

BLENDED E-LEARNING MANAGEMENT SYSTEM FOR THE TECHNOLOGICAL UNIVERSITY GRADUATE PROGRAMS

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ABSTRACT

The Technological University of the Philippines as the premier technology education university of the country, offers graduate programs in different areas in technology and engineering. Professionals both from the academe and the industry who want to upgrade themselves through higher education choose the Technological University of the Philippines. However, due to work schedule and distance, the students cannot attend regular classes in the university. The University offers extension classes wherein the professors go to a consortium university to teach in the off-campus graduate programs but this created a lack of manpower in the campus. Thus, to lessen the problem of manpower and at the same time cater to a much wider populace, an E-Learning system for the graduate programs of the University was developed. The system evolved to a blended system, synchronous and asynchronous, to make it more interactive and in real-time for those who can afford to be online while the class is in session. First, a study was done on the capability of the University to offer E-Learning system in terms of resources and technology. Further, before the actual design and development of the system, a study was conducted on the existing systems available in the country as well as those used in other countries. After these studies the Blended E-Learning Management system was developed and initially tested. Modules for the system are being developed to further test the system and its interactivity. The results of the tests showed that the system is very satisfactorily functioning as designed and can be implemented in the coming school year, 2011-2012, for some basic subjects in the Graduate Programs of the University.

KEYWORDS

E-learning, Synchronous, Asynchronous, Learning management system, Blended e-learning, Graduate programs, Interactive, Real-time

INTRODUCTION

The Technological University of the Philippines (TUP) is a state university known to be the premier university in technology education. It offers a variety of courses in engineering, technical education, sciences, architecture, engineering technology and graduate programs. These graduate programs are in the fields of engineering, technical and science education, technology and architecture. Professionals from the industry and the academe need to upgrade in terms of educational attainment for professional advancement would enroll in graduate programme in universities for higher education. In the field of technology, based on enrollment records, these professionals choose to enroll in the Technological University of the Philippines. The University, to cater their needs offer extension graduate programs, off-campus programs aside from classes held in its campuses, the Manila campus, Taguig campus, Cavite campus and the Talisay campus in Visayas. Those who wish to enroll come from different parts of the country and even from other countries such as China, Singapore, Middle East to name a few. In the off-campus programs, professors in the graduate programs are sent on site to teach. This is done during weekends or school holidays. This, however, is gradually posing problems to the University in terms of manpower.

Another problem is the schedule of classes. The students and the professors must have a common time to meet for their classes. Professionals who are enrolled in the graduate programs are working and they have different work schedules. Even if they live or work near the University, their work schedules cause them to be absent or late to classes, missing important discussions.

A solution to ease these problems is the development of a system that the students and their professors can meet in real-time through the use of the internet. The professors can teach and the students can learn without leaving their work places. For the graduate programs of TUP, a Blended E-Learning Management System was developed.

Objectives of the Study

The study aimed to develop an online system as a learning management system. The teaching-learning strategy is of a synchronous and an asynchronous system. This Blended methodology is used to make the system interactive, real-time and can be used offline when the students are ready to attend the class. The system was tested and evaluated for its functionality, effectiveness and efficiency.

Scope and Delimitation

The study is the development and evaluation of the Blended E-Learning Management System of the Graduate Programs of the Technological University of the Philippines. This system is for graduate students who are unable to come to school regularly due to geographic and time constraints. For the purpose of testing and evaluation of the system, courses which are common to the graduate programs will be used. Modules will be launched at the same time face-to-face lectures are given. The live tests will be done in the school year 2011-2012.

The system will be tested based on its performance and functionality while it will be evaluated in terms of its effectiveness and efficiency.

METHODOLOGY

As input, a study was done on the capability of the University to support an E-Learning system. The University was found to be highly capable in terms of technology, human resources, facilities and financial resources. The University is found to be ready to adapt to the system. The design and development of the system started after an investigative study of the available system in the country and in a technologically advanced country, Japan. This study was on the efficiency and effectiveness on the implementation of an E-learning system and how a system can suit the needs of the implementing University.

In the Philippines, to suit the different learning styles of the students as well as the teaching styles, a customized system was developed. This system uses the blended style of independent learning or asynchronous learning, real-time or synchronous learning and collaborative learning. In the developed system, the students can have lessons during their free time, off line or in real-time, that is, at the same time the class is being held in the University. However, with the system, the learning is highly managed and there is collaboration among students and their professors. The students will experience studying as in attending a class in the University without leaving their place of work.