute for Occupational Safety and Health; 1999)

Education Development Plan of the Ministry of Education Eleventh Edition 2012-2016, prepared under the direction of the National Economic and Social Development Plan, Eleventh Edition 2012-2016, and consistent link with the Constitution of the Kingdom of Thailand 2007 edition of the National Education Plan 2012-2016, as well as the problems of the education and development of education in the past. It was found that there are still problems that need improvement and development of the field of educational opportunities to the people: The quality of education, especially basic education, the ability to compete at the national level still low monitoring the quality of management of basic education ago. Children with academic achievement in the core subjects of the basic education level (O-Net), including English, math, science and social science. The results in 2010 showed that the mean score was less than 50%, at all levels of English and mathematics, was down from 2009, and the standard was also lower on the subject of analysis, synthesis, critical thinking and creativity. (Education Ministry; 2009)

Based on the above issues the revised National Education Plan 2012-2016, thus defined the objectives and policies in three areas: 1) the development of a comprehensive and balanced assessment analysis, 2) the creation of a social, moral, society with wisdom and learning, and 3) the development of the basic social environment. The policy’s priority is to develop and apply technology used to improve the quality of educational opportunities and lifelong learning.

Since the implementation of the past, the Ministry of Education has found a problem in the operation of media. Of the technology for education most attention has been in the development of materials more than the content in the media. In the development of teaching and learning process, Teachers and students do not make appropriate use knowledge of educational technologies in the process of teaching and learning. The school has obsolete computer equipment and media, additionally teachers are not able to use information technology for teaching and learning and truly do not use technology for their own learning. (Education Ministry; 2009) A major national study found that the key issues that need to be developed urgently is the development of the media and teachers to bring information technology application in teaching led to the development of the students. (Secretary of Education, Office; 2010)

In higher education, learning and teaching in the traditional classroom is more common than blended learning or online education. Education has changed from an orderly world of disciplines and courses to an in atmosphere in which communication technologies are increasingly important. While education is changing, it is not changing fast enough. It is clear that in the future we will see a major restructuring of our social, industrial and educational institutions, and an increased reliance on computer and telecommunication for work and education. (Kearsley &
Greg; 2010) In addition, in 21st century learner’s skill and cognitive domain are changing. We see in the cognitive domain of Bloom’s Taxonomy that knowledge and the development of intellectual skills are the main points for developing students to use technology. (Bloom and other, 1956; Anderson and Krathwohl, 2001; Bellanca, James & Brandt, Ron; 2014) This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories of cognitive processes, starting from the simplest to the most complex. In the updated version changes consisted of 6 domains such as remembering, understanding, applying, analyzing, evaluating, and creating, which are the same as 21st century skills (Kay; 2009) such as life and career skills, learning and innovation skills and information, media, and technology skills. Therefore, educational Technology will be an important tool for learning in 21st century life, which isn’t the same direction as education is currently going.

In 2014, the mission statement and policies of the head of the National Council for Peace and Order (NCPO) made it clear that education is the foundation for Thailand’s sustainable development. That is imperative to promote and elevate education at all levels for all ages. All educational authorities must continuously integrate their work so as not to let a fragmented educational system hinder the nation’s human resource development. The NCPO will develop and modernize teachers, education personnel and education technology using child, youth and student-centered approaches. Any changes in the education system must address the questions of what benefits they provide for the children or students of all levels. (National Council for Peace and Order; 2014) In 2015, Thailand will enter the Association of Southeast Asian Nations Economic Community (AEC), which Thai people must be prepared for and develop many skills.

1.2 Problem and Objective

Since current policy on education is to develop and modernize teachers, education personnel and education technology using child, youth and student-centered approaches, higher education must be hurry up and change the agenda and develop instruction in classroom utilizing blended learning and online training for all of level such as students, teachers and education officers.

2. Methodology

Methodology of research was mix-method. Data collecting tools consisted of focus group discussion, needs analysis checklist questionnaire and in-depth interview. Sample groups used in this study were 2 groups, Group I consisted of 5 online education experts. Group II had 15 persons consisting of 5 graduate students, 5 officers and 5 teachers who registered online training project.

- Step 1 was to design and develop an online training Model for blended learning. Group I participated in purposive sampling for qualitative data by focus groups discussion. Data was analysed by using content analysis.
- Step 2 was to study the usability of the model before a pilot experiment of the online training model. Group II registered for this online training project. The instruments were 2 parts 1) Basic data and online learning and 2) in-depth interviews. The instruments were validated by 5 experts who found that the index of the item objective congruence (IOC) was 0.66-1.00. After that, the instruments were used to collect data. Data were analysed by using percentage, mean, standard deviation and content analysis.

3. Results

3.1 Online Training Model

The results of the data analysis from experts and stakeholder within the focus group discussion (qualitative data) and data from checklist questionnaire (quantitative data) and in-depth interview with samples found there were 5 key elements necessary for an online training model. For result, see Fig1(a)
The 5 elements identified as most important were:

1) C-Creativity is the main aim of learning. The learner will create new ideas and information using what has been previously learned. Tools of this stage evaluate practice forms, learning discussion in chat board, computer recording, and a creativity achievement test.

2) L-Learning Management System (LMS) is the tools of learning management system of online course. LMS software such as WebCT, Blockboard, A-Tutor, Moodle, etc., are important for content management and content structure in this study and used Sharable Content Object Reference Model (SCORM) content structure for instructional design. (see Fig1(b)) Content for online training consisted of short courses between 5-7 weeks.

3) I-Instruction Media is used for learning content during training such as video, picture, handbooks, slides, learning object, etc. All instruction media will be uploaded in the LMS and for use.

4) I-Interactive is the activities in online training between learner and teacher or coacher through content designs with network and sharing to create knowledge through discussion, question and answer, games, situation, simulation, etc.

5) E-Evaluation is the final stage in the CL2IE model. This placement reflects its logical function as the point at which you determine whether your proposed solution to learning has succeeded. Some of the tools for learning evaluation are discussion board, chat room, achievement test, learning style test, attitude test, practice evaluation form and computer recording. All student responses can be recorded, providing a wealth of data to analyze. The pattern and history of a student’s course participation can be taken into consideration when assessing performance. If learning activities in a course involve frequent assignments in the form of written responses that were posted as message in discussion forums, conferences, or via email, all of these responses can be aggregated into a student portfolio either by the teacher or by the students or learners. The results of assignment and exams can be kept in a LMS database.

In the CL2IE model all of stages were in a dynamic cycle and were interactive between teacher and student. This is a two way communication through online learning and tools in LMS and content. In this paper step 1 was the research and step II was usability test of it for blended learning in traditional classroom and in the job training for students, teachers and educational officers by using experiment research methodology.

4. Discussion & Conclusion
The result of the development survey for an online training model for students, teachers and educational officers in Srinakharinwirot University, Thailand consisted of 5 stages: 1) Creativity, 2) Learning Management System (LMS) 3) Instruction Media 4) Interactive and 5) Evaluation. The online training model was created from qualitative and quantitative data from the sample groups all of the organization. As a result, our goal will be to develop courseware in phase II and study the suitability of the online training model and create an online curriculum and applications for tablets and mobile phones.

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