E-Learning: Satisfaction, Acceptance and Experience among Pre-Service Teachers in Malaysia

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Abstract: This quantitative study aims to identify the relationship and influence of two independent variables which are acceptance and experience with satisfaction of e-learning as the dependent variable among pre-service teachers in Malaysia. The Technology Acceptance Model and Gratification Model were used as the basis to develop the research framework. A total of 616 respondents were involved in this study which employed questionnaires as the instrument. The descriptive and inferential analysis were carried out using statistical technique such as Pearson correlation and multiple regression. The Pearson correlation analysis showed a significant positive correlation between acceptance ($r=0.817$, $p<0.01$) and experience ($r=0.879$, $p<0.01$) with satisfaction. Despite of both independent variables significantly influenced the dependent variable, regression analysis showed that experience had more influence ($\beta=0.525$, $p<0.01$) on satisfaction of e-learning compare to acceptance ($\beta=0.200$, $p<0.01$). A comprehensive understanding of this study can help the policy makers, administrators and lecturer to improve the level of acceptance and experience of the pre-service teachers in order to enhance the satisfaction of e-learning among them in this country.

Keywords: *E-Learning, Satisfaction, Acceptance, Experience, Pre-Service*

1. INTRODUCTION

The 21st century is a new era of information and communication technology that has brought significant changes to educational landscape in most of the countries around the globe including Malaysia. In fact, the role of information and communication technology (ICT) is very important in our daily lives. The impact of ICT usage has changed the educational circumstances in the country towards the use of computers as one of the teaching aids in the teaching and learning process.

Electronic learning or e-learning has served as one of the popular and significant methods among students and employees around the world. Almost all universities, academic institutions and colleges have been using e-learning as the teaching and learning delivery methods. Wahyu and Yahya (2006) stated that e-learning was introduced as a new strategy in learning methods to replace the old education system. This method has long been practiced in other countries of the world but, this method has just grown in Malaysia.

The platform for e-learning is made up of various types, regardless of whether free or need to be subscribed. Among them are Online Learning Management System (OLMS), Learning Content Development System (LCDS), and e-Portfolios. In addition, there are also social media and entertainment sites that provide online services such as Facebook, Twitter, Blog, Google Apps, and Skype (Ika Destiana *et al.*, 2013), which can be used as either direct or indirect e-learning platform. With the advancement and development of ICT, it is not surprising that higher education institutions such as universities, colleges and institutions are using various modes in e-learning operations. Regardless of the medium, the main purpose of employing e-learning is that the learning and teaching process is well implemented as well as efficient and can be accepted by the students. Successful students who used online learning are expected to have access to both hardware and software and become proficient in technology use. They also have the means to communicate through good writing and have high motivation and self-discipline (Mupinga *et al.*, 2006).

Nowadays, with the advancement of web 2.0 apps like Blog, Wikis, Facebook, YouTube, Twitter and Google Apps have been able to provide fast, effective and efficient services. Additionally, social media sites like Facebook, Instagram, Twitter and online learning apps such as Edmodo and Schoology can be installed into smart phones, making students more app-friendly as the students are more interested in using the applications. That will enable the students to be easier and faster interacting with lecturers and among themselves, as well as enable them to send assignments via email instead of OLMS. According to Mohd Koharudin (2004) students prefer to communicate with lecturers via e-mail or social media. Apart from that, they prefer in finding solutions through Facebook, blogs, chat groups and e-mail. They believe that social media can be used easily and effectively without less obstacles or problems.

With user-friendly features and functions in interactive form, Web 2.0 has attracted the user's interest, especially students. Web 2.0 applications are more popular and favored by students at Teacher's Training Institute and has become major competitor to OLMS. From this point on, this study intends to identify the influence of acceptance, and experience of the students on the e-learning system on the student's satisfaction.

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2. RESEARCH OBJECTIVES

1. To identify the level of the students' experience, students' acceptance and students' satisfaction in e-learning.
2. To analyze the correlation between students' experience and students' acceptance with students' satisfaction in e-learning.
3. To determine the influence of students' satisfaction, students' acceptance towards students' experience in e-learning.

