

A Development Training Curriculum of Online Lesson Creation by LMS Moodle for Management of Technology Education of Education Students 2nd Year Faculty of Education Suan Sunandha Rajabhat University.

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Abstract. The objectives of this research are to develop and evaluate efficiency of the training curriculum of online lesson creation by LMS Moodle. The curriculum's purpose was to preparing the 2nd year education students for their practical training. The research was divided into 2 phases as follows; Phase 1: Development of a training curriculum of online lesson creation comprises of principle objective of curriculum, structure, duration of the training, content, training materials, training activities, monitoring, measurement and evaluation quality of the curriculum by specialist found that overall evaluation result of the training course is in highest quality level. Phase 2: Evaluation efficiency of the training curriculum is to use the developed curriculum with the experiment group: random in 40 students. 1). The students after training is higher than before training significantly in statistic at the 0.01 level 2). The satisfaction of education students 2nd year is in highest quality level.

Keywords: Training Curriculum, LMS Moodle, Management of Technology Education

1. Introduction

The current trend of economic and social development has changed a lot, many countries have focused on the development of economy, social wisdom and learning, in order to develop the country into those areas, children and youth need to learn correctly and properly. National Education Act BE 2553 in the Chapter 4, Section 22 has assigned that management of education at all levels must ensure to all students are capable to learn and develop themselves; the student consideration is the most important in the process of education. The government must encourage students to develop to their full potential naturally Therefore, the process of teaching and learning is focused on students. In addition, Chapter 9 Section 64 Section 65: Educational Technology and Section 66 which stated that the mission of the government shall promote and support the production and development of text books, academic books, media, the publications and educational materials, including the development of both producers and users of educational technology with knowledge and skills in the production of appropriate technology, quality and performance. This is to give students the right to develop their ability to use technology for education, having knowledge and skills to use technology in self-learning continuously throughout their life. In addition, Section 67 requires that the government has a duty to promote the production of research and development of education technology, monitor, verify and evaluate the usage of education technology to achieve a cost-effective and appropriate to the learning process of students the management of learning in education reform is a process of intellectual development continues throughout life. The learning process is a pleasure and integration of the appropriate content and attention, aptitude of the students associated with social learning, emphasizing the thought process, direct experience and practical. The cooperation of many parties in order to make the student good, wise and happy and bring benefit to their daily life by designing and managing a curriculum that focuses on the learner is important. It is a concept that meet the point according to the principles of learning, "Learner is the most important" a lot which is in line with the National Education Act BE 2542 as amended (No. 2) Act 2545, Section 24, so the design of learning activities is required to comply with the guidelines of learning process that focuses on learner which is the most important. [1]

The approach to model an innovative method and management of techniques learning in the design of learning activities. An innovative learning methods and techniques which focus on the learner need to analyze the compliance with the National Education Act 2542 as amended (No. 2) Act 2545 on the activities

of learning in a way that they should be used innovative models, methods and techniques of learning how to promote relations between them. This is to let students learn in all aspects: cognitive motor, psycho motor and effective motor. [1,2]

E-learning is a new form of management training via the internet to provide opportunities to study thoroughly with no limitation of time and place, it is an advancement of information technology to be used in the field of education. Modification of input teaching styles to the knowledge searching of students themselves. The modification of teaching style by using IT has a common problem; schools lack of effective learning management system (LMS: Learning Management System). At present, there is a developer of LMS which is an open source and free and has been continually developed, such as A-Tutor Moodle, but that the most popular and widely used is Moodle, which is a high efficiency system, and manage in all aspects which is displayed in Thai.

In order to develop students from faculty of education and to comply with office of graduate education commission policy in accordance with Section 8 of teaching and learning in formal education system which is adapted to change the way that students learn and reform the teaching of education students 2nd year. The university has set up a workshop; the creation of online lesson by Moodle to prepare the readiness before practical training in teaching effectively to meet the objectives and provide students with knowledge to be a potential teacher in the future.

Objective

- To develop a training curriculum of an online lesson creation by LMS Moodle for management of technology education of Education students 2nd year
- To find out the efficiency of the training curriculum of an online lesson creation by LMS Moodle for management of technology education of Education students 2nd year
- To study satisfaction of students to the training curriculum of online lesson creation by LMS Moodle for management of technology education of Education students 2nd year

2. Idea and Research methodology

2.1. Idea of Research

This research aims to develop a training curriculum of an online lesson creation using the LMS Moodle for management of technology education of Education students 2nd year faculty of Education Suan Sunandha Rajabhat University by using process of curriculum development based on the concept of Taba (1972)[3] as follows.

