The Development of a U-Learning Instructional Model Using Project Based Learning Approach to Enhance Students’ creating-innovation skills

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Abstract

This study aimed to develop a u-learning instructional model using project-based learning approach to enhance the students’ creating-innovation skills. In addition, this model will be used as a framework in the development and evaluation of effective u-learning systems in higher education in Thailand. The design of the model was based from the analysis of various researches and literatures on u-learning. The model illustrated the four factors that influence u-learning. This research highlighted the interplay of these factors in the processes of project-based learning. Finally, the model discussed the four creating-innovation skills for 21st century learners.

Keywords: u-learning instructional model, project-based learning approach, creating-innovation skills

Nomenclature

A U-Learning Instructional Model
B Project-Based Learning Approach
C Creating-Innovation Skills

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Introduction

Developments in science and technology have continuously evolved through time. Everybody has moved to an era of an information society that affects the ways of living of the consumers regarding using technology to make life easier and more efficient in the social, political, economic and educational aspects.

In the field of education, recent developments in science and technology applications have influenced the learning process. The education in this present time is classified as the education for a social learning focusing on the integration of modern technology. A result of the integration of information technology with borderless communication makes this society become a timeless learning society. In the 21st century learning, computer and internet technologies have greatly affected the delivery of learning. These technologies made learning accessible to everyone, anywhere, and anytime. One of the learning approaches that have been used today is Ubiquitous Computing which responds to continuous learning that happens anywhere and anytime and leads to Ubiquitous Learning or U-Learning.

In Thai educational context, a model of U-Learning has yet to be developed and designed in order to effectively facilitate and implement the learning approaches adopted by various higher education institutions. Educational management is one important mission of any educational institution, especially in higher education, which is expected to produce qualified graduates to the labour market and to develop the country. Thai education has to develop both educational management, and engaging teaching and learning activities in order to make it at par with recent innovations in educational communications and technologies and to cope with the recent issues trends in the international educational system.

Objective

This study primarily aimed to develop a u-learning instructional model using project-based learning approach to enhance the creating-innovation skills of students in higher education in Thailand.

Methodology

The development of a u-learning model is the first phase of a research on u-learning applications in higher education in Thailand. The second phase of the research will involve the testing and evaluation of this model to different higher education institutions in Thailand.

This study only discussed the first phase. In developing the u-learning instructional model in higher education, this study analyzed various researches and literatures on u-learning. The process of developing the model included the following:

1. Analyzing the elements of the u-learning
2. Analyzing the elements of project based learning
3. Analyzing the elements of creating-innovation skills
4. Designing and developing the model.
Results

Based from the analysis of various literatures on u-learning, this research highlighted the three factors that influence u-learning.

The first group of factors includes the elements of u-learning. These elements are Person, Approach, Context, and Technology. Person refers to the participants of the learning process – student and teacher. They possess different characteristics and share knowledge and skills. They engage in different Contexts or learning environments using various Approaches such as using internet and computer applications and Web Blog. Learning activities inside the classroom such as teacher-learner approach and learner-learner approach can also be utilized. To facilitate the learning process, different Technologies are used. These educational technologies include mobile and wireless technologies such as tablet PC and smart phones.

The second group of factors involves the six processes in project-based learning – Introduction, Selection, Planning, Collecting, Presentation and Evaluate of U-Learning activities. The first process, Introduction, aims to attract the attention of the students to motivate them to learn. The second process, Selection, allows the students to carefully choose topics during the learning process that interest them. In the third process, Planning, students design and develop their own work plans and implement these plans. The fourth process, Collecting, involves gathering of data, information, and other resources to prepare them for the fifth process, Presentation. The last process, Evaluation, assesses the project implemented and all the components involved in the implementation such as goals and objectives, tasks, and resources used, among others.

The third group of factors includes the levels of creating-innovation skills developed by the students after engaging in u-learning. Tenkely (2010) explained these creating-innovation skills of Bloom’s taxonomy at various levels from Plan (Level 1), Design (Level 2), Imagine/Invent (Level 3), Create/Compose/Construction (Level 4) (Tenkely, 2010).
Conclusions

This study reported the first phase of the research on u-learning in higher education in Thailand. This showed the three groups of factors that were involved in the development of a u-learning instructional model using project-based learning approach to enhance the creating-innovation skills of the 21st learners. This model will be evaluated during the second phase of the research which involves the actual implementation of u-learning in higher education using this instructional model.
References


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