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FACTORS AFFECTING ACADEMICIANS' ACCEPTANCE ON E-LEARNING APPLICATION

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ABSTRACT

E-learning is a term used to describe the action of knowledge gained through a computer-networked environment. The readiness of an educator is one of the important factors affecting the success of online learning. The objective of this study is to determine factors that affect academicians in implementing online learning as their teaching style with the aim of supporting the development of content transmission in teaching and learning. The study design for this study was a cross-sectional study. An online questionnaire was distributed through the academicians' email and WhatsApp platforms. A total of 168 academicians were selected by using Proportionate Stratified Random Sampling where the population is divided into nine strata according to their faculties/academies. The variables involved were Gender, Educational Level and Working Experience, Computer Anxiety, Computer Self-Efficacy, Technological Complexity, Perceived Convenience, Perceived Usefulness and Perceived Ease of Use. Pearson Correlation test and Multiple Linear Regression were used as data analyses. There is a relationship between factors (computer self-efficacy, technological complexity, perceived convenience, perceived usefulness and perceived ease of use) and academicians' acceptance on E-learning. Factor such as perceived ease of use and perceived usefulness are significantly affecting the academicians' acceptance on E-learning. When the academicians perceived that online learning is ease to use and very useful, their acceptance on E-learning may increase. The further study was recommended to be done since this study found that computer self-efficacy, technological complexity and perceived convenience had relationship with academicians' acceptance on E-learning but not significantly contribute on it.

Keywords: E-learning, ease of use, usefulness, academicians' acceptance, multiple linear regress

INTRODUCTION

Electronic learning or E-learning is a term used to describe the action of knowledge gained through a computer-networked environment. Conferring to some scholars, E-learning or electronic learning is an approach that integrates learning with the use of emerging technologies in the learning process such as the internet, intranet, email, satellite broadcasting, audio or videotape, or compact disk read-only memory (CD-ROM). This takes place in a multitude of the learning process: Web-based learning, computer-based learning, and online courses (Salleh, 2008).

This has been pointed out regarding the effectiveness of E-learning in encouraging its use throughout university education and in developing skills for the emerging technology that clients will see in the workforce. The creation and introduction of E-learning have been a prerequisite for an academic institution in the last decade. This is because E-learning offers

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advantages to universities. Some of these benefits are lack of reliance on time limits, willingness to ask questions without shyness, and exposure to resources or materials from everywhere and anywhere (Rudy, as cited in Al-Rahmi, Othman, & Yusuf, 2015).

The 21st century is the age of online education. In addition, the corona virus outbreak (COVID-19) triggered the learning institutions to engage in E-learning as a result of the shutdown and closure of the university and school. As a consequence, learning process has changed dramatically, with a marked spike in E-learning currently happening digitally and on online platforms. There was still strong growth and penetration of education technology as well before COVID-19. In 2019, the global investment in technology hit US$18.66 billion. By 2025, the overall online education industry expected to reach US$350 billion. Whether it is language applications, video conferences, online tutoring, or online learning devices, there has been a substantial growth in use since COVID-19 (Li & Lalani, 2020).

Online learning has recently increased in other countries, with a higher rate of learners enrolling in online programs. India has developed a number of world-class educational programs that are expected to "carry US$ 1 billion in revenue by the end of the decade" leading the 1st position in the field of online learning across Asia. In the same study, China, with a long history of distance learning, was referred to as "home to nearly 70 online colleges" and expects the online learning industry to "develop by leaps and bounds over the next few years." In the United Kingdom, investment of 100 million pounds in online education has been proposed, with the expectation that it will make educational services more competitive and open to students. Online enrolment increased by almost 20% in Australia in 2012. In the next ten years, Australia is expected to become one of the leading online education providers (Phan & Dang, 2017).

