Students Acceptance on Document Sharing through Learning Management System

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Abstract: Learning Management System (LMS) is a vital tool that can be used to support teaching and learning process. To date many institutions of higher learning have employed LMS as a platform to manage their e-learning program. Typically various tasks can be performed through LMS such as delivering and managing the course materials. However, due to the limitation of computer and internet facility, access to the LMS can sometime become troublesome especially when uploading and downloading large documents. In this paper we focus our study on document sharing which is one of the typical features in LMS. This study adapted Unified Theory of Acceptance and Use of Technology (UTAUT) to assess students' perception towards document sharing through LMS. The results reveal that students have positive perception towards LMS. Furthermore, students have indicate that they are keen on continue using the LMS in their learning.

Keywords: *E-learning, learning management system, acceptance model, Unified Theory of Acceptance and Use of Technology, document sharing*

1. Introduction

E-learning is an alternative platform for education. It deployed electronic media and information and communications technology (ICT) to support teaching and learning. The Internet technology has enabled borderless connection for communication and information sharing in e-learning. The Internet is also known as a resource center, where students can search and retrieve any information and materials related to their course (Sian et al., 2013). Furthermore, the use of up to date ICT tools and gadgets such as smart phone and tablet make the teaching and learning more interactive. To date, e-learning can occur in or out classroom which make it more flexible and reduce the constraint of traditional classroom. Learning Management System (LMS) is one of the most popular and vital administrative tools for e-learning (Rubin et al., 2013; Chee et al., 2010). Through this software, instructor can deliver, track and manage the teaching session. On the other part, the students can access to the class materials, lecture notes, online quiz, view forum and etc. Through these activities LMS can be seen as online learning platforms that connect both instructors and students to create new knowledge (Ahmad et al., 2012), share their knowledge (Martín-Blas & Serrano-Fernández, 2008). Min et al (2012) has shown that students are utilizing LMS in their learning. They have high interest on LMS and they are actively using LMS to download the course materials and communicate with their instructor.

However, due to certain limitation of the computer and internet facility the access to LMS has become difficulties to certain instructors and students. Therefore, updating the content has become tedious task for the instructor. While on the students part, unavailability of the content after they logged in cause frustration and unsatisfaction. Moreover, study has shown that some has stop using e-learning after experience it (Sun et al., 2008). Sun et al investigate the issue and reveal some critical factors that affect students' perceived satisfaction on the e-learning. Among the factors are student computer anxiety, instructor attitude toward e-Learning, e-Learning course flexibility, e-Learning course quality, perceived usefulness, perceived ease of use, and diversity in assessments. This study proves that limitation does exist on e-learning system that affects student's satisfaction. In this paper we focus our study on document sharing which is one of the typical features in LMS. Document sharing is tedious as the file shared are sometime multiple and large size. Uploading the files into LMS might take several minutes up to hours depending on the internet connection and the bandwidth. Failure of uploading the document may result incomplete course content thus influence students' satisfaction and perception towards the course and the instructor. This problem may influence students' acceptance of LMS as one of the tools that support teaching and learning.

TECHNOLOGY ACCEPTANCE MODEL: Student satisfaction on LMS is vital, yet student acceptance to LMS is more crucial. Satisfaction is a subjective state of satisfaction (Botelho, 2004). It is a state where people feel please with their achievement due to some effort. Satisfaction is one of the precedents of the intention to continue using the e-learning system and individual performance (Lin, 2012). The student acceptance to LMS is crucial as it reflect student's behaviour, attitude and belief towards LMS. According

to Wixom and Todd (2005) technology acceptance model can be used to predict technology usage better compare to satisfaction model. This can be achieved by linking behaviours to attitudes and beliefs. Masrom and Hussein (2008) review several well-known technology acceptance models namely Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB), Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), and Innovation Diffusion Theory (IDT). The models are summarize in Table 1.

Table 1: Summary of the technology acceptance models

Model	Pioneer	Year	Description
Theory of Reasoned Action (TRA)	Martin Fishbein and Icek Ajzen	1975	An individual behaviour such as use or rejection of technology is determined by one's intention to perform the behaviour that is influenced jointly by the individual attitude and subjective norm.
Theory of Planned Behaviour (TPB)	Icek Ajzen	1985	Actual behaviour is preceded by behavioural intention which is influenced by either attitude, subjective norm, or perceived behavioural control or all of the factors.
Technology Acceptance Model (TAM)	Fred Davis and Richard Bagozzi	1989	Individual's adoption of a technology is dependent on their perceived ease of use and perceived usefulness of the technology
Innovation Diffusion Theory (IDT)	Everett Rogers	1962	Explain how, why, and at what rate new ideas and technology spread through cultures
Unified Theory of Acceptance and Use of Technology (UTAUT)	Viswanath Venkatesh, Michael G. Morris, Gordon B. Davis, Fred D. Davis	2003	Explain user intentions to use an information system and subsequent usage behavior