3. RESEARCH HYPHOTESES

H_0^1 There is no significance correlation between between students' experience with students' satisfaction in e-learning.
H_0^2 There is no significance correlation between students' acceptance with students' satisfaction in e-learning.
H_0^3 There is no significance influence of students' experience, students' acceptance on students' satisfaction in e-learning.

4. LITERATURE REVIEW

E-learning refers to an online learning program that uses computers for learning purposes through website or the internet. According to Venkataraman (2012) e-learning is the use of technology which enable individuals to learn at any time and anywhere. He added that e-learning can include training and guidance from experts as well as faster delivery of information. Rodriguez *et al.*, (2008) defines e-learning as the use of information and communication technology networks in teaching and learning.

Based on the above interpretation, it can be concluded that e-learning is a system that provides a virtual space for students, lecturers and students to interact regardless of time and place as long as the environment has a network. With that, various activities can be done such as making quizzes online, checking answers, exchanging opinions among fellow students and lecturers, uploading and downloading notes and so on.

Therefore, it is clear that online learning includes various sources such as websites, social sites, social media, tools, interactive, and curriculum or teaching approaches. Internationally, various terms are used to visualize online learning including distance education, virtual schools, virtual learning, e-learning or electronic learning (Rosenberg, 2001). In general, e-learning is an interactive tool that uses electronic devices such as CDs, DVDs, video tapes, internet and others to deliver learning materials and lectures. Hence, e-learning plays an important role as it can help students at institutions, colleges and universities to achieve their goals without a need to attend classes at all times (Conole *et al.,* 2008; Song, 2010).

In addition, e-learning is widely used by educational institutions, government agencies and private parties in conducting daily tasks as users can interact and learn anywhere and at any time even though the distance and location are different. In describing the advantages of e-learning, Song (2010) and Liaw *et al.* (2007), addressing the flexibility of learning systems that promote collaborative learning, creating and contributing among students. Liaw *et al.*, (2007) touched on a conducive learning environment that could lead to active and effective learning activities. In other words, e-learning can enhance understanding, communication skills, improve listening, social skills and improving individual achievement, but need to be used prudently. Moreover, e-learning can alter the attitude of a quiet and shy student to be brave and active.

However, there were e-learning researchers who expressed concern about the integrity and effectiveness of online learning. They also highlighted the issues of lack of face-to-face communication, the remote environment and the suitability of the course content (Song, 2010). However, many countries which have been implemented e-learning in their educational system have been working very hard to make improvements and innovations to address these weaknesses. In Malaysia, the Ministry of Education and Teacher's Training Institute have done some innovations in e-learning to help and smoothen the learning and teaching process either at school or tertiary level. This includes e-textbooks, FrogVle, 1BestariNet, Edmodo, Schoology and others.

In this study, the Technology Acceptance Model (TAM) proposed by Davis (1993) is an adapted model of the Theory of Reasoned Action (TRA) developed by Ajzen and Fishbein (1980). TRA explains that intentions are strong predictors of intentional constructs (Ajzen and Fishbein, 1975). Davis (1989) also predicts that acceptance of a technology is based on two main factors, namely the usability or perceived usefulness and easy-to-use response or perceived ease of use. The usefulness statement refers to the extent to which a person believes that the use of a particular system will improve its performance, and the convenient response refers to the extent to which a person believes that the system can be used easily and free of any problems or otherwise. According to TAM (Davis *et al.*, 1989) construction of direct constructs are useful responses and usability responses by combining variables from past studies to influence the intention of using technology. Therefore, an easy-to-use impression can affect a sense of usefulness that means if one thinks the system is easy to use then the system is useful to him.

Besides that, this study also refers to Uses and Gratifications Theory or Conscience and Satisfaction Theory which was introduced by Elihu Katz, Jay G. Blumler and Michael Gurevitch in 1974. According to this theory, media users play an important and active role in the selection and use of such media (Katz *et al.*,1974). Moreover, one is actively searching for certain media and content to produce satisfaction. In other words, media users are an active part of the communication process when selecting and evaluating media. According to this theory, media users are trying to find the best media sources to meet their needs (Katz *et al.*, 1974). This means that this theory assumes that users have the power to make alternative choices to satisfy their needs and satisfaction.