As other countries, Malaysia shows an improvement in Information and Communication Technology (ICT) and positive trend for E-learning Technologies as well as E-learning Content creators over the coming years (News & Trillion, 2018). This has been implemented as a choice for all levels of education, particularly in higher education, where it is expected to play a major role. The dissemination of ICT has allowed established and future higher education systems in Malaysia to offer their educational opportunities to a broader marketplace and, in several cases, within geographical regions (Endut, Isa, Aziz, Jono, & Aziz, 2012).

Malaysia's leading higher learning university, Universiti Teknologi MARA (UiTM) has experienced tremendous growth since its inception in 1956. Organization of the institution is optimistic of the prospects of technology, specifically the availability of internet access, E-learning could be the solution to the growth of the university's student population over time and to the development of continuous learning by reaping the benefits of the technological opportunity. Education will now stretch far past the classroom in a hybrid world driven by immersive E-learning technologies. Academicians will also make all education material accessible on the internet for their students, as well as develop online events and discussions to enhance students' comprehension and promote deeper learning. Also, moving some tasks online, e.g. lectures, presentations, announcements, assessment as well as tutorials and online classroom discussion not just to decreases building requirements but also increases productivity, as information devices of technologies are much easier, inexpensive to manufacture, copy, disseminate, evolve as well as exchange than other formats anytime (Endut et al., 2012).

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E-learning is being marketed as a mode of distance learning as the educational medium of the future (Yiong, Sam, & Wah, 2008). However, in this context, the main concern of any implementation of any new technology at universities is the readiness and acceptance of lectures to embark on any new technology used in universities. This new COVID-19 pandemic is changing not just the use of technologies in education, but also pedagogy methods in the future. Some of them will have doubts regarding how to incorporate pedagogical elements of their teaching with the usage of electronic educational resources because there is disengagement in the learning process between pedagogy and technology.

REVIEW OF LITERATURE

Acceptance of E-learning Application

According to Rusdin (2018), teachers show significant support on the ability of their pupils to assess their E-learning skills during 21st century. This is also confirmed by Veloo, Krishnasamy, and Md-Ali (2015), where their respondents decided reasonably on the application of the assessment. They realize that the evaluation of 21st-century learning involves assessing many skills and not just with paper-pencil examination. In addition, based on Cheok, Wong, Ayub, and Mahmud (2017), Malaysian's teachers agreed that E-learning helps them make their teaching work simpler than the conventional approach and they enjoyed E-learning techniques.

A study conducted by Ali (2020) found that worldwide universities are shifting further into E-learning and apart from educators' acceptance, they are willing to implement online learning as it will make a huge impact on their students' life. According to Alhumaid, Ali, Waheed, Zahid and Habes (2020), there is a significant relationship between technology acceptance among educators and online learning.

Gender, Educational Level and Working Experience

According to Attis (2014) and Kisanga (2016), gender did not significantly contribute to the acceptance of online learning. Kisanga (2016) also stated that educators' experience and educational level have no significant difference towards online learning. A study by Teo (2014) which consists of 673 primary and secondary school teachers found that teachers with longer years of teaching service would find the utilization of technology to be difficult. Another study by Liu, Jones, and Sadera (2010) found that teachers with a master's degree had significantly higher scores in familiarity of instructional practices, theory and research knowledge, and perception of the effectiveness of the practices than those who had a bachelor's degree. According to Park and Choi (2009), as cited by Hung (2016), the decision to give up on online courses might come from the level of education among adult learners or teachers-as-learners. A sequence of tests by Hung (2016) was done with 248 teachers as respondents and found that education levels to be correlated with differences in teachers' readiness for online courses since there is a significant difference in mean scores of communication self-efficacy and learning-transfer self-efficacy.