UTAUT MODEL IN LMS: The aim of this study is to access the students' acceptance of LMS for document sharing for teaching and learning purposes. In this study, students are given access to the documents that are uploaded into LMS. The final goal of this study is to seek students' utilization of LMS to support their learning. In institution of higher learning, LMS is not a new technology. It was use for quite some time to support teaching and learning (Wang et al., 2013; Min et al., 2012; Chee et al., 2010; Ishak, 2004). Students' acceptance towards LMS as a whole has been studied by previous researcher such as Min et al (2012). In this study UTAUT model (Venkatesh et al., 2003) is adapted as it can be used to access students' intentions to use the LMS for document sharing and their subsequent usage. It is the university goal to fully utilize LMS for educational purposes. The original UTAUT model is shown in Figure 1. The model holds four key constructs: 1) performance expectancy, 2) effort expectancy, 3) social influence, and 4) facilitating conditions; the first three being direct determinants of usage intention and behavior, and the fourth a direct determinant of use behavior. Gender, age, experience, and voluntariness of use are posited to moderate the impact of the four key constructs on usage intention and behavior. Table 2 explain the four UTAUT variables in context of this study.
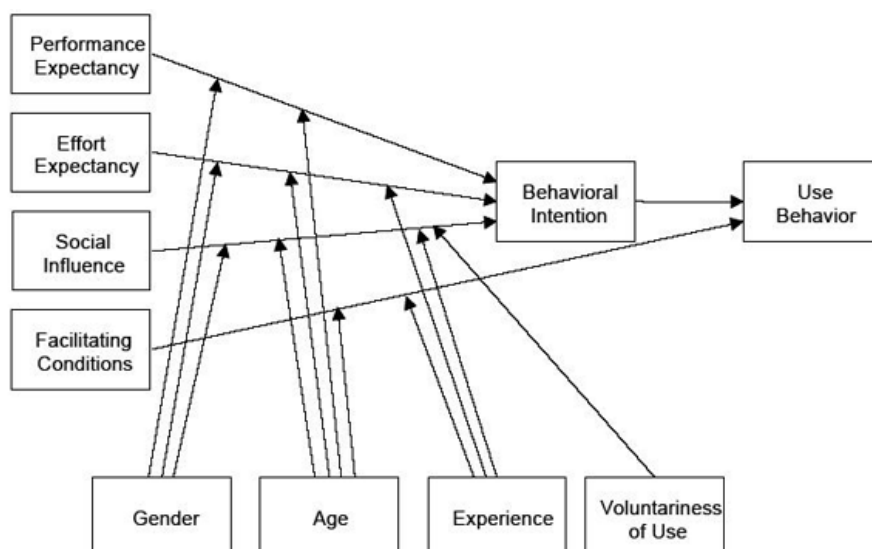
Figure 1: UTAUT Original Conceptual Model

Table 2: UTAUT Variables

Variable	Explanation
Performance Expectancy	The degree to which a student believes that using the LMS for document sharing will help him or her to perform better
Effort Expectancy	The degree of ease of use
Social Influence	The degree to which a student perceives that important others believe he or she should use the LMS for document sharing
Facilitating Conditions	The degree to which a student believes that the university and technical infrastructure support exist.

2. METHODOLOGY

This study employed purposive sampling method, where the questionnaire with 7 point linkert scale (1=Totally unacceptable to 7=Perfectly acceptable) was distributed to the students that enrolled in three classes that are database, introduction to Artificial Intelligence and logic programming. In these classes the students are provided with the notes and hand outs in both powerpoint and pdf formats. These materials are uploaded into LMS based on certain schedule.   The LMS used in this study is called Learningzone. The total numbers of students from the three classes are 100 students, however the return and usable questionnaire are 80. Descriptive analyses that are frequencies and percentages were conducted in order to provide richer understanding of the students' perceptions with respect to the four constructs of UTAUT model.

3. FINDINGS

The findings of this study shows that 70% of the respondents are female and the rest are male (30%) (Figure 2).   Descriptive analysis was conducted on the students' feedback. The 7-likert scale has been aggregated into three groups that are unacceptable (combine 1st to 3rd scale point), neutral (4th scale point) and acceptable (combine 5th to 7th scale point). Table 2 summarize the results of the descriptive statistics analysis.
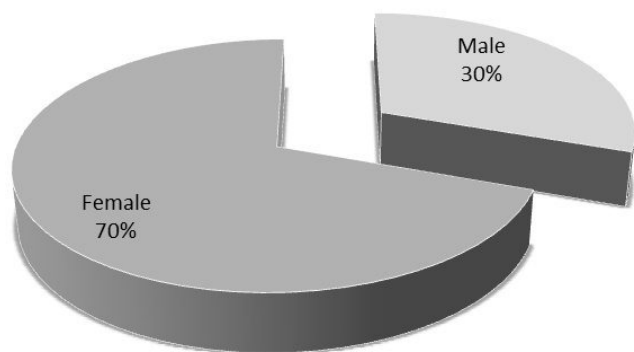
152

