The Perceived Usefulness and Lecturers' Attitude Towards the Used of the Learning Management System

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The Perceived Usefulness and Lecturers' Attitude Towards the Used of the Learning Management System

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Abstract

The integration of e-learning platforms in the higher education system has been around for a long time and is seen in line with the changes in Industrial Revolution 4.0 (IR4.0). Realizing this, Sultan Idris University of Education (UPSI) has developed a Learning Management System (LMS) platform for its members to streamline learning and facilitating processes consistent with the current changes. The purpose of this study was to determine the applicability and attitude of the lecturers towards the used of MYGURU during the teaching, learning and facilitating process. Quantitative research design was used with the survey method. The study population of 734 and 248 lecturers were selected using simple random sampling. The questionnaire was distributed by email in 2 month's period. This study used descriptive and correlation analysis. The results of this study found the mean score for MYGURU perceived usefulness and mean scores of lecturers' attitude to be at moderate level. The study of attitudes toward MYGURU used was modest as the mean value was 3.03. Whereas the correlation test showed that there was a significant positive and moderate relationship between perceived usefulness and lecturers' attitude of rs = .485 (p> .05). The implication of this study is hoping that the ICT department will enhanced and improved the MYGURU hardware in order to provide a better quality in Learning Management System.

Keywords: Model TAM, Learning Management System, Perceived Usefulness, Attitude, Learning and Facilitating Process

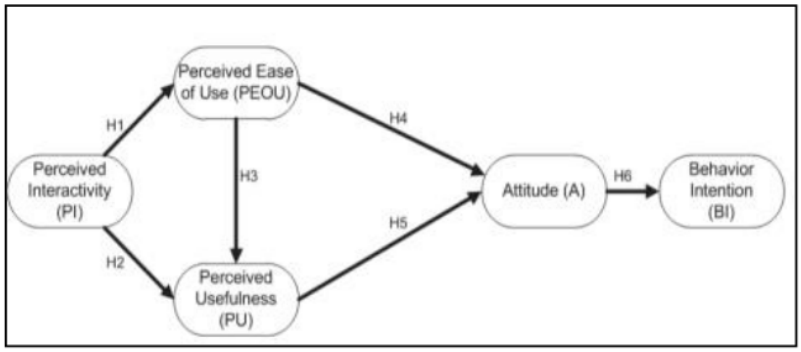
INTRODUCTION

Technological advances have changed the paradigm of world society in education. Sultan Idris University of Education (UPSI) has provided a Learning Management System (LMS) as MYGURU platform. LMS is a web-based learning ecosystem used to disseminate information, communicate and knowledge for education and training (Cidral, Oliveira, Di Felice, & Aparicio, 2018). The Technology Acceptance Model (TAM) is used to assess lecturers' perceptions of MYGURU usage by making the faculty's use and attitude as a research construct. The education system has undergone a continuous change, with new values and methods that will bring about educational advancement over time. Recognizing and incorporating responsible innovation into education policies and into the classroom can lead to a new era of innovation in and for education. (Richter, Hale & Archambault, 2019). The integration of e-learning in education has shown disastrous results when it fails to achieve its goals due to the low levels of use by educators despite policy reforms as technology advances (Yeop, 2016).

The traditional method of delivery is seen as less applicable in today's modern education system.

This is because the delivery process is seen as preventing students from developing their own learning methods and techniques (Razak, 2017). The primary concern of educational institutions is improving the quality of teaching and student academic performance. Various studies have been conducted to identify factors that influence student learning especially the use of learning techniques that help guide students in the right direction and change students' personal habits and situations (Rivas, Fraile, Chamoso, González-Briones, Rodríguez & Corchado, 2019).