Researchers define experience as the level of online teaching experience for the participant. It is also measured by the total number of years taught by the participant online or the total number of years taught in a traditional setting (Attis, 2014). The study found that the

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working experience significantly contributes to the acceptance in E-learning. It is also found that the longer online teaching years, the higher the teachers' acceptance level. Acceptance of online learning, however, has been found low for older teachers. Coman, Tiru, Mesesan-Schmitz, Stanciu, and Bularca (2020) found that some disadvantages of teachers in teaching online might come from the lack of teachers' experience in using E-learning in which they had to adapt their teaching style to the new conditions. Furthermore, Watkins, 2005, recommended that two important abilities for success in E-learning were the adaptation of classroom teaching skills and applying new E-learning skills. However, a study by Eslaminejad, Masood, and Ngah (2010) discovered that there was no significant association found between teaching experiences and technical E-learning readiness.

Computer Anxiety

Depending on the theory of language learning, anxiety is correlated with "feelings" of discomfort, annoyance, self-doubt, fear, or concern (Brown, 2000). This is in line with Chang (2005), stated that computer anxiety as a problem. Teachers have a sense of anxiety, uncertainty, and fear in dealing with ICT devices or uneasiness in spite of adverse effects from computer-related operations.

Study by Hong and Koh (2014) found that school educators in Malaysia had lower mean of computer anxiety and attitude towards computer. Negative association between attitude towards computer and computer anxiety was found in this study. Compared to educators who had fewer computer experience, educators who had more computer experience and having their owned computer were tend to accept E-learning.

According to Attis (2014), computer anxiety was not an important contributor factor to the acceptance of E-learning among teachers. A negative relationship was indicated between computer anxiety and acceptance of E-learning. Acceptance of E-learning decreases as computer anxiety increased. The teachers will have a negative attitude towards his or her cognitive willingness to accept or adopt E-learning when he or she anticipates nervousness or fear when using E-learning (Al-alak & Almnawas, 2011).

Computer Self-Efficacy

Self-efficacy can be defined as the trust and expectation of an individual in his or her capability to complete a task. If the individual's confidence in the use of computers is self-efficacy of the computer. Self-efficacy of the Internet is described as the confidence that Internet users have in them when using the Internet (Engin, 2017). Aypay, Celik, and Sever (2012), stated that computer self-efficacy is not an indicator factor of E-learning acceptance. Whereas, study done by Ismail, Mahmud, Nor, Ahmad, and Rahman (2011) stated that the mean score of computer self-efficacy (CSE) of 330 teachers in Malaysia to use the online education is moderate. The findings conclude that CSE of teachers may help to influence their perception of online education.

Self-efficiency is commonly accepted as a core consideration for the recognition of knowledge technologies, such as E-learning (Al-Busaidi & Al-Shihi, 2010). Ball and Levy (2008) found that computer self-efficacy is an important indicator of the acknowledgment of E-learning by higher education academicians. Number of studies also have found a positive

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association between computer self-efficacy and acceptance of E-learning. (Amin, 2007; Park, 2009; Rusu & Shen, 2011; Wong, Teo, & Russo, 2012).

Technological Complexity

Rogers (2002) imparted that "complexity is how difficult it is to recognize and use a technology invention". Technological complexity depends on "expectations of using a system rather than system expectations themselves" (Hasan, 2007). As the use of a program becomes harder to use or understand, Hasan (2007) indicated that the system users may begin to have doubts regarding their ability to use the system effectively. According to Nikian, Nor, and Aziz (2013), Malaysian educators see the benefits in technology and intend to use it in their classroom, even though they experience some difficulty in implementing technologies in their classroom.

Aypay et al. (2012) showed that, technological complexity has been reported to have no impact on structures related to system acceptance (e.g. perceived usefulness, social influence, and perceived satisfaction). The study also found that the technological complexity significantly contributed to the E-learning acceptance with negative association. Acceptance of E-learning decreases as technological complexity increases (Attis, 2014). Other research yielded favorable findings revealed that technological complexity had a clear and important effect upon behavior towards computer usage, perceived usefulness, and perceived ease of usage (Teo, 2010, 2012).