Figure 2: Students' Gender

Table 2: Descriptive Statistics (n=80)

Construct	Measurement	Results		
		Unacceptable (%)	Neutral (%)	Acceptable (%)
Performance expectancy (PE)	I find Learningzone useful in my studies	3.75	12.5	83.75
	Using Learningzone, enable me to accomplish tasks more quickly	6.25	15	78.75
	Using Learningzone, increase my productivity	2.5	15	82.5
	If I use Learningzone, I will increase my chances of getting a better grade	3.75	17.5	78.75
Effort Expectancy (EE)	My interaction with Learningzone is clear and understandable	3.75	8.75	87.5
	It is easy for me to become skilful at using Learningzone	3.75	10	86.25
	I find Learningzone easy to use	8.75	10	81.25
	Learning to operate Learningzone is easy for me	6.25	10	83.75
Attitude toward using Learningzone	Using Learningzone is a good idea	3.75	11.25	85
	Using Learningzone is bad idea	62.5	6.25	31.25
	Working with Learningzone is fun	10	18.75	71.25
	I like working with Learningzone	7.5	15	77.5
Social Influence	People who influence my behaviour think that I should use Learningzone	6.25	15	78.75
	People who are important to me think that I should use Learningzone	7.5	18.75	73.75
	The administration of this university has been supported the use of Learningzone	6.25	13.75	80
	In general, the university has supported the use of Learningzone	7.5	12.5	80
	My lecturer have been supportive in the use of Learningzone	7.5	8.75	83.75
Facilitating condition	I have the resources necessary to use Learningzone	5	16.25	78.75
	I have the knowledge necessary to use Learningzone	7.5	11.25	81.25
	Learningzone is not compatible with other application I use (MS word, excel, etc)	25	17.5	57.5
	A specific person is available for assistance with difficulties I experience with Learningzone	7.5	30	62.5

Behavioural intention	I intend to use Learningzone in the next days	3.75	13.75	82.5
	I predict I will use Learningzone in the next days	7.5	16.25	76.25
	I plan to use Learningzone in the next days	3.75	17.5	78.75

DISCUSSION: This study shows that students have positive expectancy on Learningzone towards increasing their performance. The results shows that they tend to believe that Learningzone is a useful (83.75%) and productive tool (82.5%) for document sharing. The students also believe that Learningzone help them to accomplish their tasks more quickly (78.75%), thus increase their chances of getting a better grade.

The students also have very strong expectancy that Learningzone is easy to use tool for document sharing. They are strongly agree that Learningzone is easy to understand (87.5%), easy to use (81.25%), easy to learn (83.75) and easy to become skilful (86.25%). This shows that Learningzone has friendly design and fit with students' requirements. Therefore, using Learningzone is not a problem to the students.

The results also reveal that students have positive attitude towards Learningzone. They are strongly agreed that having documents shared through Learningzone (85%) is a good idea. They also indicate that they like working with Learningzone (77.5%) and working with Learningzone is fun (71.25%).

In term of social support, students have positive believe that they are well supported and highly motivated to use Learningzone. The students strongly agree that their lecturer is the most influential and supportive person (83.75%). Besides the lecturer other people who has influence and important to the students also support them to use the Learningzone (78.75% and 73.75% respectively). Moreover, the university and its administration highly support the use of Learningzone to in teaching and learning process (80%).

The students also belief and aware that the university and technical infrastructure does exist to support them when using Learningzone. Students believe that they are provided with necessary resources to use Learningzone (78.75%). They also agree that they have enough knowledge on how to use Learningzone (81.25%). In term of technical support, they tend to agree that the technical support staffs are available to assist them (62.5%).

The results also reveal that the students have strong intention to continue using Learningzone for their learning purposes especially for document sharing. Students have positive intention and planning to use the Learningzone in the next days (82.25% and 78.75 respectively). Furthermore, students predicted that they will keep on using the Learningzone in their study (76.25%).

4. Conclusion

LMS is a very useful tool to support teaching and learning process. Various tasks can be conducted through LMS including document sharing. This study proves that students were positively support the document sharing initiative through LMS. This is evident by the students' positive perception towards the construct measured in this study. The findings can be a kind of motivation for the instructor to continue using LMS in their teaching. In addition the existence of negative perception among the students on LMS can be used as input to plan and improve the method of employing LMS.

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