- Diagnosing of needs is to survey the problems, needs and necessity of society and learners
- Formulation of objectives is to set up goals to make it clear after diagnosis of the needs of society and the learners
- Selection of contents is to select material to suit with the purposes, the ability of the learner, the content must be reliable and a key to learning.
- Organizing of content is to use the selectable content and ponder the continuity and the difficulty of the content, maturity, ability and interests of learners.
- Selection of learning experiences that teachers who were involved will select learning experience to cope with the content and aim of the course.
- Organization of learning experience based on the content and continuity.
- Determine what to assess and assessment method is to decide what needs to be evaluated to determine the achievement of the goals, and determine whether how to use the assessment method, which tool which can be written in the following diagram.

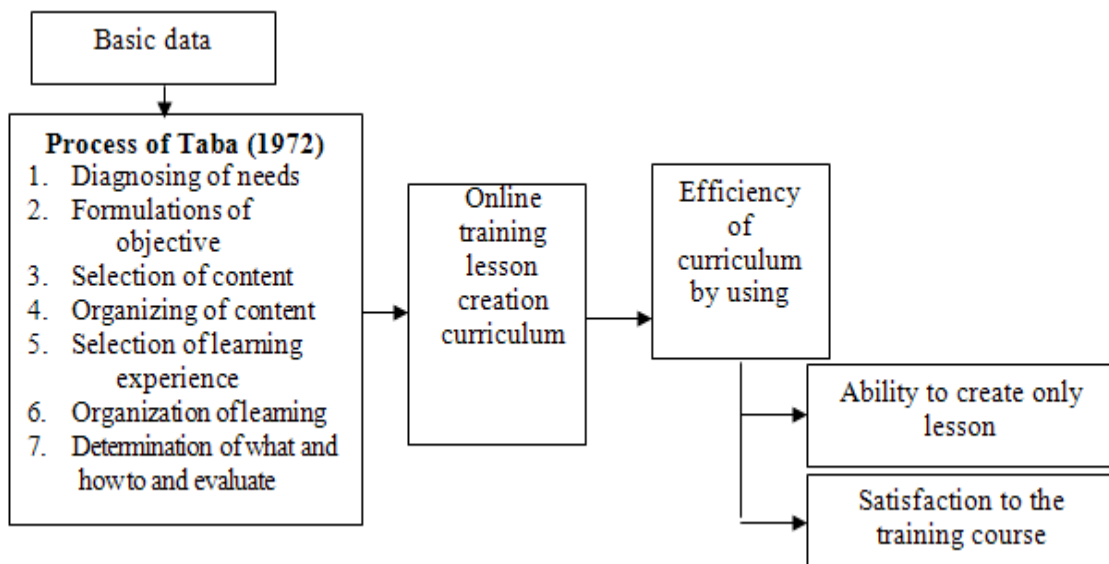


Fig. 1: Idea of Research

2.2. Research Scope

This research aims to develop a training curriculum of an online lesson creation using the LMS Moodle for management of technology education of Education students 2nd year faculty of Education Suan Sunandha Rajabhat University. The scope of the research are as follows.

- The population used in this study is education students 2nd year
- The samples used in this study were derived from a systematic sampling of 40 people.
- The variables used in the study.
 - Independent variables are based training courses according to an online training curriculum by LMS Moodle to create lessons for management of technology education of Education students 2nd year
 - Dependent variables are 1.The ability to create online lesson 2. The satisfaction of the students on the course

2.3. The research process

This research is a research and development of a training curriculum of online lesson creation by LMS Moodle for management of technology education of Education students 2nd year faculty of Education Suan Sunandha Rajabhat University divided into 2 phases as below;

- Phase 1 a development training curriculum of an online lesson creation by LMS Moodle for management of technology education of Education students 2nd year by using process of curriculum development based on the concept of Taba (1972)[3]
- Phase 2 assess the efficiency by trial using online lesson creation by LMS Moodle for management of technology education of Education students 2nd year

3. Conclusions

A development training curriculum of an online lesson creation by LMS Moodle for management of technology education of Education students 2nd year faculty of Education Suan Sunandha Rajabhat University shows;

1. The development training curriculum of online lesson creation using the LMS Moodle for management of technology education based on concept of Taba (1972)[3] took the lead elements of the course and organized into the following training courses; problem and the importance of the curriculum, principle, objectives, structure, contents of the curriculum, duration of the training, training methods, trainer, media training, monitoring, measurement and evaluation.