Perceived Convenience

According to Yoon and Kim (2007), perceived convenience towards online learning applications can be defined as the degree of convenience towards time, place, and performance that the users are aware of when using the online education system to perform a task. The online learning acceptance was found to have a higher perceived convenience and significantly influenced on E-learning readiness (Attis, 2014). In addition, this study found that teachers' perceptions on E-learning is positive because they felt a high degree of convenience towards E-learning tasks in time, place, and implementation. Getting exposure to the E-learning systems, therefore, increases acceptance towards it.

According to Aguilera-Hermida (2020), during the pandemic COVID-19 people need to stay at home and all the education needs to be done in an online form. In comparison with before pandemic COVID-19, respondents reported a more frequent use of online learning technology after the stay-at-home order as it is more convenient to implement it.

Perceived Usefulness

Perceived usefulness is a condition where the user believes that the way of their actions will be practical to their performance at work. For example, if an academician thinks that online learning comes with a benefit to their task, then they would willingly accept online learning. The aforementioned benefits include encouraging the performance and participation of students, and helpful for efficient instruction. Perceived usefulness is the feeling that academicians should carry toward the benefits of the online learning system.

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According to Tabak and Nguyen (2013), there is a positive relationship between perceived usefulness and online learning acceptance. It is also found that the higher the perceived usefulness, the higher the acceptance in participants towards online learning.

Haron (2012), stated that perceived usefulness has a major association with online learning adoption. The perceived usefulness is one of the significant constructs that have driven E-learning adoption. The blended learning was embraced by educators because they found that the technology to be beneficial to the teaching and learning process.

Study conducted by Aristovnik (2016), stated that Perceived Usefulness had a significant impact on the mean online acceptance.

Perceived Ease of Use

Perceived ease of use is the scope the user feels the effort applied to the system will be minimal. Users may not want to take part in the behavior of the user believes that the effort they applied to use online learning will be challenging. Therefore, perceived ease of use refers to the level of easiness that the user feels when using an online learning system, Davis (1989). Six-item information technology-system acceptance scale is used to construct perceived ease of use (Yoon & Kim, 2007).

Al-Busaidi and Al-shihi (2011) expressed that constant aim to web-based learning use is controlled by perceived usefulness and satisfaction. The instructor acceptance to utilize the E-learning is significantly contribute by perceived ease of use. The more the instructor is satisfied with LMS (Learning Management System), the more likely it is that they will continue to use it. According to Haron (2012), there is a significant relationship between perceived use and academicians' acceptance towards E-learning.

According to Abdullah and Toycan (2017), there is a positive relationship between perceived use and attitude towards E-learning. In addition, the stated that, when the perceived ease of use of E-learning is an increase, positive attitude toward E-learning will be increased.

RESEARCH METHODOLOGY

The cross-sectional study design was conducted among academicians in Universiti Teknologi MARA Cawangan Kelantan (UiTMCK) in session 2020. The sampling frame was all academicians from seven faculties and two academies who are actively teaching in year 2020. For those who are not actively involved in teaching and learning in year 2020, for example, the academicians that are taking leave for pursuing study were excluded in this study. The total population that involved in this study were 355 academicians. A proportionate stratified random sampling was used to enroll a random sample of 96 academicians.

A self-administered online questionnaire was used as a method of data collection. The questionnaire was transformed into an online questionnaire through Google Form and was distributed it to the selected respondents using respondent's email or WhatsApp. The pilot study was conducted on December 2020 among 20 academicians. Based on the feedback from the respondents, some of the questions were modified for the actual study. The questionnaire was divided into eight sections: Section A for demographic profile (Gender, Educational Level and Working Experience); Section B (Computer Anxiety); Section C (Computer Self-Efficacy); Section D (Technological Complexity); Section E (Perceived Convenience); Section F (Perceived Usefulness); Section G (Perceived Ease of Use); and Section H (Academicians'

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Acceptance for E-learning Application). For Section B to Section H, the items have been measured by using a 10-Likert scale, from strongly agree to strongly disagree. The questionnaire was adapted from Attis (2014) and Styarini (2018). Table 1 summarized the number of item for each section.