The Technology Acceptance Model (TAM) was founded by Fred Davis in 1989. The model is an extension of the Theory of Reasonable Action (TRA) developed by Ajzen and Fisbein's. Davis's model aims to explore factors that have been identified as having an impact on people's attitudes and behavior in accepting information technology. Through this Model, there are five main components namely perceived usefulness (PU), perceived ease of use (PEOU), attitude toward use (ATU), behavior intention (BI) and actual use (A) to use IT. However, the study was conducted using only perceived usefulness (PU) and attitude (A). According to Davis (1989), PU is the level of consumer psychology to understand a particular system as performance enhancement has direct correlation with A and relationship with BI to use the Learning Management System (LMS) applications.



Rajah 1. *Technology Acceptance Model* (David, 1989)

The notion of usefulness (PU) is the level of acceptance of an individual who believes that the system is capable of positively impacting it. Consumption is the user's assessment of a matter. When a user feels that a system is useful, they will then assume that the system is useful for application (Elkaseh, Wong & Fung, 2015; Zemudin & Salleh, 2017). The notion of usefulness refers to how much an individual believes the use of technology can improve their performance (Chinyamurindi & Shava, 2015). The notion of usefulness must be taken into account as it can have a great impact on the formation of attitudes and intentions using e-learning (Ibrahim, Leng, Yusoff, Samy, Masrom & Rizman, 2017).

Attitude toward use (ATU) is an attitude that an individual demonstrates when using a system and promoting it in the learning process. Attitude is important in shaping an individual's intention in accomplishing something. Attitudes consist of influences, cognitions and behaviors that lead to positive reactions and are able to form the intention to use the system (Hussien, 2017). Knowledge of lecturers' attitudes towards the use of technology and their impact on their work performance is very helpful in integrating technology into the teaching process. (Elkasih et al., 2015).

Usability perceptions influence consumer attitudes toward e-learning. When users find the system useful, it will change their attitude. Perceived usefulness has a significant relationship with attitude toward e-learning and intention to behave (Sakarji et al., 2019; Salloum, Alhamad, Al-Emran, Monem, & Shaalan, 2019). In this study, the researcher will focus on the affective components defined by the positive and negative attitudes displayed by the lecturers when using the MYGURU where to identify perceived usefulness of MYGURU use among lecturers, identify the attitude of lecturers towards the use of MYGURU and identify the relationship of perceived usefulness and the attitude of the lecturer to the use of MYGURU.

METHODOLOGY

The study design is a data collection strategy used to collect data. The design of the study was aimed at providing the framework and activities for the data collection and analysis process to answer the research questions that have been developed (Creswell, 2012). The design of this study is using a quantitative study, which is a survey method. The study population was 734 lecturers consisting of nine faculty at UPSI. Referring to Krejie and Morgan's (1970) table, the sample size was 248. Table 1 is the source of the study's intrusions which contains two study variables in which the perceived usefulness is independent variable and the attitude towards use is dependent variable.

Table 1. The variables based on source and number of questions

Variables	Sources	Number of items
Perceived Usefulness (*independent variable*)	Liaw dan Huang (2011)	1
	Lin, Persada dan Nadlifatin (2014)	1
	Delone dan McLean (2003)	3
	Ho dan Dzeng (2010)	2
	Chiu dan Wang (2008)	1
	Hassanzadeh, Kanaani dan Elahi (2012)	1
	Islam (2014)	5
Attitude (*dependent variable*)	Liaw dan Huang (2011)	1
	Lin, Persada dan Nadlifatin (2014)	1

Methods of authenticating the content of the instrument used from two panels of experts in education. Intrinsic reliability was conducted in a pilot study with 30 lecturers. Alpha Cronbach's alpha recorded 0.886 for the use of contraception and 0.802 for lecturer attitudes. The final questionnaire was distributed to the study sample by email for a period of 2 months. The analysis of this study uses descriptive analysis and correlation. The interpretation of mean scores for descriptive analysis is shown as Table 2.

Table 2. Mean classification by scale

Mean scale	Level
3.67-5.00	High
2.34-3.66	Moderate
1.00-2.33	Low

(Jamil Ahmad, 2002)

RESULTS

The findings of this study describe descriptive analysis and inference to answer research questions 1 to 3. Hypothesis (Study Question 1): Perceived usefulness is positively related to the attitude of the lecturers for using e-learning. The mean score for construction items perceived usefulness was modest as the mean value was 3.32 while the standard deviation was 0.620.

