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THE ACCEPTANCE OF SCHOOLOGY AMONG EARLY CHILDHOOD EDUCATION STUDENT AT MARA POLY-TECH COLLEGE (KPTM)

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Abstract

In this era of Information and Communication Technology (ICT), e-learning has increasingly been developed and implemented by most academic institution due to their positive impacts and advantages for both learners and educators. E-learning system is viewed as a potentially significant platform in learning and teaching process. Learning Management System (LMS) such as Schoology have gain attention among educators nowadays. Due to its features most educators are adopting Schoology as learning and teaching platform. Hence, this paper explores the acceptance of Schoology, an online Learning Management System (LMS) among diploma students. A set of questionnaire based on Technology Acceptance Model (TAM) was administered to 90 diploma students in early childhood education at MARA Poly-Tech College (KPTM), Kota Bharu, Kelantan. Descriptive quantitative analysis was employed to analyze the data by using IBM SPSS statistical software. The results show a positive response in using Schoology as learning platform due to its flexibility, simplicity, user- friendliness, and its various functionalities.

Keywords: *Schoology, Learning Management System, Technology Acceptance Model, Learning*

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Introduction

The use of technology in education leads to positive impacts for both educators and students. A recent trend in higher education is the use of e-learning systems that provide students with online access and learning content. This trend has led to an increasing supply of e-learning technologies

in the form of teaching and learning based that enable users to learn regardless of time and place. The definition of e-learning often changes in line with technological advances nowadays. Generally, e-learning is any teaching and learning using electronic networks (LAN, WAN, or the Internet) which are used communicate the contents, interaction, or facilitation. E- learning can be in forms of Internet, intranet, satellite, audio tape, video, interactive TV is part of the electronic media.

E-learning technologies have several advantages over traditional method of teaching. E-learning technologies are able to provide training and education to anyone, anytime and anywhere (Ong et. al.,2004). The successful implementation of e-learning technologies depends on user's perception, as well as their skills and knowledge in using technology tools such as a computer. Numerous factors have been presented in order to influence initial acceptance of information and communication technologies and their behavior in terms of the use of e-learning systems (Kim & Moore, 2005; Jones & Jones., 2005). Due to its admissible explanatory power and popularity, several studies have applied the Technology Acceptance Model (TAM) in the technology acceptance and implementation of e-learning (Park, 2009; Adwan et. al., 2013; Ernst et. al., 2014; Elkaseh et. al., 2015; Pindeh e.t al., 2016).

The Learning Management System (LMS) is a category of e-learning. LMSs, such as Schoology have gained traction over the years and have excellent features that can completely change the perception of traditional learning and teaching process. The integration of technologies in learning process could improve students' motivation, however, the question remains on whether students are ready to learn in a collaborative learning environment?. Thus, the main purpose of this current study is to investigate the acceptance of e-learning focused on learning management system (schoology) as a learning and teaching tool among early childhood education students at MARA Poly-Tech College, Kota Bharu Kelantan.

Learning Management System (LMS)

Learning Management System (LMS) comprises of web-based technologies that provide instructors with a way to create and deliver contents, to monitor student participation and engagement, and to assess student performance online (Lonchner, B., Conrad, R. & Graham, E, 2015). LMSs fall under the broader category of Web-Based Instruction, a term related to a computer device used for instructional purposes (Song, Wang & Liu, 2011). The use of LMS among institution of higher education in Malaysia has increased and adopting LMS as a platform for learning and teaching. Schoology, Blackboard, Webstudy, and Moodle are prime examples of LMS (Lonchner, B., Conrad, R. & Graham, E, 2015).