Table 1: Summary of the questionnaire by section

Section	Construct	Number of Items
A	Demographic Profile (Gender, Educational Level, Working Experience)	3
B	Computer Anxiety	12
C	Computer Self-Efficacy	10
D	Technological Complexity	4
E	Perceived Convenience	4
F	Perceived Usefulness	6
G	Perceived Ease of Use	6
H[a]	Academicians' Acceptance on E-learning Application	8

Notes: [a]Dependent Variable

RESEARCH FINDINGS

Data processing and analysis was carried out using Statistical Package for Social Sciences (SPSS) Version 23. The reliability analysis was used to test the stability and consistency of the items in the questionnaire and it demonstrate how well the items measuring the concept. For categorical variables, frequency and percentages were used to describe the data. Meanwhile, all results were given as mean and standard deviation for continuous variables. Pearson Correlation test was performed to determine the relationships between factors (computer anxiety; computer self-efficacy; technological complexity; perceived convenience; perceived usefulness; perceived ease of use) and the academicians' acceptance of E-learning applications. All the assumptions for Pearson Correlation test such as normality distribution, linearity relationship and no significant outliers were checked before the test was performed. Multiple linear regression with stepwise variable selection procedure was used to determine the factors associated with academicians' acceptance on E-learning application. The significant variables were checked for multicollinearity. The assumptions of multiple linear regression, significant of the regression model and model adequacy were assessed. The estimated multiple linear regression model was shown in Eq. (1).

$$\hat{Y} = \hat{\beta}_0 + \hat{\beta}_1 X_1 + \hat{\beta}_2 X_2 + \hat{\beta}_3 X_3 + \hat{\beta}_4 X_4 + \hat{\beta}_5 X_5 + \hat{\beta}_6 X_6 + \hat{\beta}_7 X_7 + \hat{\beta}_8 X_8 + \hat{\beta}_9 X_9 + \hat{\beta}_{10} X_{10} \quad (1)$$

Where:

X_1: Gender
X_2: Educational level
X_3: Working experience (1)
X_4: Working experience (2)
X_5: Computer anxiety
X_6: Computer self-efficacy
X_7: Technology complexity
X_8: Perceived convenience
X_9: Perceived usefulness
X_{10}: Perceived ease of use

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The level of categorical variable for this study summarized in Table 2.

Table 2: Levels of categorical Variable

Variable	Categories
Gender	0 = Male 1 = Female
Educational level	0 = Master's degree 1 = Doctoral degree
Working experience (1)[a]	0 = Others 1 = >10 to 21 years
Working experience (2)[a]	0 = Others 1 = >21 years

Notes: [a]Reference for working experience is 1 to 10 years

A two-sided hypotheses testing was used in all analysis with $p < 0.05$ was considered statistically significant.

Reliability Test

Table 3 shows the reliability test of the pilot and actual study. The Cronbach's Alpha Coefficient of the pilot study is in the range of 0.755 to 0.982 which indicate that the internal consistency for all construct varies from acceptable to excellent. Meanwhile the Cronbach's Alpha Coefficient of actual study is in the range of 0.810 to 0.976 which indicate that the internal consistency for all construct were good and excellent.

Table 3: Reliability Analysis for Pilot and Actual Study

Construct	Cronbach's Alpha for Pilot Study	Cronbach's Alpha for Actual Study
Academicians' Acceptance on E-learning Application[a]	0.976	0.972
Computer Anxiety	0.982	0.976
Computer Self-Efficacy	0.899	0.844
Technological Complexity	0.755	0.810
Perceived Convenience	0.915	0.884
Perceived Usefulness	0.953	0.927
Perceived Ease of Use	0.975	0.926

Notes: [a]Dependent Variable

Descriptive Statistics

Total respondents in this study were 96 academicians. Majority of respondents were female with 85.42% of total number of respondents. The percentage of academicians with experience 1 to 10 years is 32 academicians with a percentage of 33.3%. The number of academicians with more than 10 years to 21 years is 52 with the percentage of 54.2%. Lastly, academicians with more than 21 years working experience have a frequency of 12 academicians and the percentage is 12.5%. Hence, the academicians with more than 10 to 21 years of working experience have the highest frequency and the academicians with more than 21 years have the least frequency. About 82.29% or 79 of respondents had Master's degree.

