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User Acceptance on Facebook and Online Learning for Learning Purposes

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Abstract: *The fast expansion of technology had inflated the usage of Internet in learning environment instead of traditional teaching methods. Effectiveness of e-learning platform benefits not only academic performance but also user acceptance level of technology. Since the importance of user acceptance in the success of e-learning platform makes it imperative that the driving intention to use e-learning, this study aims to measure the level of acceptance with Technology Acceptance Model (TAM) towards Facebook and Online Learning for learning purpose among UUM students and its level of intention to use in future. The online survey with a set of questionnaires was conducted in this research to collect data from 150 students that using both Facebook and Online Learning. Data were analysed using SPSS software. The findings show that the respondents have higher level of acceptance towards Online Learning in term of perceived usefulness and perceived ease of use for Facebook technology. However, students are more agreed to use Facebook in study compared to Online Learning. The findings are expected to serve as feedback to further improvement of UUM Online Learning system.*

Keywords: Technology Acceptance Model (TAM), e-learning, Facebook, Online Learning, intention to use technology

1. INTRODUCTION

To date, rapid technology advancement has brought the fundamental changes in students' learning environment. The increasing value of knowledge enhance the importance of online learning and teaching tools to offer an environment which provide conveniently access and interactive learning activities to attract students' learning interest (Hamid et al., 2007). E-learning is a trending upward learning platform which uses Internet and Intranet technologies for learning purpose to provide a set of educational activities by using electronic devices such as smartphone, tablet, personal computer, and laptop (Bahramnezhad et al., 2016).

In the end of 1990s, learning management in the traditional classroom has been transferred to the e-learning method to catch up the changes of era, and the Learning Management System (LMS) has been introduced. These technologies are designed to support the development and management of the universities' entire educational cycle, including data and information (Irwin et al., 2012). Institutional based LMS is being used by the colleges and universities all over the world nowadays, including Universiti Utara Malaysia (UUM).

Apart of that, the most popular social networking sites, Facebook was recognised as a most respectable e-learning platform since it had more than 750 million users worldwide until 2011 (Irwin et al., 2012). Features of Facebook become more diverse and attractive which is not only for social use but also construct a public or semi-public profile within a bounded system. These functions have increased the educational usage of Facebook which allow students to conduct learning process consists of interaction, communication, collaboration, and resource sharing (Arteaga Sánchez, Cortijo, & Javed, 2014).

Both Facebook and online learning system are the suitable e-learning platform utilised by instructors and students due to the features and functions of these websites. However, it is lack of study conduct to examine the factors most influence students' user acceptance towards Facebook and LMS for learning purpose and also the intention to use both e-learning platform among end-users (Moghavvemi et al., 2017). Therefore, there is increasingly need and important to understand the students' perception regarding the e-learning platforms currently in use.

2. LITERATURE REVIEW

The rapidly growth of technological applications have increasingly changed the courses delivery

methods of most of the institutions nowadays. E-learning represents a significant shift in how interaction style between students and lecturers (Bahramnezhad et al., 2016). According to Cole, Shelley, and Swartz (2014), interaction between instructors and students have positive impact to the students' academic performance. Numerous universities and educational institutions had providing the dedicated LMS to deliver education to students with new innovative way. LMS is a widely adopted e-learning platform using by many organizations as a formal online system to support and to improve learning quality within their institutions (Yamin & Ishak, 2016; Min et al., 2012; Aydin & Tirkes, 2010). According to Berking and Gallagher (2013), the significant role of LMS is e-learning platform which manage the entire educational cycle for accessible registered users normally for academic purpose.

However, previous studies verified that social media sites have potential to utilise as valuable collaborative and cooperative learning tools (Albayrak & Yildirim, 2015; Moghavvemi et al., 2017; Arteaga Sánchez, Cortijo, & Javed, 2014). The high involvement of people to Facebook were increasing the effectiveness of utilizing and some improvements have been created for other purposes apart from social such as business and learning (Salarzadeh Jenatabadi et al., 2017).

Technology Acceptance Model (TAM) used in this study was developed by Davis (1989) as the one of the possibly most widely used framework in the information system domain to measure user acceptance towards technology (Alharbi & Drew, 2014; Albayrak & Yildirim, 2015). According to Davis' (1989), TAM stated that human's reaction and perception toward technology will affect an individual's decision to accept new technology. The two variables perceived usefulness (PU) and perceived ease of use (PEU) in TAM are the primary factors which indirectly effect to the intention to use (IU) technology (Deng et al., 2005; Alharbi & Drew, 2014; Albayrak & Yildirim, 2015; Moghavvemi et al., 2017). In summary the user acceptance toward technology was the key factor for the success of e-learning platform.

3. METHODOLOGY

This study comprised of 150 undergraduate students of UUM. The selected students were among the active Facebook users. A set of questionnaires adopted from Davis (1989) was used in this study. The questions comprises of the 5-point Likert scale questions, with a choice of strongly agre to strongly agree. The construct of this study is based on the TAM instruments developed by Deng et al. (2005) which contains two dependent variables: perceived usefulness (PU) and perceived ease of use (PEU), and one independent variable: intention to use (IU).