In this study, satisfaction refers to emotional reactions or effects on something. The same definition applies in information systems (Liaw and Huang, 2011). According to Zou Alfaghari Mitra (2009) satisfaction is about fulfilling desires, expectations, needs or pleasure derived from using e-learning. According to Gratifications Theory (Katz *et al.*, 1974), users can choose and evaluate media based on certain criteria. In this study all elements such as content, process, social and technology are used as the components of satisfaction. In addition, the element of intention in continuing using the system is also included in this dependent variable.

Technology acceptance implies the change in behavior and attitude of students in accepting electronic learning methods as an effective learning method. The effect of acceptance is that students can learn more flexibly. Acceptance of e-learning also helps students to actively participate in or out of the classroom as students can implement the learning process independently and according to their own time line. In this study, five elements in

the acceptance component have been employed, namely, usability, easy-to-use perceptions, lecturer / tutoring characteristics, system quality and information quality.

Experience is defined as the level one has used technologies to facilitate its work (Kharisma, 2011). Experience is something that happens to a person or has been implied and affects him. The past student experience in using computers, the internet and the e-learning system to help the learning process is very important and can encourage users to apply knowledge and skills in e-learning. Thus, the three elements in the experience component have been used, namely course design, social interaction and self-learning process. Social interactions also touch on student interactions with lecturers and student interactions with friends.

Early finding indicated that the use of OLMS-based e-learning among students and lecturers at teachers training institutes in Sarawak is quite limited and unsatisfactory. Problems such as unavailability of WIFI service, unstable server and poor internet coverage are among of the obstacles faced by the students and lecturers to use e-learning. In addition, the function is limited only for uploading content and course materials. Apart from that, the e-learning design is unattractive and less user-friendly compared to Facebook, Twitter, Skype, Edmodo, Schoology and so on. Therefore, OLMS is rarely used and this indicated that the e-learning system (OLMS) is less accepted and practiced by students.

5. METHODOLOGY

This research is a non-experimental design using quantitative approach based on the research objectives which is to study the relationship and influence between the phenomenon (variables). In addition, survey method was applied because it has systematic procedures and sufficient to achieve research objectives. Apart from that, cluster and random sampling techniques were chosen for data collection from the population because this study covered a large area and involved many respondents (Mohd. Majid, 1990; Chua, 2011). This study was carried out at four teacher's training institutes in Sarawak, Malaysia. The total number of sample is 616 out of 1300 trainee teachers who have been using e-learning in their respective institute for more than a year.

Questionnaire was used in order to measure the research variables in this study. The questionnaire employed 5 points Likert scale, with 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree and 5 for strongly agree to measure the variables. The questionnaires for this study were adapted from previous studies in e-learning (Thongmak, 2014; Rhema and Miliszewska, 2014; Rhema *et al.*, 2013; Lemos and Pedro, 2012; Paechter and Maier, 2010; Paechter *et al.*, 2010; Song, 2010; Waheed and Hussain, 2010; and Sun *et al.*,2008). Pilot study had been carried out to test the validity and reliability of the instruments prior to the actual research. The validity test using exploratory factor analysis showed that all items carried at least 0.40 of factor loading value. Mean while, the reliability test using Cronbach Alpha showed all the variables carried minimum value of 0.70. Descriptive and inferential analysis (Pearson correlation and multiple regression) were employed to analyze the data and to test the hypotheses.

6. RESULTS

Table 1 shows the mean score for each variables studied in this research based on the data collected from the selected samples.

Referring to the table below, the satisfaction variable had a mean score of 4.04 (SD=0.57). The mean score for acceptance variable was 3.99 (SD=0.55) while the experience variable had a mean score of 4.01 (SD=0.56), as shown in Table 1.

Table 1: Descriptive Analysis

Variable	Mean	SD
Acceptance	3.99	0.55
Experience	4.01	0.56
Satisfaction	4.04	0.57

Meanwhile, the result from the statistical method through skewness and kurtosis tests for all the variables in this research which are the students' satisfaction, students' acceptance and students' experience showed normal distributions. Bhasah (2007) stated that the distribution of data is normal when the value of skewness and kurtosis is between -3.00 until +3.00 while Sheridan (2013) is in between -1.00 until +1.00. Therefore, inferential statistics can be carried out to test the hypotheses. In this research, the level of significance value is $p < .05$ (95%).Table 2 shows the normality analysis by looking at the skewness and kurtosis for all the variables.