Table 3. Perceived usefulness of MYGURU

Items	Total respondents (%)					Mean	Standard deviation
	SD	NA	NS	A	SA		

Able to motivate my learning and facilitating processes.	6 (2.4)	33 (13.3)	49 (19.8)	148 (59.7)	12 (4.8)	3.51	.872
Easy to use to communicate with students.	9 (3.6)	59 (23.8)	26 (10.5)	134 (54.0)	20 (8.1)	3.39	1.048
Network systems are not easy to down.	53 (21.4)	100 (40.3)	39 (15.7)	52 (21.0)	4 (1.6)	2.41	1.091
The system guarantees the storage of student assignment information and scores.	14 (5.6)	32 (12.9)	42 (16.9)	150 (60.5)	10 (4.0)	3.44	.963
The system is capable of storing large amounts of data.	16 (6.5)	47 (19.0)	75 (30.2)	104 (41.9)	6 (2.4)	3.15	.972
Easy to uploading the materials.	8 (3.2)	39 (15.7)	28 (11.3)	163 (65.7)	10 (4.0)	3.52	.918
Interface is interesting (color, font, saiz)	6 (2.4)	66 (26.6)	26 (10.5)	138 (55.6)	12 (4.8)	3.34	1.001
Access speed rates are sufficient.	17 (6.9)	95 (38.3)	28 (11.3)	106 (42.7)	2 (0.8)	2.92	1.056
Has the ability to deal with viruses / hackers.	6 (2.4)	16 (6.5)	182 (73.4)	40 (16.1)	4 (1.6)	3.08	.618
Helps save time on learning and programming.	4 (1.6)	33 (13.3)	43 (17.3)	156 (62.9)	12 (4.8)	3.56	.842
Help to improve my work performance.	12 (4.8)	67 (27.0)	47 (19.0)	106 (42.7)	16 (6.5)	3.19	1.057
It is an effective and efficient learning and facilitating tool.	9 (3.6)	32 (12.9)	33 (13.3)	166 (66.9)	8 (3.2)	3.53	.890
Internet-based and easy to access everywhere.	4 (1.6)	26 (10.5)	26 (10.5)	166 (66.9)	26 (10.5)	3.74	.843
To improve my learning and facilitation.	2 (0.8)	35 (14.1)	26 (10.5)	173 (69.8)	12 (4.8)	3.64	.813
	Total of mean					**3.32**	**0.620**

SD=Strongly Disagree, NA=Not Agree, NS=Not Sure, A=Agree, SA=Strongly Agree

Hypothesis (Study Question 2): Perceived usefulness is positively related to the attitude (A) of the lecturer for using e-learning. The mean score for the constructs of attitudes toward MYGURU use was modest as the mean value was 3.03 while the standard deviation was 0.941 (Table 4).

Table 4. Attitudes toward the use of MYGURU

Items **MYGURU**	**Total respondents (%)**					**Mean**	**Standard deviation**
	SD	**NA**	**NS**	**A**	**SA**		
It can be used by anyone without the need for expertise in computer skills.	10 (4.0)	60 (24.2)	41 (16.5)	117 (47.2)	20 (8.1)	3.31	1.051
Using it is the same as reading using a backboard.	33 (13.3)	89 (35.9)	40 (16.1)	79 (31.9)	7 (2.8)	2.75	1.125
	Total of mean					**3.03**	**0.941**

SD=Strongly Disagree, NA=Not Agree, NS=Not Sure, A=Agree, SA=Strongly Agree

Hypothesis (Study question 3): Perceived usefulness is positively related to the attitude of the lecturer to the used of learning management system.

The study found that 169 respondents had a negative attitude towards the used of learning management system. The remaining 97 people have positive attitudes. Table 5 shows the frequency, percentage and distribution of learning management system attitude scores on MYGURU.