LMSs have many features that could benefit the educators and students throughout the learning and teaching process. It has the potential to improve quantity and quality of communication for example educators can communicate and store the content information such as assignment instructions, and instructional materials (Rubin, Fernandez, Avgerinou, & Moore, 2010). As a result, students have ongoing access to this information and they are able to review and ask questions regarding course material anytime and anywhere (Lonchner, B., Conrad, R. & Graham, E, 2015). Moreover, LMS also provide a section for comments and feedbacks , and these two features are crucial in the online learning process (Liu & Cavanaugh, 2011; Hashey & Stahl, 2014; Lonchner, B., Conrad, R. & Graham, E, 2015). Online interaction between educators and students

can be synchronous or asynchronous (Hashey, A. I., & Stahl, S., 2014). In this regard, synchronous online interactions occur in real time and these include video chat or video conference, while asynchronous online interactions occur at different times, such as through emails.

According to Lonchner et al (2015), communication with a teacher is more important compared to access to contents. In this regard, there are various web-based communication tools such as discussion forums, Really Simple Syndication (RSS) feeds, chats, podcasts, and video conference. These tools promote collaborative learning environment and enable prompt learning to take place anytime and anywhere (Lonchner et al., 2015).

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) (Davis, 1989) generated from the Theory of Reasoned Action (TRA) (Fishbein, 1975) offers a theoretical basis for user acceptance and usage behavior of information technology. In TAM, there are two core beliefs- perceived usefulness and perceived **ease** of use, which influence an individual's behavioral intention to adopt a system. (Davis, 1989) defined Perceived usefulness as "the degree to which an individual believes that using a particular system would enhance his or her productivity" while perceived ease of use is defined as " the degree an individual believes that using a particular system would be free of effort" (Davis, 1989). It can be stated that perceived ease of use has a direct effect on both perceived usefulness and technology usage. (Adams, 1992; Davis, 1989) cite that users' beliefs are directly related to a technology's usefulness, the attitude and the intention to use the technology. It is reported that perceived usefulness has a stronger relationship with usage than other variables. Moreover, an individual adopts a technology if it is considered as convenient, useful and socially desirable even though it is not enjoyable to use the technology (Saga, 1994) TAM is a model widely used in studies about technology, this model has been adopted and expanded in many studies in various types of technologies including e-mail, word processor, World Wide Web, enterprise resources planning (ERP) systems and have shown high validity.

There are many theoretical perspectives developed in order to understand how end users make decisions to use technology applications. TAM has been used in many papers in order to investigate the acceptance of different (Cases, 2010). The number of researchers and academics that still use TAM proves that it is generally accepted as a valid tool. It presents an attractive tool due to its ease of use and implementation, as well as explaining and predicting systems use in terms of its two constructs: Perceived Usefulness and Perceived Ease of Use (Elbeltagi, 2005), which are influenced by external variables. In this light, there are almost 700 authors who quoted TAM, and TAM has been partly changed from one study to another.

Methodology and Procedures

Ninety (90) diploma students enrolled in the early childhood education program were selected by using purposive sampling , had participated in this study. Students' acceptance towards the use of Schoology were explored via a set of questionnaire adapted from a previous study conducted by Park (2009), who used it to analyze students' behavior towards e-learning based on Technology Acceptance Model (TAM). The study questionnaire consists of two parts. Part 1 contains

demographic items such as gender, major of study, year of study, mother tongue and experience in learning by using technology. Meanwhile, part 2 consists of six sub-sections, which are related to students' acceptance of e-learning which is Schoology guided by Technology Acceptance Model. The items were developed to measure perceived ease of use (PE), Perceived of usefulness (PU), Attitude (AT), System Accessibility (SA), Behavioral Intention (BI) and user satisfaction (US).

The responses were indicated on a 5-point Likert scale, from 5 (strongly agree) to 1 (Strongly disagree). Descriptive quantitative analysis was employed to analyze the data collected by using IBM SPSS statistical software. The results were measured under three different ranking Mean Score (M) which are high level: M = 3.5 or above, medium level: M = 2.5 – 3.4 and low level: M = 2.4 or below (Madhumathi & Ghosh, 2012; Li, 2010).