Table 2: Normality Analysis

Variables	Skewness	Kurtosis
Satisfaction	-.618	.984
Acceptance	-.381	-.143
Experience	-.638	1.127

Correlation Analysis on Students' Acceptance and Students' Experience with Student's Satisfaction Result

Table 3 shows the correlation analysis between variables. Based on the table, it showed that there was a significance positive correlation between students' acceptance and students' experience with student's satisfaction $(p < .05)$. The results from the analysis as shown in the table 3 indicated that there was a significance positive and strong correlation between students' acceptance ($r= .817$, $p= .000$) with student's satisfaction in e-learning. In addition, students' experience also showed a significance positive and strong correlation ($r= .879$, $p= .000$) with with student's satisfaction in e-learning. Therefore, the both null hypotheses (Ho[1] and H0[2]) were rejected since there were significance correlations between students' acceptance and students' experience with students' satisfaction in using online learning.

Table 3: Correlations between Students' Acceptance and Students' Experience with Students' Satisfaction in E-Learning

Variables	Satisfaction in E-Learning
Students' Acceptance	
Pearson Correlation	.817**
Sig. (2-tailed)	.001
Students' Experience	
Pearson Correlation	.879**
Sig. (2-tailed)	.001

** p < .01

The Multiple Regressions Analysis of Students' Acceptance and Students' Experience with Students' Satisfaction in E-Learning

The result of the multiple regressions (stepwise) in Table 4 showed that both the predictor variables which were the students' experience (β=0.525, $p < .05$) and student's acceptance (β=0.200, $p < .05$) were the contributors that significantly influenced students' satisfaction in e-learning. Both independent variables contributed 79.5 percent to the students' satisfaction in e-learning. This result also indicated that the students' experience variable was the main predictor to the students' satisfaction in e-learning. In addition, students' experience variable significantly contributed 77.3 percent (R^2=0.773, t=12.892) to the students' satisfaction in e-learning. Meanwhile, the students' acceptance variable [β=0.200, p=.000] was the other significant predictor to the students' satisfaction in e-learning. The data analysis significantly showed that this predictor variables contributed 1.2 percent (R^2=0.012, t=5.662) variance changes into students' satisfaction in e-learning.

Table 4: Multiple Regression Analysis (*Stepwise*) of Students' Acceptance and Students' Experience with Students' Satisfaction in E-Learning

Variables	β	t	p
Students' Experience	0.525	12.892	0.000
Students' Acceptance	0.200	5.662	0.000

Info:

Students' Experience	Students' Acceptance
R = 0.879	R = 0.891
R^2= 0.773	R^2 = 0.795
F= 2095.082	F= 1185.385

Based on the analysis of the multiple regressions (stepwise), it showed that both the students' experience and acceptance had a significance influence on the students' satisfaction in e-learning. In that case, the hypothesis H_o^4 is rejected.

7. DISCUSSION

The initial findings revealed that all the variables involved in this study showed high mean scores. The level of satisfaction of students towards e-learning as a whole should not be entirely depend on the content, processes, and technology to encourage the continuous intention in using the e-learning system. The findings are supported by Calli *et al.*, (2013) which explains that student satisfaction is influenced by the quality of course content such as the appropriate provision, up-to-date, systematic, convenient, and sufficient information. Students who are satisfied with e-learning will be able to increase their knowledge and improve learning performance. Therefore, the use of e-learning provides effective learning because of its entertaining aspect, easy-to-use features and promotes active learning and collaborative learning.

Therefore, it can be concluded that the elements proposed in the acceptance and experience of usability components (Calli *et al.*, 2013; Agustiawan and Subagyo, 2011; Davis, 1989; Davis *et al.*, 1993), the quality of the system and the quality of information (DeLone and McLean, 1992 and 2003), course designs (Mohd Shafie Rosli and Nur Amalina Shamsudin, 2015; Calli et al., 2013) and social interaction such as students with lecturers and students with partners (Harris, et al., 2010; Paechter and Maier, 2010; Paechter et al., 2010), self-learning processes (Mohd Nihra and Krishnan, 2011; 2007) and demographic features should be taken into account and addressed when developing an e-learning system.

