

The Development of an Effective Electronic Learning 8E Based on Connectivism Model for Virtual University

Parinya Bannaphesat¹, Kulpanya Bunnapesat²

¹Faculty of Education, Suan Sunandha Rajabhat University, Bangkok, Thailand

²Faculty of Pharmaceutical Sciences, Naresuan University, Phitsanulok, Thailand

E-Mail: parinya.bu@ssru.ac.th¹, kulpanya68@nu.ac.th²

Abstract

Thai education has more improved than before since both the government pay more attention and technology can support in many ways of learning. Especially, traditional university try to be virtual universities. The Development of an Effective e-Learning 8E Based On Connectivism Model for Virtual University based on appropriation of Thai learning technologies, cost, culture, students and instructors. These are the most important factors in determining before developing of e-Learning. This research is aimed to support instructors and students in order to know how to change traditional idea to a new paradigm shift in learning. This friendly e-Learning model can optimize the utilization of information technology resources and their cost. It can reduce cost and time for a learning style. The instructors and students can access e-Learning via the Internet at any time and place. The online learning content can be presented in texts, graphics, audio, video, and multimedia animation. The main features of the model are student information storage section as well as comment and peer to peer interview information from the instructors. The e-Advisor, Web page engine tools, e-Evaluation are added to this proposed model. In addition, web board, hyperlink to other source are also available to students. The purpose of this research were to 1) develop of electronic learning 8E based on connectivism model for undergraduate students with efficiency at 80/80, 2) To compare the achievement scores with the pre-test scores from electronic learning 8E based on connectivism model. 3) study the satisfaction of Students after the learning from electronic learning 8E based on connectivism model for undergraduate students. The model can support asynchronous online learning for students to prepare the lessons before the class begins and review all materials after the classes. This style of learning is a fully student-center approach. The research result show that 1) the quality of electronic learning 8E based on connectivism model at 81.53/80.10 criteria, 2) achievement score of student learning on electronic learning 8E based on connectivism model higher than pre-test scores at .05 level 3) the students 'satisfaction on developed electronic learning 8E based on connectivism model were at good levels.

Keywords: E-Learning, Asynchronous, E-evaluation, Connectivism

1. Introduction

The present education has advancements for human development that supports people both mind and morality along with information technology development era. The education plays an important role in both society and country development. According to education technology legislation, it pushes effort on education facilities that can support several means of education ranging from traditional system to lifelong learning system. All education system

aim at human resource development by using technology as supporting tools to learn, follow up, assess, and evaluate through the technologically appropriated learning process. Currently, e Education can be applied in any part of society as part of knowledge-based society [4]. Today, learning process in a university has been a major role in which much improved by adapting internet technology in all level of education. Thailand universities have strategies to design and implementation of e-Learning model for virtual university. This will support student interaction, in which they can select time and place to study through evaluation method with e-Learning model via Internet. Internet itself has benefit as a global library that connects every part of the world together in a real-time basis. Virtual University has launched e-Learning as the tool of distance learning via Web Page.

2. Objective

There are some teaching problems in universities such as one subject is teaching by several instructors in which lack of teaching consistency. Also, there are limited budget to provide teaching facilities. The research objectives are to design and Implementation of effective e-Learning model for Virtual University and to enhance learning capability of people through the internet.

Research Conceptual Framework

The proposed e-Learning model will use the following approaches.

1. Create learning online via the Internet and focus on the content lesson and attractive media.
2. Create the lesson steps and link to education network.
3. Create lessons and data warehouse for examination. In addition, the online learning content can present in texts, graphics, audio, video and multimedia animation.
4. Create data security management for each lesson and self-test examination.
5. Create e-Learning 8E Model web board and interaction among the learners.
6. Create supporting system such as e-Advisor through Internet.
7. Create automatic lesson template for instructors in order to create teaching homepage.
8. Create online electronic evaluation

3. Methodology

Research on design and Implementation of Electronic learning 8E Based On Connectivism Model for Virtual University Diploma Program Students Faculty of Education, Suan Sunanda Rajabhat University The research with the following details: Population includes students. Faculty of Education, Suan Sunanda Rajabhat University who registered in the 1semester of the 2025 academic year, a total of 30 students. In this research, the researcher studied data from the population because the population is small and it is convenient to collect data. Tool used for this data collection consist of a questionnaire on the awareness of the importance of education quality assurance as a questionnaire with a 5-level estimation scale to check the effectiveness of the questionnaire by checking the accuracy of the content (Item Objective Congruence (IOC) and the analysis to determine the reliability value. The researchers collected questionnaire data by giving the population Fill in the google from information that the researcher submitted in Google Classroom. This research collected data

from the population, so the data analysis used descriptive statistics to analyze the data by analyzing the mean average and standard deviation .

4. Results

The concept of design and Implementation of Electronic learning 8E Based On Connectivism Model for Virtual University need activities between instructors and students through university network. First of all, any information access can accomplish on LAN, Intranet, and Internet. Some important steps that instructors should do in order to optimize learning are:

1. Define teaching and learning objective.
2. Determine student's attitude and learning potential
3. Design academic courses • Lesson curriculum. • Set content priority. • Determine duration of study time and academic schedule. • Determine the study method. • To find appropriate technology and communication media for each course. • Determine evaluation method • Determine student's knowledge background and skill. • Implementing academic courses.
4. Determine all possible activities of e-Learning through internet.
5. Prepare e-Learning environment such as: Survey IT infrastructure • Determine location & equipment Develop lesson webpage follow course outline. • Develop database files for each course.
6. Set orientation program to the learners; for instance, • Inform the learners about course objectives and the plan how to learn. • With doing students assessment in order to confirm if they are ready to learn.
7. Implementing the e-Learning in web page follows the requirements and specifications.

