EXPLORING FACTORS CONTRIBUTING TO STUDENTS SATISFACTION IN BLENDED LEARNING ENVIRONMENTS: CASE OF UNIVERSITI KUALA LUMPUR MALAYSIA INSTITUTE OF INFORMATION TECHNOLOGY

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Abstract

Blended learning was introduced to high education due to new advance in technology environments. Blended learning was mix-method of teaching learning between face-to-face traditional methods and online learning activities that also called as flipped classroom. Blended learning has been implemented several years ago but due to the facilities provided is still underutilized. The objectives of this study is (1) to explore factor contributing to student satisfaction in blended learning environment in Universiti Kuala Lumpur Malaysia Institute of Information Technology (UniKL-MIIT). (2) To investigate the relationship of the factor contributing in student satisfaction in blended learning environment in Universiti Kuala Lumpur Malaysia Institute of Information Technology (UniKL-MIIT). (3) To provide recommendation to improve blended learning implementation in Universiti Kuala Lumpur Malaysia Institute of Information Technology (UniKL-MIIT). To achieve all three (3) objectives, methods of quantitative and qualitative are using to collect data from students and academicians. For students questionnaire they have to answer 35 questions based on five (5) constructs that evaluate the student's satisfaction in blended learning. Five (5) constructs are Interaction, Instruction, Instructor, Course Management and Technology adopted from Naaj, Nachouki, & Ankit, 2012. Result and analysis show that all the relationship between five (5) construct was strong with positive results. The highest relationship was between Instructor and Interaction [r =.658 p<.0005 n=170]. The relationship analysis was interpret using Spearman's Rank Order Correlation. In this study also provide some recommendation in student satisfaction in blended learning environment.

Keywords: Blended learning (BL); Satisfaction; VLE (Virtual Learning Environment)

1.0 INTRODUCTION

In this introductory, it will provide an overview of learning technology that introduce by Ministry of Education Malaysia among Malaysian Higher Education Institutions (HEIs) that the delivery of education via Internet have been increase due to advance requirement from based on the technology itself. Now, even the primary school and secondary school also applied the learning method by using internet. In today's learning concept, a wide range of technologies are creating new options for learner to gain new knowledge and skill other than attending physical classroom style. The most popular pedagogical method in learning technology materialized at the beginning 2000 called blended learning [1]. Blended learning surrounding the interconnect between e-learning methods as knows as visual education with tradition method called traditional method [2]. With the increase of preference, many journalists have reported on blended learning since it flourished. Barrenness of the technological availability prevented blended of traditional method learning with distributed learning environments. However, within the recent 10 years the introduction of the new technological innovations filled the gap between traditions learning method and distributed learning environments [3].

Challenges in pedagogical learning will face when changes in technology continue to alter possibilities for learning. Blended learning is the teaching concepts that emerging traditional mode with visual mode through Web-based teaching and learning. Web-based teaching and learning method is an instructional model that required for twenty one century learner. Furthermore, the teacher can use it as the method to evaluate student engagement that requires students to employ their previous learning using a wide range of synchronous tools in conjunction with asynchronous tools [1].

Learning today is no longer classroom and text book oriented. Living in the technology era make everything can access through online via laptop, personal computer and also mobile phone.

According to Masroom 2008, many higher learning institutions in Malaysia implemented blended learning because of its effectiveness as an alternative learning approach. The lecturer doesn't have to prepared hardcopy assignment or notes and distribute to students.

2.0 BLENDED LEARNING BACKGROUND

Blended learning combines the strengths of learning method; face to face and online learning (Azizan, 2010). Rosset et al (2003) pictured blended learning as an integrated strategy for delivering on promises about learning and performances. It involves planned combination approaches including supervisor coaching, online class participation, reference to a manual, collegial relationships, and breakfast with colleagues, competency descriptions, reading on the beach and seminar, online communities and workshop participation (Rosset et al., 2003). Precise definitions of blended learning have been explained in previous studies. Singh (2003) defined blended learning as a combination of multiple delivery media designed to complement each other and promote learning and application learned behavior. Thorne (2003) described blended learning as a way of meeting the challenges of tailoring learning and development to the needs of the individuals by integrating the innovative and technological advances offered by online learning with the interaction and participation offered in the best of traditional learning. Finn and Bucceri (2004) defined blended learning as an approach that brings traditional physical classes together with virtual education element. According to Kim (2007), blended learning is learning outside the traditional classroom using information technology for the delivery of the learning materials. Kim et al (2008) simply defined blended learning as the mixing of traditional face to face approach with online approach. Kudrick et al (2009) defined blended learning as a combination of two kind of learning environment, physical classroom learning and online learning to enhance the learning outcomes..