However, students' reluctance, low capability and self-esteem in using or handling with computers as mentioned by Cadenhead and Van Belle (2011) and Waheed and Hussain, (2010) are not the main obstacles in affecting student satisfaction. This is because net-learner students are quicker to understand and become proficient in technology. The results of this study are in line with the study conducted by Ab Hamid *et al.* (2014), Calli *et al.* (2013) and Agustiawan and Subagyo (2011), which found that usefulness and easy-to-use responses in the e-learning acceptance component will affect student satisfaction.

Next, the findings showed that the relationship between e-learning acceptance and experience with satisfaction in e-learning are strongly positive among the students. This means when the acceptance and the experience are good or increased, the satisfaction will also good and increased. Receiving components such as usability, easy response, lecturer features, system quality and quality of the proposed information have relationships with satisfaction variable. Among the elements in anticipation are the quality of the course design, the quality of interaction and the self-directed learning process. If the elements in acceptance meet the expected experience of students towards e-learning, then it is found to be able to help teacher's training institute management to improve the e-learning implementation.

Based on the findings, there is a significant relationship between experience and satisfaction among students. This means that if the acceptance of student e-learning is high and gives a positive experience, therefore these will influences student satisfaction. In other words, this will increase the satisfaction of students in the use of e-learning and provide them the opportunity to continue using the system. Past experiences play an important role in learning. Based on the Learning Experience theory, previous student experiences will influence students to use a particular learning approach (Kolb, 1984). Positive experience can also make students more interested in learning and consistently using the e-learning system.

In conducting this study, the researcher proposes three elements in experience components such as experience in social interactions that include aspects of interaction between students and lecturers and students with partners, course design and self-directed learning processes. In the context of social interaction, support and feedback from lecturers are very important for students as students prefer to interact with lecturers face to face and get immediate feedback, especially on assignments or any problems they encountered. This study is supported by Paechter and Maier (2010) and Paechter *et al.* (2010) which explains that students prefer face to face to get new information, exchange ideas, getting quick answers and to establish positive interpersonal relationships with tutors, while encouraging motivation in the learning process.

In terms of student experience in the self-learning process, e-learning provides or offers a variety of learning opportunities that the student can control. Students can access materials, choose materials that are appropriate to the requirements of their assignments and could be implemented at any time. In Paechter and Maier (2010) and Paechter et al. (2010) students can process, select and evaluate learning materials according to individual needs, flexibility of time and place and acquisition of learning skills. However, students need further information, especially when dealing with analytical and critical concepts in a particular topic. Thus, face-to-face approaches are still needed to gain a clearer and true knowledge and explanation of any concept or topic that is not understood.

Negative experiences in e-learning can affect or negatively affect student satisfaction. The limited student experience in e-learning will reduce productivity and deliver low performance. This will result on that learning outcomes for a topic are not achieved. However, the study of Haverila (2011) explains that past experience can help promote the success of e-learning in various forms throughout the course. As experience is an important component of e-learning, it is important to identify the needs of students when implementing e-learning at the institute so as not to give negative impression and avoid negative expectations of the course results being followed.

Experience based on course design also affects the satisfaction of students in receiving e-learning. The findings show that the course design has a positive effect on the acceptance and satisfaction of students to use the e-learning system. The cognitive, social, personal and computer-related features have links to satisfaction because these aspects can influence the satisfaction of students in the use of e-learning (Haverila, 2011; Liaw, 2008). Generally, students with positive experiences will use an e-learning approach to help improve learning and productivity. However, in this study, aspects of student characteristics are not used as constructs in independent variables. The findings suggest that the characteristics of e-learning students are important to the acceptance, expectation and experience of technology, so it should be noted.

The finding of multiple regression analysis shows that there is strong influence of e-learning acceptance and experience in e-learning on student satisfaction. This means that students who are in four campuses of the Teacher Education Institute in Sarawak have different e-learning acceptance and experience in different e-learning medium. This indicated that the aspects of usefulness, user-friendly, learner characteristics, system quality and information quality are important in designing and developing e-learning systems in line with student acceptance and high e-learning satisfactions. The student experience in e-learning also helps in the development and design of online learning system. All elements in this component of acceptance and experience were found to have a strong influence on e-learning satisfaction among students in all institutes involved in this study.