The activities in web page are included: • Motivate the learners at the first paragraph of content with multimedia animation. • Inform the student and lesson objectives in each topic.

- Review and conclude the previous topics and how to relate them to the current topic.
- Introduce guideline to the next topics.
- Students shared knowledge, document and course exercises among each other.
- At student homepages, there have evaluation results and feedback from instructors.

8. Student evaluation can be evaluated for both during the study and at the end of course. It is also evaluated instructor in each course. Moreover, the supporting e-Learning components have shown in Fig1.



Figure 1 explain component in e-Learning model and context diagram description of interaction

E-Learning Techniques Based on research results, the researcher stated that the additional learning techniques have as followed:

- 1.To inform students in advance to learn through the web with specific URLs by e-mail.
- 2.All document presentations are web-based.
3. Formal Discussions and seminar are debated on web using e-mail and videoconference.
- 4.Instructors post open-ended questions on the web. Then, students take change to answer those questions.
- 5.To brainstorm among students to work together in team in order to find the right answers.
- 6.Determine the task setting in each learning process.
- 7.Classroom evaluation by quizzes with multiple choices and questions.
- 8.Dynamic group discussion on given topics.

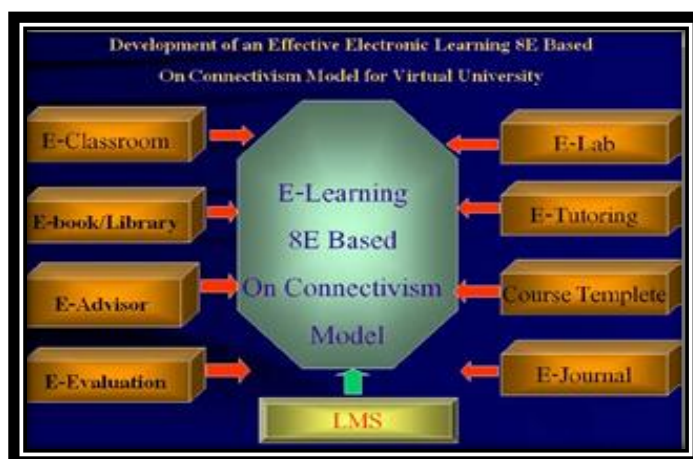


Fig. 2 The e-Learning 8E Based On Connectivism Model

Attitude and Satisfaction of Instructors on Electronic The results are :

1. A moderate number of instructors agreed on the idea of implementing e- Learning for every course. The interactivity between instructor and students is considered vital in many courses.

2. A moderate number of instructors agreed that e-Learning can replace the traditional classroom learning.
3. The research finding pointed out that the majority of instructors indicated that the e-Learning need to be continuously developed and improved in order to keep the course contents updated. Also, the web site should be made appealing by featuring with a lot of graphics and animation.
4. Instructors should know how to apply IT for their courses. Then, they can develop web-based courses.
5. The e-Learning management system will automatically monitor the students to access the web site and their studying behaviors. It also generates pre-test and post-test.

E-Learning Content Evaluation and Analysis In this research, the researcher analysis and suggest the way how to evaluate the web content as follows:

1. Identify the purpose of the courses.
2. Evaluate the identification of the web site. The information and illustrations on the homepage should make students know what the content is all about, as does the front cover of the book.
3. Evaluation Authority
4. Evaluate the layout and design.
5. Identify the appropriate links to other web sites and resources.
6. Examine the text content of the web site, graphics, and audio, to conform with the overall concept. The student evaluation will be done on both formative and summative basic, which include these 4 approaches:

1. Evaluate the individual's grade for the course.
2. Peer-to-Peer evaluation: The reciprocal evaluation between the student and the chosen partner.
3. Continuous evaluation: The students are required to submit the assignments on the weekly basis.
4. Final course evaluation: The students are required to send the course evaluation via email.

5. Conclusion And Future Work

The research about the design of effective e-Learning pointed out that the respondents are interested in e-Learning and agree that it is the most effective way of self-study. Since the students can review the content on the self-paced basis and they can access from anywhere and at any time. This finding aligns with the study of Bannaphesat P.(2025), stated that research E-learning and the development of an effective Electronic Book for Learning Augmented Reality Technology in Thailand University. Subject-area-based electronic learning research can be used for lesson planning for characteristics of classroom action researchers. The development of research competencies education students. Besides, the traditional classroom teaching method requires instructors to prepare accumulated materials to suit classroom teaching equipment, while in the e-Learning only the content need to be developed. Student results are found to be more courageous to ask questions, give comments, and participate in the discussions, in comparison to the traditional classroom method. This research finding indicated the potential of student capability is improved. The interactivity also helps improve the student's skills for utilizing the information technology. The effectiveness of e-Learning

depends on the continuous improvement and update the contents and features, which will make the learning more appealing. This will also make the students more enthusiastic for revision. The exchange of ideas and comments on the web board will broaden the learning horizon. However, some number of respondents do not agree with e-Learning since they believe that the students need very strong self-discipline to accomplish. The instructors must prepare the content in advance and need to be trained to develop appropriate contents and teaching approaches to the best suit of e-Learning environment.

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