Results and Findings

This study aims to investigate the user acceptance of Schoology, a learning management system among early childhood education students at MARA Poly-Tech College (KPTM), Kota Bharu Kelantan. From the perspective of technology acceptance model, perceived ease of use, perceived of usefulness, attitude, system accessibility, behavioral intention, and user satisfaction are assumed to be related to the acceptance of a computer or technology system. The results and findings are reported in two main categories, which are demographic information and the student acceptance of e-learning based on Technology Acceptance Model. The details are shown in the following section.

A) Demographic Information

The following section summarizes the respondent profile. This section consists of five items which emphasized on gender, major of studies, year of study, mother tongue and experience in e-learning.

Table 1: Demographic Information

Student Demography and Background		Frequency (N)	Percentage (%)
1. Gender	Male	5	5.6
	Female	85	94.4
2. Major of Study	Early Childhood Education	90	100
3. Year of study	1st year	47	52.2
	2nd year	0	0
	3rd year	43	47.8
4. Mother Tongue	Malay	88	97.8
	Mandarin	1	1.1

	Tamil	1	1.1
5. Experience in learning using technology	Yes	14	15.6
	No	76	84.4

As shown in Table 1, the majority of the respondents are females (94.4%) while the rest are males (5.6%). All of the respondents are first and third- year diploma students majoring in early childhood education. In Most of the respondents are first- year students with (52.2%) and (47.8%) are third-year students. The table above also shows that (97.8%) of students' use Malay as their mother tongue, while the remaining students use Mandarin (1.1%) and Tamil (1.1%), respectively. Lastly, the majority of the respondents (84.4%) do not have experiences in learning using technology prior to enrolling in KPTM and (15.6%) of the respondents have some experience.

B) Students Acceptance Using E-learning as a Learning Tool.

This section describes the results and findings on students' acceptance of the adoption of learning management system as a learning and teaching tool at KPTM. The students responded to six items. The proceeding section details the results obtained.

Table 2: Perceived Ease of Use

Construct	Measurement instrument	Mean (M)	Standard Deviation (SD)	Score
Perceived ease of use (PE)	**PE[1]** I find LMS system is easy to use.	3.91	0.664	High
	PE[2] Learning how to use LMS is easy for me.	3.87	0.804	High
	PE[3] It is easy to become skillful at using LMS system.	4.02	0.734	High

The survey results above (Table 2) indicates that the students find learning management system as easy to use with the mean score of (3.91). Besides that, the students also agreed learning how to use learning management system is easy with the mean score (3.87). Moreover, students are skillful at using learning management system with a high mean score of (4.02). The prime factor

for the high mean scores on the perceived ease of use is the features of e-learning itself; its simplicity, flexibility, user- friendliness, and reliability may be best features in learning management system, to be precise Schoology used at KPTM.

Table 3: Perceived of Usefulness

Construct	Measurement instrument	Mean (M)	Standard Deviation (SD)	Score
Perceived of usefulness (PU)	**PU[1]** LMS would improve my learning performance.	4.05	0.769	High
	PU[2] LMS would increase academic productivity.	4.00	0.686	High
	PU[3] LMS could make it easier to study course content.	3.83	0.722	High

The respondents were asked on the usefulness of learning management system. Table 3 presents the results with the high mean score of (4.05) where they stated learning management system would improve their learning performance. They also agreed learning management system would increase academic productivity with the mean score of (4.00). Besides, the course content provided by educators are also easy to study by students using learning management system where the mean score is (3.83). The findings disclose some opinions of the usefulness of learning management system , including improved learning performance, increased academic productivity and easy to study course contents that are beneficial and advantagous to them.

Table 4: Attitude

Construct	Measurement instrument	Mean (M)	Standard Deviation (SD)	Score
Attitude (AT)	**AT[1]** Studying through LMS is a good idea.	4.00	0.749	High
	AT[2] I am positive towards LMS.	3.80	0.781	High

Based on Table 4, the students found that studying via learning management system is a good idea where the mean score is (4.00) and most of them are also positive towards learning management system where the mean score achieved (3.80). Most of the students are interested in adopting the learning management system as a learning tool, and this may be influenced by several factors, such as the ability to access the course even outside of the classroom, the ability to communicate with their lecturers after class time, and they can gain new experience in learning via technology.