Good system quality as well as the quality of information can affect the student's willingness to accept and use the system to assist implementing the learning process and to meet the satisfaction of the students. E-learning satisfaction can have a positive or negative impact and benefits to individuals and ultimately will give impact on the institution. Additionally, e-learning satisfaction also encourages students towards the intention to use the system on an ongoing basis. Unfortunately, this has yet to reach a satisfactory level and will affect the student experience in e-learning negatively. In fact, students' expectations of the systems and information in e-learning are maintained and are at a high level. Hence, the quality and the latest and relevant information systems are an important factor in measuring the effectiveness and success of a system. This research framework has been updated by incorporating system quality and information quality as an important element in independent variables (e-learning acceptance).

Apart form that, technical support and management is other elements that affects students' satisfaction in e-learning. The findings of this study shows that the technical support element and management are among the dominance elements of acceptance of e-learning variable among students at the teacher's training institute. Technical support such as the provision of necessary facilities, internet access speed, internet quality, access quality, e-learning system, training in e-learning and technical assistance response can enhance student in e-learning acceptance. The availability of good technical resources and good administrative support will positively influencing student satisfaction towards e-learning. For example, the provision of facilities, access to quality and good internet quality will allow students to interact with each other, or with lecturers at their convenience. With this, students can control their learning process in terms of time, content and feedback.

In addition, acceptance of e-learning will influence student's attitude to continue using e-learning and strengthen their believe that the technology is useful and can helps improve the performance of information delivery (Siti Rokiah and Fadzli, 2015; Ab Hamid Ali et al., 2014; and Wijayanti, 2009). The contribution of the quality system and information (DeLone and McLean, 1992 ; 2003) in this study has had an impact on the increase in discussions between students with students and students with lecturers; interactive and collaborative communication and enhancing academic achievement (Azidah et al., 2012) and Park (2009). Students will use e-learning applications when these applications benefit them and will continue to focus on the usefulness of the technology (Sharma and Chandel, 2013; Davis, 1989). For example, when individuals know how to use a computer or feel more comfortable using them, they will be more likely to develop positive attitudes and feel motivated to use the e-learning system.

This study also support previous studies which have been conducted by Ab Hamid Ali et al. (2014), Rhema and Miliszewska (2014), Rhema et al. (2013), Wafaa (2012), Song (2010), Waheed and Hussain (2010), Sun et al. (2008), Davis et al. (1992) and Davis (1989), which looked at factors that could influence e-learning satisfaction such as usefulness, easy response, lecture features, system quality and information quality. These are the factors which can influence technology acceptance in improving satisfaction, and then able to encourage the intention to continue using technology.

To summarize, the acceptance of student in e-learning is determined by five elements which are perceived usefulness, perceived ease of use, lecture features, system quality and information quality. The student experience variables in e-learning are also determined by three elements which are course design, social interaction, and self directed learning process. While the satisfaction of students towards e-learning is determined by five elements which are content satisfaction, process satisfaction, social satisfaction, technology satisfaction and continuing intention.

8. CONCLUSION

In conclusion, the influence of acceptance and experience on e-learning satisfaction among students were influenced by various elements and occured in different learning environment, culture, educational system, and organization. In other words, the differences findings in this study with previous studies can be due to differences in term of cultural or organizational context, sampling size, student feedback, external problems, lack of infrastructure, lack of training and courses among students and lecturers, knowledge and skills in technology and software and so on. The commitment and collaboration of all parties is crucial to ensure the implementation and use of e-learning at the teacher's training institutes. As a result, this will enhance acceptance and satisfaction among students, reducing student's negative experience of e-learning system used at teacher's training institute, and at the same time adding and acquiring new experiences as well using past experience in improving the skills in the future. Nevertheless, the e-learning approach is not an appropriate learning method for all students and can not be fully utilized in the institute, especially in areas with low or no internet network/coverage. This problem will lead to failure of e-learning implementation and less interest in students to receive and continue to use e-learning. However, e-learning approaches can be combined with traditional methods to diversify teaching methods in order to attract students.