2. Assessment result of the quality of the training curriculum by the experts found that the overall quality level of the curriculum is at the highest level when considering in different aspects found quality in its contents, followed by the training time, monitoring, measurement and evaluation. The documentation for the purpose of the curriculum, the structure of the media training are in highest level followed by principles aspect respectively.

3. The trial courses using LMS Moodle to create online lessons conducted 2 days on Saturday, July 15 to Sunday, July 16, 2554 from 9:00 to 16:30 at faculty of Education.

The content of the online training curriculum were as follows.

- Characteristics and features of Moodle.
- Settings in Moodle in the Admin mode.
- The creation and management courses (For teachers) on a Server.
- Adding sources, pages, creating a link to a file or directory, and the label's website.
- Channels of communication modules in lessons and such as web board and chat.
- The use of modules for creating other lessons.
 - Create a quiz in AIKEN format
 - Create a quiz with Hot Potatoes program
 - Module Glossary
- Use of addon Modules
 - Block HTML.
 - Block Flash.

Activity of course training curriculum of online lesson creation were as follows;

- Creating of familiarity using the game is to build familiarity and to build an disclosure atmosphere to the members receiving training.
- Pre-test with performance evaluation LMS Moodle to measure pre-training.
- Conducting the training course using the LMS Moodle
- Post-test performance after training with LMS Moodle to measure pre-training and after the training

Techniques of the training curriculum of online lesson creation by LMS Moodle comprises of lecturing, group discussions, brainstorming, games, practice, and group activities.

Media training course of the training curriculum of online lesson creation by LMS Moodle comprises of curriculum, manual for the training, projector, Power Point, computers, and documentation for the training, testing materials and evaluation of different exercises.

Measurement and evaluation of the training curriculum by LMS Moodle for management of technology education of Education students 2nd year comprises of two parts: the knowledge and attitudes. The knowledge, the measurement and evaluation of performance by LMS Moodle, both before and after the training of Education students 2nd year. The attitudes, the measurement and evaluation, with a measure of attitude towards the creation of online lesson by using the LMS Moodle to prepare professional experience in practical training teachers.

4. The result of performance evaluation of training curriculum of online lesson creation by LMS Moodle found that the overall curriculum quality is in high level, when considering in all aspects found the documentation for the course is the highest quality, followed by media training, content and monitoring. Measurement and evaluation in most areas of the structure, training time, the purpose of the course and training activities are in high levels, respectively.

5. The results of the study LMS Moodle before and after the training curriculum of online lesson creation by LMS Moodle found that average score in performance of LMS Moodle of students before training is 35.70, and standard deviation is 4.57, but average score in performance of LMS Moodle of students after training is 87.60 and standard deviation is 2.86 respectively.

6. The comparison score before and after the training curriculum of online lesson creation by LMS Moodle of 40 students by the analysis. The statistics (t-test) is equal to -59.99, which has significant in statistic at .01 level is said that performance score before and after the training are different, the performance

score of LMS Moodle after the trial of a training course is higher than before training significantly at .01 level.

7. Students have highest satisfaction level to the online lesson creation by LMS Moodle in overall with an average of 4.57 and standard deviation 0.58 when considering in each aspect found that the students participating in activities, followed by the students want to have this training to increase capability on the other sides and the trainer clearly explain accordingly.

4. Suggestion

According to curriculum development, researcher has suggested in the course to follow.

- The training was very content with time limitation, activities have to be completed in a given period and a lot of participants have a lot of action, there should be increase the duration of the training for this.
- This training, the participants were interested and willing at every step, there should be adding more content in order to provide participants with the knowledge, understanding and skills to create online lessons and knowledge that can be used more widely.

5. Recommendations for next research

- There should be a study to follow and monitor a course in the long run after application of the curriculum by schools to study whether the participants are developing an ability to create online lessons.
- There should be a study of curriculum development by combining the techniques and activities in other formats used to find this form of training that is appropriate for different contexts.
- There should be curriculum development with other students in different faculty in order to bring the knowledge and ability to create online lesson to develop and apply the learning and teaching as well.

6. References

- [1] Thailand. Office of the National Education Commission. *A research report on higher education system: A case study of Thailand*. Bangkok: Office of the National Education Commission, 2003.
- [2] David W. Johnson. *Curriculum : Design and Development*. London : George Allen & Marwin,1994.
- [3] Taba, H. *Curriculum Development: Theory and Practice*. Harcourt Brace and World Inc,1972.