Importance of Blended Learning in Higher Institutions

Active participation in the learning process requires "students and teachers to join into a dynamic partnership in which they share the responsibility for instructions", which is important rather than passive observation (Olgun, 2009; Karamustafaoglu, 2009). Active learning is proven to improve retention and application of course content. In addition, by listening to peers, students were exposed to different viewpoints and ways of interpreting and applying course material. One of the factors that rendering from active learning is the class size. The larger the size of the class, the bigger number of students has less opportunity to participate due to teachers are forced into more lecture-based teaching (Weaver and Qi, 2005). Hence, the use of technology-mediated teaching is a way to promote student learning and engagement as well as improved learning in larger-sized classes (Murphy, 2002; Marsh et al.2003; Greyling et al., 2008).

Benefit of Blended Learning

In terms of teaching and learning activities, Azizan (2010) cited that generally, blended learning benefited students and lecturers by enhancing social interaction, communication and collaboration. By connecting the people, activities, and events through technologies, knowledge, ideas, experience and learning products are exchanged and valued. It also offers flexibility and efficiency whereby it increases the learning contents and improves instructor and learners' experience at the minimal cost. Blended learning also helps to extend the reach and mobility where the learning can take place anywhere and anytime provided by mobile and wireless technologies. Blended learning is cited as a tool that can optimize development cost and time as it combines different delivery modes (documents, case studies, recorded e-learning events, text assignments and Power Point presentation) which lead to effective or even more effective learning activities (Azizan, 2010).

Blended learning has been found to increase understanding, interaction and involvement in the learning process (Martyn, 2003; Lin, 2007). Previous study showed that the students who used blended learning had slightly higher average score than students who didn't use. When further investigated, majority of the students indicated that they were "very proficient' in the use of technology (Kenney, 2011). Among the students who studied in small, public liberal arts college who have been introduced with blended learning model, they reported the positive aspects of this approach were flexibility, higher interaction with the professor, independent learning, authenticity, learning styles and social presence. In the other hand, they indicated several challenges that they faced when employ this approach were it requires discipline, requires time management skills, required comfort with technology, conflict with preferred learning styles and requires investment of time (Napier, 2011).

3.0 METHODOLOGY

Method

This study using paradigm which uses the mix mode methods consists quantitative and qualitative. Thirty five structures questions have been outlined in paper-pencil questionnaire.

Research Subjects

The subjects of this study comprise of 170 students who under System and Networking courses in Universiti Kuala Lumpur Malaysia Institute of Information Technology (UniKL-MIIT). These students use VLE (virtual leanring enviroments) the e-learning system provided by UniKL and traditional method in their learning. The lecturer uploaded notes and assessment on VLE while the students downloaded it whatever required. Other than that students also underwent online quizzes through VLE portal which set up by lecturersuch as assingment and quizzes. For the final examination, they should sit in examination hall. All the students involved from four (4) courses, bachelor system networking, diploma computer and networking, bachelor computer engineering, diploma engineering computing.