Table 5. Frequency, percentages and distribution of learning management system attitude scores on MYGURU

Marks	Frequency	Percentages	Attitude	
2-5	62	25.0	Negative	169 (68.1%)
6	107	43.1	Negative	
7-10	79	31.9	Positive	97 (31.9%)
Total	**248**	**100.0**		

The results of the Spearman's correlation test showed that there was a significant positive and moderate relationship between perceived usefulness and lecturers' attitude, rs = .485 (p> .05). Therefore, the H1 hypothesis is accepted as the positive perception (PU) positively associated with (A) lecturers' attitudes toward the used of learning management system as presented in Table 6.

Table 6. The relationship between Perceived usefulness and attitude toward MYGURU

Variables	Perceived usefulness	Attitude
Perceived usefulness, *rs (spearman)*		.485**
Attitude towards the MYGURU, *rs (spearman)*	.485**	

**p<.05

DISCUSSION

The impression of usability on MYGURU is at a moderate level. Findings in line with Sakarji et al., (2019); Islam and Azad (2015) state that e-learning is positive which helps in efficient information retrieval. Accessibility gives MYGURU a high positive response from lecturers. This finding was supported by Fauzi and Azlyzae (2019); Taat and Francis (2020) state that the ability to use wireless to help access or learning is carried out regardless of location is one of the positive advantages of an application. The mean score for the lecturer's attitude is moderate to positive. This finding is in line with Cakir and Solak (2015); Fathema et al. (2015) who found that participants' perceived value of e-learning was positive. In addition, the attitude of lecturers through the use of MYGURU in UPSI was negative. This finding is contrary to Seyal and Rahman (2015); Hussien (2017) states that consumer attitudes towards the use of e-learning systems are positive. Based on the findings of the study, it was found that the significant relationship between perceived usefulness and attitude towards MYGURU use by respondents was UPSI lecturers. This finding is supported by Salloum et al. (2019); Sakarji et al. (2019) stated that the perceived usefulness of the lecturer has a positive relationship in influencing the attitude toward developing my intention.

The highest score for perceived usefulness of MYGURU is helps save time on learning and programming with mean value score of 3.56. MYGURU is an effective web based learning especially to cater huge number of class students, and all the evidence teaching and learning activities such as lecturer notes, assignment, forum, quiz and video conference is stored in MYGURU as well as for the long learning distance is efficient. E-learning helps manage the time of the instructor in implementing PdPc sessions with wireless usage capabilities regardless of place and time (Stapa, Ibrahim & Yusoff, 2017; Fauzi & Azlyzae, 2019; Taat & Francis, 2020). Thus, MYGURU provide blended learning tools, where not all the time lecturer have to meet the students for 14 weeks per semester. Instead of having lecturer via face to face with students, they can communicate with all the students via MYGURU platform to have lecture online, save the video lecture online, having forum with the students and easy to trace those students who attend the online class via MYGURU. While, the benefits for the university academic management, the MYGURU are able to monitor the lecturer activities in line with the Industrial Revolution 4.0 for education and accessible for the accreditation process where the MYGURU can retrieve al the evidences of teaching and learning activities. Therefore, the perceived usefulness of MYGURU not only satisfy of

saving time on learning and programming for the lecturer but also cater the needs of the student and university academic management.

The second highest mean score is 3.53 for perceived usefulness is an effective and efficient learning and facilitating tool. As the nation is moving towards to Industrial Revolution 4.0 for education, the teaching and learning can reach beyond classroom walls and connect your online class via single-touch on your smart phone or touch screen monitor. Based on Awani (2018), there are 25 million (80%) out of 31 million of Malaysia population active user for internet access and most of the youth today have smart phone. Therefore, the lecture is easy to reach the student via MYGURU platform not just during the formal class time for teaching and learning but can reach beyond classroom walls with active learning process and social learning. The lecturer have good management in facilitating the process of learning and teaching where easy to monitor the assignment submitted by the student. The assignment form can be essay writing, report writing, project, video (can be upload via Youtube link), online quiz and online game. On other hand, the online platform provide paperless environment and lecturer no longer have to spend so much time running copies or shuffling papers around and will have more time to teach and plan their lesson with more sustainable and efficient workflow.

