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INFORMATION TECHNOLOGY PROJECT SYSTEM MODEL

Abstract:

This research aimed to study and design information technology project model for learning and teaching. It was a case study. The sample group was 10 students who studied the special problem course and 30 users were used to evaluate the systems. The methods of data collection were questionnaire and information technology systems. The key performance indicators in this study included 10 information technology systems, usability of system, the accuracy and completeness of system. The instruments used in this study were: time to develop information system and evaluate users' document. The data were analyzed by percentage and mean. The results of this research found that 10 information technology systems could be delivered in time and information technology project system model included 5 components: analysis module, logical design module, physical design module, implementation module and testing module. The students and users in this study expressed positive attitudes towards instruments of learning and information technology systems.

Keywords:

Information System, Information Technology, Information Technology Project, IT project Model, Learning and teaching

JEL Classification: A30, C80, I29

Introduction

Today technology is an important tool for education. Information technology links information and economy. The systems development cycle should be followed in the design of systems and interfaces to ensure they are effective and efficient. It is, however, not an easy task to analysis and design the new system to accept by user (Kendal, 2005).

Based on a special problem course in the Information Technology Program of the Faculty of Liberal Arts and Sciences, students are required to take a requisite course to do the information technology system project before examination. In the past, students had some difficulties in achieving this course and they had delayed to submit their information technology system project. Another factors were the lack of good design, evaluation and the right track on work each time. Therefore, the researcher was interested in studying and designing information technology project model to develop learning and teaching and apply a model to increase students' performance on information system project.

Method

The case study used research and development method.

Sample Group

The sample group consists of 10 students studying special problem course in the academic year 2016 on Information Technology program at Kasetsart University, Khamphensan campus, and 30 users were used to evaluate the systems.

The procedures conducting this study were as follows:

1. Week 1, the researcher designed the content an activities for the students including instruments used to develop information system and evaluate systems' document.
2. Week 2, there were 10 new systems for the students to choose to develop information technology system.
3. Week 3, the researcher interviewed 10 students to evaluate the suitability of each system.
4. The students studied the new systems and wrote the information requirement to serve the users' needs.
5. The sample group was 10 students who studied the special problem course and 30 users evaluated the new systems.
6. Students started their project in Week 4 and completed it in Week 14.
7. Students submitted their sub-system to the teacher every two weeks
8. Week 13, each student presented his/her information system reports to class within 15 minutes.
9. Week 14, the final version of the information technology project was submitted to the teacher.

10. Week 15, users used and accepted testing information technology system.

Results

The results of this research were as follows:

Students submitted the activities to the teacher in time as shown in Table 1

Table 1: students submitted the activities in time

Topics	Score level (100 %)	
	Complete	Modify
Proposal Project	90	10
Requirement	90	10
Context Diagram	70	30
E-R Diagram	80	20
Sub System	90	10
Reports	60	40

Source : Own data

Table 1 showed that the students submitted the activities in time. There were 6 activities in this study : proposal project , requirement, context diagram, E-R diagram, sub system and reports. Proposal project , requirement and sub-system activities were evaluated the most complete. Report activity needs to modify the most.

Table 2 : Information Technology Project

Type	Project
Information system services	3
Information system on mobile device	1
Department information systems	6

Source : Own data

Table 2 showed that 6 (60 %) information systems are department information systems and 3 (30%) systems are information system services.

Table 3: Information System evaluation by teacher

Detail	Quality	
	Complete	Modify
Usability of system	9	1
Correctness	10	-
Efficiency	8	2
Satisfactory	8	2
functionality	9	1

Source : Own data

Table 3 showed that the criteria used to evaluate the accuracy, usability of system and submission in time. The evaluation of information technology systems by users were : usability, correctness, efficiency, satisfaction and functionality. 8 systems (80%) were functionality while 2 systems (20%) were non-functionality and it needs some improvements.

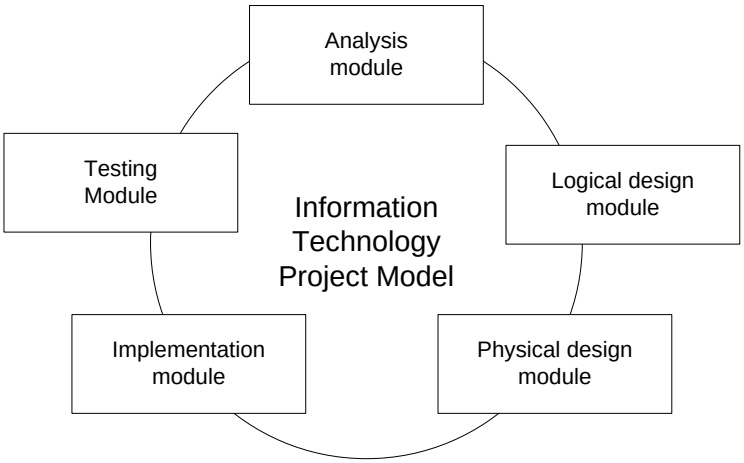
Table 4 : Information System evaluation by 30 user

Content Validity		$\bar{X}$	**SD**
1	usability of system	4.37	0.49
2	functionality	4.50	0.51
3	security	4.60	0.50
4	user Interface	4.40	0.67
Average		4.47	0.54

Source : Own data

Table 4, the result of the evaluation information systems by 30 users revealed that the sample groups were satisfied with this content validity of system at a high level and the mean score was 4.47 and the standard deviation of users' satisfaction was 0.54

Picture 1 : Information Technology Project System Model



Source : Own data

The results from picture 1, the information technology project system model included 5 components: analysis module, logical design module, physical design module, implementation module and testing module.

Conclusions

The findings indicated that the use of instruments of learning and teaching system can design an information technology included 5 component: analysis module, logical design module, physical design module, implementation module and testing module. In addition, the evaluation information technology systems by 30 users revealed that the sample groups were satisfied with this content validity of system at a high level and the mean score was 4.47 and the standard deviation of users' satisfaction was 0.54

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Reference

Kendall, K.E. (2005). *Systems Analysis and Design.* 6th ed. Pearson Prentice Hall, Upper Saddle Reiver. New Jersey.

Marakas, G.M. (2001). *Systems Analysis and Design* : An Active Approach. Prentice Hall. New Jersey.