References

1. Ab. Hamid Ali, Fadzli Adam dan Wong, Wan Solihin Abdullah. 2014. Penerimaan Blog Sebagai Medium Agama Dalam Kalangan Pelajar IPTA di *Malaysia. Proceeding of the International Conference on Arabic Studies and Islamic Civilization iCasic* 2014, 4-5 March 2014, Kuala Lumpur, Malaysia.
2. Azidah Abu Ziden, Adi Syahid Mohd Ali dan Mimi Malini Mohamad Fuzi. 2012. e-Forum: Platform Perbincangan Ilmiah. *Jurnal Teknologi Pendidikan Malaysia*. Vol. 2 (2): 5-10.
3. Chua Yan Piaw. 2011. *Kaedah dan Statistik Penyelidikan*. Kuala Lumpur: McGraw-Hill.
4. Conole, G., de Laat, M., Dillon, T. and Darby, J. 2008. Disruptive technologies, pedagogical innovation: what's new? Findings from an in-depth study of students' use and perception of technology. *Computers & Education.* Vol. 50 (2): 511-524.
5. Davis, F.D. 1993. User acceptance of information technology: system characteristics, user perceptions and behavioural impacts. *International Journal of Man-Machine Studies.* Vol. 38: 475-487.
6. Davis, F. D., Bagozzi, R. P. and Warshaw, P. R. 1989. User acceptance of Computer Technology: a comparison of two theoretical models. *Management Science.* Vol. 35 (8): 982-1003.
7. Davis, F.D., Bagozzi, R.P., and Warshaw, P.R. 1992. Extrinsic and Intrinsic Motivation To Use Computers in The Workplace. *Journal of Applied Social Psychology*. 22(14):1111-1132.
DeLone, W. H. and McLean. E. R. 2003. The DeLone and McLean Model of Information Systems Success: A Ten-Year update. *Journal of Management Information System*, **19**: 9-30.
DeLone, W. H. and McLean. E. R. 1992. Information Systems Success: The Quest for the Dependent Variable. *Information Systems Research,* **3** (1): 60–95.

8. Haverila, M. 2011. Prior -Learning Experience and Percieved Learning Outcomes in An Undergraduate E-Learning Course. *MERLOT Journal of Online Learning and Teaching*. Vol. 7(2): 206-218.
9. Ika Destiana, Ali Salman and Mohd Helmi Abd. Rahim. 2013. Penerimaan Media Sosial: Kajian dalam Kalangan Pelajar Universiti di Palembang. *Malaysaian Journal of Communication.*
10. Liaw, S.S. and Huang, H.M. 2011. A Study of Investigation Learners Attitudes Towards E-Learning. *2011 5th International Conference on Distance Learning and Education (IPCSIT).* Vol. 12: 28-32.
11. Katz, E., Blumer, J.G. And Gurevitch, M. 1974. Utilization of Mass Communication by The Individual. In J. Blumer and E. Katz (Eds.). *The Uses of Mass Communication: Current Perspectives on Gratification Research*. CA Sage: Baverly Hills.
12. Kharisma Nur Khakim, 2011. *Analisis faktor-faktor yang Mempengaruhi Penerimaan dan Penggunaan Software Akuntasi Myob dengan Menggunakan Pendekatan Technology Acceptance Model (TAM).* Tesis Sarjana Universitas Diponegoro.
13. Kolb, D.A. 1984. *Experiential Learning: Experience as The Source of Learning and Development.* Englewood Cliffs, NJ:Prentice Hall.
14. Lemos, S. and Pedro, N. 2012. Students' Expectation and Satisfaction in Postgraduate Online Courses. *ICICTE 2012 Proceedings in Portugal.*
15. Liaw, S. 2008. Investigating Student's Perceived Satisfaction, Behavioral Intention, and Effectiveness of E-Learning: A Case Study of The Blackboard System. *Computers and Education.* Vol. 48 (2):301-317.
Liaw, S. S., Huang, H. M. and Chen, G. D. 2007. Surveying instructor and learner attitudes toward e-learning. *Computers and Education.* **49**: 1066-1080
16. Mohd Koharudin Mohd Balwi. 2004. Perkembangan, Pembangunan dan Penerimaan e-Pembelajaran di Institusi Pengajian Tinggi. Jurnal Teknologi, 41(E): 55-71.
17. Mohd. Majid Konting. 1990. *Kaedah Penyelidikan Pendidikan*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
18. Mupinga, D.M., Nora, R. T. and Yaw, D.C, 2006. The Learning Styles. Expectations. And Needs of Online Students. *College Teaching.* Vol. 54 (1):185-189.
19. Paechter, M. and Maier, B. 2010. Online of Face-to-Face? Students' Experiences and Preferences in E-Learning. *Internet and Higher Education*. Vol. 13: 292-297.
20. Paechter, M. and Maier, B. And Macher, D. .2010. Students' Expectation of Experiences in E-Learning: Their Relation to Learning Achievements and Course Satisfaction. *Computers and Education*. Vol. 54: 222-229.
21. Park, S. Y. 2009. An Analysis of the Technology Acceptance Model in understanding university students' behavioral intention to use e-learning. *Educational Technology and Society.* Vol. 12 (3): 150–162.
22. Rhema, A and Miliszewska, I. 2014. Analysis of Students Attitude Towards E-Learning. The Case of Students in Libya. *Issues in Informing Science and Information Technology.* Vol. 11:169-190
23. Rhema, A and Miliszewska, I., Sztendur, E.M. 2013. Attitudes Towards E-Learning and Satisfaction With Technology Among Engineering Students and Instructors in Libya. *Proceedings of Informing Science and IT Education*