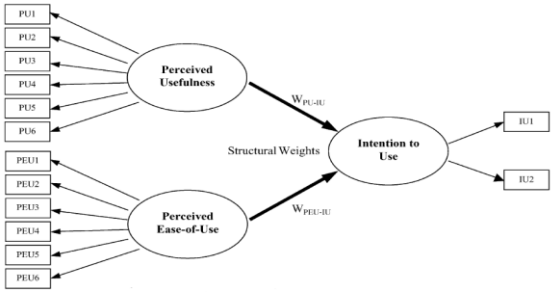

Figure 1. Research framework of TAM by Deng et al. (2005)

Table 1. Variables and item for TAM

Variable	Items
Perceived Usefulness (PU)	Using Facebook/UUM Online Learning in my study would enable me to accomplish tasks more quickly.
	Using Facebook/UUM Online Learning would improve my study performance.
	Using Facebook/UUM Online Learning in my study would increase my learning productivity.
	Using Facebook/UUM Online Learning would enhance my effectiveness on my study.
	Using Facebook/UUM Online Learning would make it easier to complete my tasks.
	I would find Facebook/UUM Online Learning useful in my study life.
Perceived Ease of Use (PEU)	Learning to operate Facebook/UUM Online Learning would be easy for me.
	I would find it easy to get Facebook/UUM Online Learning to do what I want to do.
	My interaction with Facebook/UUM Online Learning would be clear and understandable.
	I would find Facebook/UUM Online Learning to be flexible to interact with.
	It would be easy for me to become skilful at using Facebook/UUM Online Learning.
	I would find Facebook/UUM Online Learning easy to use.
Intention to Use (IU)	Assuming I will have unlimited access to Facebook, I predict that I will use it as main e-learning platform in the future.
	Assuming I will have unlimited access to UUM Online Learning, I predict that I will use it as main e-learning platform in the future.

4. FINDINGS

In this study, a total of 150 questionnaires were fully completed by target respondents. Data

analysis has been performed using SPSS software. Those 150 respondents were classified according to their gender, age, race, current semester, and college. On average, the respondents are mostly between 18 to 24 years old. Female respondents make up the majority which occupied 87.3% or 131 of the total respondents and the others 12.7% or 19 were male.

Table 2. Descriptive analysis of gender

	Frequency	Percentage %
Female	131	87.3
Male	19	12.7
Total	150	100.0

4.1. Frequency of Facebook and Online Learning usage

The time of respondents spent on Facebook and Online Learning per week for only learning purpose had been measured in the study. From the results presented in Table 3 clearly shows that most of the respondents (43.3% for Facebook and 49.3 % for Online Learning) spent more time on Facebook (2 to 5 hours) rather than Online Learning (less than 2 hours) per week for learning purpose.

Table 3. Descriptive analysis of technology usage frequency

	Facebook		Online Learning	
	Frequency	Percentage %	Frequency	Percentage %
Less than 2 hours	46	30.7	74	49.3
2-5 hours	65	43.3	72	48.0
More than 5 hours	39	26.0	4	2.7
Total	150	100.0	150	100.0

4.2. Validity and Reliability of Data

Cronbach's alpha statistics were presented to investigate the reliability of quantitative feedback, which related to internal consistency of the student's responses to the questionnaire. Responses from both Facebook and UUM Online Learning were combined for comparison analysis. The Cronbach's alpha coefficients for the two variables PU and PEU were investigated varied between 0.89 and 0.94 in Table 4. As a result, the data derived from the responses to the questionnaire is reliable.

Table 4. Cronbach's alpha value for variables

Variables	Cronbach's alpha value	
	Facebook	Online Learning
Perceived Usefulness (PU)	0.90	0.92
Perceived Ease of Use (PEU)	0.89	0.94

4.3. Perceived Usefulness (PU)

One of the independent variable used to measure user acceptance level is perceived usefulness (PU). This variable consists of six questions concern about whether the Facebook or Online Learning contribute to enhance the studying performance such as complete academic tasks more easily and quickly, and the effectiveness of Facebook or Online Learning as an e-learning platform.

The result shows that usefulness of Online Learning system was more acceptable by UUM students as e-learning platform. The mean average of Online Learning was 3.64 higher than Facebook which is only score 3.34 (Table 5) in term of perceived usefulness. The results also show that UUM students have positive feedback for both Facebook and Online Learning as e-learning platform. These results found that using Facebook and Online Learning can help to improve their academic performance.