Table 5: System Accessibility

Construct	Measurement instrument	Mean (M)	Standard Deviation (SD)	Score
System Accessibility (SA)	**SA[1]** I have no difficulty accessing and using LMS.	3.55	0.875	High
	SA[2] The overall of LMS (Schoology) is excellent.	3.83	0.707	High

The respondents were also asked about the system accessibility of learning management system. Table 5 shows the mean score of (3.55) which indicate that the students have no difficulty accessing and using the system. Most of the students agreed that the learning management system (Schoology) used in KPTM is excellent with the mean score of (3.83). These findings are important to highlight the importance of choosing the best platform of e-learning to adopt as a learning tool. In this regard, schoology was adopted as a learning tool for early childhood education students in KPTM due to its aforementioned features and the students are exposed to the advantages of Schoology.

Table 6: Behavioral Intention

Construct	Measurement instrument	Mean (M)	Standard Deviation (SD)	Score
Behavioral Intention (BI)	**BI[1]** I intend to be a heavy user of LMS.	3.45	0.705	Medium
	BI[2] I intend to check information in the LMS.	3.80	0.810	High

Table 6 demonstrates the results of students' acceptance in term of behavioral intention. The (3.45) mean score of students show that they are heavy users of learning management system, where checking information through learning management system shows the mean score is (3.80). Based on the survey result, students are positive towards adopting learning management system as a tool in their learning process but they did not consider themselves as a heavy user as shown by the mediocre mean score. There are several reasons why they did not consider themselves as heavy users of learning management system.; the main reason could be the lack of high- speed internet access in the college. Low internet speed could affect their focus on using learning management system. Besides that. the lack of knowledge about technology could also dampen their interest in using technology, and the lack of technology environment in KPTM may be one of the reason due to not all courses implement and adopt learning management system as a learning tool.

Table 7: User Satisfaction

Construct	Measurement instrument	Mean (M)	Standard Deviation (SD)	Score
User Satisfaction (US)	**US[1]** I completely satisfied in using LMS.	3.77	0.746	High
	US[2] I feel confident in using LMS.	3.77	0.794	High
	US[3] I can accomplish the task quickly through LMS.	4.02	0.764	High

As illustrated in Table 7, this study also measured user satisfaction among the students. It is obvious that the students are completely satisfied in using learning management system and feel confident in using it as both items achieved the mean score of (3.77). Moreover, the students believe that they can accomplish the task quickly through learning management system, with a high mean score of (4.02). Generally, the findings highlight the satisfaction of students in accepting learning management system as a learning tool. User satisfaction is very crucial in implementing learning management system because it affects their academic achievement and behavior.

Conclusion

In summary, this study has reported the student's acceptance of the use of Schoology, an online learning management system, used as a platform in learning and teaching process, as guided by Technology Acceptance Model. There are six items measured in terms of perceived ease of use, perceived of usefulness, attitude, system accessibility, behavioral intention and user satisfaction. The overall findings show positive feedback among students to learn via learning management system as it contributes to numerous positive impacts and advantages among the students, such as the increase in academic productivity and achievement, faster task accomplishment, and enhanced access to learning even outside classroom wall. Besides that, the development and implementation of effective e-learning process, especially u through learning management system, require students to become active and fully participate in learning activities such as forum and assessment. The educators must also choose a proper, appropriate, and suitable e-learning platform to increase students' participation. Moreover, e-learning features must also be interesting, flexible, simple and well functioned to make sure the learning process runs smoothly.

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References

Adams, D. A. (1992). "Perceived usefulness, ease of use, and usage of information technology: A replication. *MIS Quarterly 16*, 227 - 247.

Adwan, A. A., Adwan, A. A. & Smedley, J. (2013). Exploring Students Acceptance of E-Learning Using Technology Acceptance Model in Jodanian Universities. *International Journal of Education and Development using Information and Communication Technology, 9*(2), 4 - 18.