Conference.

24. Rodriguez, M.C., Ooms, A. and Montanez, M. 2008. Students' Perception of Online Learning Quality Given Comfort, Motivation, Satisfaction and Experience. *Journal Interactive Online Learning.* Vol. 7(2): 105-125.

25. Rosenberg, M. 2001. *E-Learning: strategies for delivering knowledge in the digital age*. New York: McGraw-Hill.

26. Sharma, S. K. and Chandel, J. K. 2013. Technology Acceptance Model for the use of learning through websites among students in Oman. *International Arab Journal of e-Technology.* Vol. 3 (1): 44-49.

27. Siti Rokiah Ab Rahman dan Fadzli Adam. 2015. Penggunaan Youtube Sebagai Medium Pembelajaran Agama Dalam Kalangan Generasi Y di Terengganu, Malaysia. *E-Proceeding of The International Conference on Social Science Research,* ICSSR 2015, 8 & 9 June 2015, Meliá Hotel Kuala Lumpur, Malaysia.

28. Song, S.M. 2010. *E-Learning: Investigating Students' Acceptance of Online Learning in Hospitality Programs.* PhD Dissertation. Iowa State University.

29. Sun, P. C., Tsai, R.J., Finger, G., Chen, Y.Y. And Yeh, D. 2008. What Drives a Successful E-Learning? An Empirical Investigation of The Critical Factors Influencing Learner Satisfaction. *Computers and Education.* Vol. 50: 1183-1202.

30. Thongmak, M. 2014. Factors Determining Learners Acceptance of Facebook in a Higher Education Classroom. *Knowledge Management and E-Learning*. Vol. 6(3): 316-331.

31. Venkataraman, S. 2012. A Study on E-Learning Satisfaction of High School Teachers. *Indian Journal Education Information Management.* Vol. 1(8): 324-327.

32. Waheed, M and Hussain, M.F. 2010. Empirical Study of E-Learner Contentment Towards E-Learning: Influential Role of Key Factors. *The 2010 MIT LINC Conference in Stratton Center on the MIT Campus*. Boston, 23-26 May.

33. Wahyu Idrus and Yahya Buntat. 2006. *Aplikasi 'E-Learning' dalam pengajaran dan pembelajaran di sekolah-sekolah Malaysia: Isu dan Cadangan Pelaksanaannya*.

34. Wijayanti, Ratih. 2009. *Analisis Technology Acceptance Model (TAM) terhadap faktor-faktor yang mempengaruhi penerimaan nasabah terhadap layanan Internet banking.* Indonesia: Penerbit Universitas Gunadarma.

35. Yahya Don. 2006. *Psikologi Sosial Dalam Pendidikan*. Kuala Lumpur: PTS Profesional Publishing.

36. Zou Alfaghari Mitra, Sarmadi, M.R., Negarandeh, R., Zandi Bahman and Ahmad Fazl Elah. 2009. Satisfaction of Student and Faculty Members With Implementing Blended E-Learning. Iranian Journal Nursing Research. Vol. 3(10-11): 95-105.