Research Model

This study methodology adapted from "Evaluating Student Satisfaction with Blended Learning in Gender-Segregated Environment". The model can be seen in Figure 1, a set of variables or factors that influence student satisfaction in blended learning environment are identified and it was presented in the diagram. The model was choosing by expanding from literature review and past research. Research hypothesis are presented in relation to the variables. Research hypotheses are presented in relationship between five (5) variables.
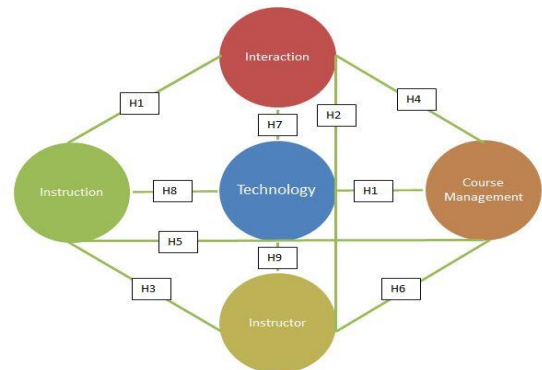

Fig. 1. Research model adapted from (Naaj, Nachouki, & Ankit, 2012)

Research Instrument

The questionnaire used in this research called Student Satisfaction Form (SSF) [4]. SSF questionnaire is originated from previous research. There are two (2) sections in the questionnaire which are demographic and items related to the user satisfaction in BL environments. This user satisfaction is measured using 35 items based on a 5 point Likert Scale from strongly disagree to strongly agree.

Research Procedure

The research subjects individually answered the questionnaire in a classroom setting under the supervision of a lecturer who was teaching the class. Out of 230, only 170 or 73% subjects were successfully submitted the complete questionnaire.

Data Analysis

Statistical technique used in this study. After completing the interview, the analysis responded, whether the institutional strategy, structure and support influenced their blended learning adoption decisions. Thus, Spearman's Rank Order Correlation was used to test relationship between the variable in this study. It will measure the strength of relationship.

4.0 FINDING AND DISCUSSION

The descriptive analysis reveals the mean and standard deviation of the factors that influence student satisfaction. Table 1 show the mean value for the Likert Scale gathered from the respondents. The table shows all items with means value greater than 10.0.

Construct	Mean	Std. Deviation
Total Interaction	32.25	8.177
Total Instruction	42.19	8.987
Total Instructor	17.72	2.806
Total Course Management	10.95	1.785
Total Technology	21.75	3.460

Table 1. Descriptive statistics

Reliability

This instrument was generated from previous validated study. However, the test using Cronbach's Alpha Value will used to ensure the reliability of the questionnaire. Table 2 illustrate the reliability for five (5) variables.

SST Dimensions	Cronbach's Alpha	N of Items
Interaction	0.721	9
Instruction	0.778	12
Instructor	0.701	5
Course Management	0.831	3
Technology	0.794	6

Table 2. Cronbach's Alpha Reliability Result

Result

The findings of this study were mainly based on the quantitative data gathered from respondents using developed set of questionnaire named as Student Satisfaction Form (SSF). All the data gathered were analyzed using Statistical Package for Social Science (SPSS).

As the data distribution is non-parametric, Spearman's Rank Order Correlation (RHO) is used to calculate the strength of the relationship between the dimensions. Total score from Liker scale of each item in this study instrument were calculated. Each total were paired and tested using Spearman's Correlation function in SPSS 16.0 with p value <0.0005 and N=170 that indicates the total number of respondents.

			Total Interaction	Total Instruction	Total Instructor	Total Course Management	Total Technology
Spearman's Rank	Total Interaction	Correlation Coefficient Sig.(2-tailed) N					
	Total Instruction	Correlation Coefficient Sig.(2-tailed) N	.632** .000 170				
	Total Instructor	Correlation Coefficient Sig.(2-tailed) N	.618** .000 170	.658** .000 170			
	Total Course Management	Correlation Coefficient Sig.(2-tailed) N	.606 .000 170	.572** .000 170	.606 .000 170		
	Total Technology	Correlation Coefficient Sig.(2-tailed) N	.629 .000 170	.592** .000 170	.629 .000 170	.597 .000 170	

Table 3. Result Analysis of Correlation using Spearman's Rank

Table 3 illustrate the result of correlation between five (5) constructs interaction, instruction, instructor, course management and technology. The relationship between Total Instruction and Total Interaction was a strong, positive correlation between the two variables [r = .632, n = 170, p = <.000]. Based on the relationship between these two variables it can conclude that more instruction from lecture can get more interaction from students.

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