Cases, C. (2010). Factors That Determine Attitudes Toward the Use Technology to Plan for Retirement: An Empirical Analysis,. *St Thomas Aquinas College, Sparkill, NY*, 4.

Davis, F. (1989). Perceived Usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319-339.

Elbeltagi, I. M. (2005). Evaluating the factors affecting DSS usage by senior managers in local authorities in Egypt. *Journal of Global Information Management,* , 1-20 .

Elkaseh, A. M., Wong, K. W. & Fung C.C. (2015). The Acceptance of E-Learning as a Tool for Teaching and Learning in Libyan Higher Education. *International Journal of Information Technology, 3*(4).

Ernst, C. H., Wedel, K. & Rothlauf. F. (2014). Students' Acceptance of E-Learning Technologies: Combining the Technology Acceptance Model with the Didactic Circle. *Twentieth Americas Conference on Information System*, (pp. 1-7). Savannah.

Fishbein, M. a. (1975). Belief, attitude, intention, and behavior: An introduction to the ory and research Reading. *MA: Addison- Westley*.

Hashey, A. I., & Stahl, S. (2014). Making Online Learning Accessible for Students with Disabilities. *Teaching Exceptional Children, 46*(5), 70 - 78.

Jones, G. H. & Jones B. H. (2005). A Comparison of Teacher and Student Attitudes Concerning Use and Effectiveness of Web-based Course management Software. *Educational Technology & Society, 8*, 125 - 135.

Kim, K. S. & Moore, J. (2005). Web-Based learning: Factors Affecting Students' Satisfaction and Learning Experience. *First Monday, 10*.

Li, F. (2010). A Study of English Reading Strategies Used by Senior Middle School Students. *Asian Social Science, 6*(10), 184 - 192.

Liu, L. & Cavanaugh, C. (2011). Success In Online High School Biology Factors Influencing Student Academic Performance. *Quarterly Review of Distance Education, 12*(1), 37 - 54.

Lonchner, B., Conrad, R. & Graham, E. (2015). Secondary Teachers' Concerns in Adopting Management Systems. *TechTrends: Linking Research & Practice To Improve Learning*, 62 - 70.

Madhumathi, P. & Ghosh, A. (2012). Awareness of Reading Strategy Use of Indian ESL Students and the Relationship with Reading Comprehension Achievement. *English language Teaching, 5*(12), 131 - 140.

Ong, C. -S., Lai, J. -Y., & Wang, Y. -S. (2004). Factors Affecting Engineers' Acceptance of Asynchronous E-Learning Systems in High-Tech Companies. *Information & Management*, 795 - 804.

Park, S. Y. (2009). An Analysis of the Technology Acceptance Model in Understanding University Students' Behavioral Intention to Use e-Learning. *Educational Technology & Society*, *12*(3), 150-162.

Park, S. Y. (2009). An Analysis of the Technology Acceptance Model in Understanding University Students' Behavioral Intention to Use E-Learning. *Educational Technology & Society*, 150 - 162.

Pindeh, N., Suki, N. M & Suki, N. M. (2016). User Acceptance on Mobile Apps as an Effective Medium to Learn Kadazandusun Language. *Procedia Economics and Finance*, 372 - 378.

Rubin, B., Fernandez, R., Avgerinou, M. D., & Moore, J. (2010). The Effect of learning management Systems on Student and Faculty Outcomes. *The Internet and Higher Education, 13*(1).

Saga, V. Z. (1994). The Nature and Determinants of IT Acceptance, Routinization, Routinization andInfusion. In: L. Levine (Ed.): Diffusion, Transfer and Implementation of Information Technology. *ElsevierScience Publications, Minneapolis, MN, USA*, 67-86.

Song, H. -D., Wang, W. -T. & Liu, C. -Y. (2011). A Simulation Model That Decreases Faculty Concerns About Adopting Web-Based Instruction. *Educational Technology & Society, 14*(3), 141 - 151.