While the perceived usefulness for easy to uploading the materials is the third highest mean score where lecture the do not have any problem to upload the teaching and learning documents and the students able to download the materials that they required. MYGURU can save the previous semester of lecture notes and carry forward for the next semester. The teaching and learning materials can be updated and replace with the latest version the used for the students. E-learning demonstrates positive uses and helps users to access information more efficiently online (Sakarji, Nor, Razali, Talib, Ahmad & Saferdin, 2019).

The lowest mean score (2.41) for PU is network systems are not easy to breakdown which fall under moderate level. The MYGURU is the process of upgrade the system in order to cater the latest technology in Learning Management System. MYGURU is not just good provide the software but required to have good hardware system especially the network systems and also have good security system to protect all the important data. Thus, the university also already used the feasibility of outsourcing the management of application performance from developers to cloud operators where the system is monitorless model to streamline application deployment by delegating performance management (Grohmann et al., 2019).

On the other hand, vise versa result for attitude towards the use of MYGURU where the mean value is 3.03 with modest level. However, the findings of the study participants' attitude towards the use of e-learning is modest, but may change in a positive manner if the learning management system meets current user needs (Cakir & Solak, 2015). Lecturers' attitudes toward technology and their impact on their work performance have been helpful in integrating technology that is more relevant to the teaching process (Elkaseh et al., 2015). The negative attitude can be solved, if the learning management system able to cater the hardware of the specification especially the internet and network. Consumer attitudes towards the use of the system remain positive and significant as consumers believe and believe that e-learning is best used for better information (Seyal & Rahman, 2015; Fathema, Shannon & Ross, 2015; Abidin & Husseini, 2014).

Based on the Spearman's correlation between the perceived usefulness and lecturers' attitude shows significant positive and moderate relationship towards the used of learning management system. Useful and easy-to-use perceptions are not a major factor in the formation of attitudes and in influencing intentions towards implementing e-learning systems (Hussien, 2017). However, different situations are shown when the notion of ease of use is an important construct for the usefulness and attitude of a technology. This is because when technology is difficult to use, no matter how functional it may be, users will not be attracted (Bungbeng-Andoh et al., 2019). In addition, the perception of technology's use affects users' attitudes and intentions to use them. This will determine the actual use of a technology system by an individual (Yoshida, 2016).

IMPLICATION

This study helps the management of UPSI to understand the MYGURU performance and integrate it into the system in line with the current needs of the lecturers especially launching learning and facilitating sessions. This is important because improving the quality of the system can improve the effectiveness of the learning process. In addition, this study helps the lecturer to state the actual performance of the existing MYGURU system for ICT in terms of its usefulness. This directly helps the lecturer use the

MYGURU without having difficulty in furthering each and every case of the learning process. This indirect effect will influence the perception and attitude of the lecturer and thus encourage the use of MYGURU more proactively. Furthermore, the study of MYGURU can also help students to use the MYGURU smoothly without the difficulty of applying it during the learning and facilitating process especially in obtaining information from lecturers.

CONCLUSION

The perceived of usefulness to the MYGURU generally plays a very important role in influencing the level of lecturer acceptance. Through feedback from the respondents, it was found that most respondents expressed agreement on the usefulness of the system. However, the level of attitude expressed by the lecturers is modest. Furthermore, the attitude towards the use of MYGURU certainly has a strong influence on the perceived usefulness of the lecturers. This can be seen when there is a positive relationship between the two attitude variables and their perceived usefulness. The successful factor of the used of MYGURU required a good software application that able to manage the administration, documentation, tracking, reporting, and delivery of educational courses and blended learning as well as have a good specification of hardware in term of provide stable data center or cloud system that stores the data in the public cloud which may exposed to security issues. In light of this, it was found that the notion of usefulness is very much related to the formation of the lecturer's attitude which in turn will determine the attitude of the lecturer whether positive or negative to the use of MYGURU at UPSI.

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