Table 5. Descriptive Analysis for PU

Items	Mean value	
	Facebook	Online Learning
PU1	3.65	3.51
PU2	3.21	3.65
PU3	3.33	3.65
PU4	3.04	3.64
PU5	3.31	3.60
PU6	3.51	3.69
Mean average	**3.34**	**3.62**

4.4. Perceived Ease of Use (PEU)

Another independent variable had been used to measure the user acceptance level in this study is perceived ease of use (PEU). There is also consists of six questions but in different focus which concern in easy to use and operate by students while using as interaction platform with instructors. The clear and understandable of information provided also cover by this variable to examine the ease of use level of Facebook and Online Learning as learning tools.

According to mean value presented in Table 6, the positive feedback was given by UUM students towards ease of use of Facebook and Online Learning for learning purpose. The

results can conclude that using Facebook and Online Learning was easy to manipulate among UUM students. However, the mean average presented indicates that Facebook (3.88) have more acceptable than Online Learning (3.56) in term of variable perceived ease of use. Therefore, the easy to use of such technology information system should concern as a key factor to increase users' using desire when design an online learning tool.

Table 6. Descriptive analysis for PEU

Items	Mean value	
	Facebook	Online Learning
PEU1	3.93	3.71
PEU2	3.70	3.40
PEU3	3.83	3.55
PEU4	3.96	3.49
PEU5	3.83	3.61
PEU6	4.00	3.60
Mean average	**3.88**	**3.56**

4.5. Intention to Use (IU)

The only dependent variable in this study was intention to use (IU) which used to identify the UUM students' desire to use Facebook or Online Learning for learning purpose in future. The only one assuming question had been asked under IU variable which is about the desire to use either Facebook or Online Learning as main e-learning platform in future. Table 6 shows the results Facebook contribute the higher mean value 3.53 than Online Learning 3.43 which means UUM students were more preferred to use Facebook as their only e-learning tool for academic purpose.

Table 7. Descriptive analysis for IU

	Mean
Facebook	3.53
Online Learning	3.43

5. DISCUSSION

The findings show that there is an overall positive feedback of the UUM students towards Facebook and Online Learning as the e-learning tool in their study life. E-learning nowadays is important in education domain due to students adapted in online tool to conduct interaction with their lecturers or instructors for various kinds of objectives such as download materials, submit assignment, having discussion within group members, and making announcement instead of face to face communication. E-learning was encouraging because of its environmental friendly concept and efficiency is in line with the requirements of modern society.

Findings in the PU show the acceptance level of Online Learning was higher than Facebook (Table 4). This finding is reasonable to explain that the functions and features of Online Learning are more meet the requirements of students as a learning tool in term of usefulness since Online Learning is a dedicated LMS which focus only students and for learning purpose (Easwary & Yamin, 2017). It is undeniable to posit that some features of Online Learning are unable to find in Facebook for example assignment submission due date setting, conduct quiz within sites, and the real personal or contact information of lecturers. Therefore, the Facebook's user acceptance level as a comprehensive e-learning platform was decreased by the insufficient itself.

However, the user acceptance level of UUM students towards Facebook was scored higher than Online Learning in term of PEU in Table 5. This result can be explained through the high flexibility of Facebook as a largest social networking site which bring most affected in the social life and activity of people in several ways, and in line with the study by Mohd-Bashri & Yamin(2016). Facebook can access in anywhere and anytime without issue such as login error, website busy, "404 error" and others. It is accessible as long as the Internet is connected. Thus, high reflexibility of Facebook compare to Online Learning is the one reason lead to score the higher user acceptance in term of PEU.

Lastly, Facebook was identified as a main online learning tool which more intention to use by UUM students in their future (Table 6). This finding is reasonable since Facebook is the most popular and most preferred social network site among university students nowadays (Albayrak & Yildirim, 2015; Moghavvemi et al., 2017; Irwin et al., 2012). Although some researchers stated that Facebook has more social and entertainment value than educational value and should not serve as formal learning platform, but the adaption and skilful of current young generation in Facebook website should encourage to use Facebook in order to increase their desire to learning.

To summarize, both Facebook and Online Learning had score high user acceptance level in different variable PU and PEU. The findings

in this study show both Facebook and Online Learning is suitable e-learning platform for UUM students according to their own features and specialisation. Students' requirement as end-user of online learning tools should take as priority comments in further improvement of Online Learning system.

6. CONCLUSION

In conclusion, this study is essential to understand the user acceptance on Facebook and Online Learning as e-learning tools to achieve students' goals such as improve their academic performance and increases the communication, interaction, and collaboration within group members and instructors. The user acceptance is a significant factor which influence to the students' behaviour regarding the intention to use those technology information system in future. From the findings in this study, for further development, the developer should take action to enhance the practicality of Facebook or dedicated LMS as a useful e-learning tool.

However, there are still some limitations in this research with respect to the TAM. The needs of the further studies that adding more variables which is considered to be the influencer to intention to use technology. In addition, the only focus on UUM students had limited the scope of study. Therefore, future studies could conduct a longitudinal study with a broader profile of users or samples. The investigation of a larger number of samples could allow more sophisticated statistical analysis to be conducted.

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