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Table 4 summarized the quantitative variables based on mean and standard deviation the mean score of academicians' acceptance on E-learning application, perceived convenience and perceived usefulness were above eight. The mean score for computer self-efficacy and perceived ease were less than eight. Meanwhile, the mean score for computer anxiety and technological complexity approximately low which is less than six.

Table 4: Descriptive Statistic of Quantitative Variables

Variable	**Mean (*SD*)[b]**
Academicians' Acceptance on E-learning Application[a]	8.12 (1.38)
Computer Anxiety	5.40 (2.22)
Computer Self-Efficacy	7.53 (1.24)
Technological Complexity	5.41 (1.86)
Perceived Convenience	8.37 (1.34)
Perceived Usefulness	8.00 (1.29)
Perceived Ease of Use	7.93 (1.25)

Notes: [a]Dependent Variable; [b]*SD*=Standard Deviation

Pearson Correlation Test

Table 5 shows the relationship between academicians' acceptance and quantitative factors based on Pearson Correlation coefficient. The test can be performed since the assumption of normality, linearity and no significant outliers was met. All variables have significant relationship with academicians' acceptance except computer anxiety. It can be concluded that technological complexity had weak negative relationship with academicians' acceptance. While, perceived convenience, perceived usefulness and perceived ease of use significantly had positive strong relationship with academicians' acceptance on E-learning application.

Table 5: Pearson Correlation coefficient

Variable[a]	**Correlation Coefficient**	***p*-value**
Computer Anxiety	-0.131	0.204
Computer Self-Efficacy	0.338	0.001
Technological Complexity	-0.255	0.012
Perceived Convenience	0.761	<0.001
Perceived Usefulness	0.838	<0.001
Perceived Ease of Use	0.847	<0.001

Notes: [a]Dependent Variable= Academicians' Acceptance on E-learning Application

Multiple Linear Regression

The regression model obtained in this study was statistically significant with *p*-value less than 0.001. The model was adequate since the assumption of normality of residuals, linearity, independent of residuals, and homoscedasticity for the model was met. The multicollinearity does not exists among the significant variables since the value of Variance Inflation Factor (VIF) and tolerance were satisfied which were smaller than 10 and larger than 0.1 respectively for each variable. Moreover, about 83.0% ($R^2 = 0.830$) of the variability in the academicians' acceptance can be explained by the variability in the independent variables (perceived

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usefulness and perceived ease of use). Meanwhile, the 17% of total variation can be explained by other factors. Since the *R* Squared value is more than 75%, it can be concluded that the model explains well the academicians' acceptance on E-learning.

Table 6 shows that, there are two factors found to be associated with the academicians' acceptance on E-learning which were perceived usefulness, and perceived ease of use. It can be concluded that for every 1-unit increase in means of perceived usefulness and perceived ease of use, means of academicians' acceptance on E-learning application will increase by 0.561 and 0.512 respectively.

Table 6: Regression Coefficient of the Regression Model

Variable	***Beta Coefficient***	***t*- statistics**	***p*- value**
Constant	-0.425	0.406	0.298
Perceived Usefulness	0.561	0.067	<0.001
Perceived Ease of Use	0.512	0.065	< 0.001

Notes: Multiple Linear Regression (R^2=0.830; the model is fit; model assumption are met; no multicollinearity problem)

Hence, the estimated regression models for this study are shown in Eq.(2).

$$\hat{Y} = -0.425 + 0.561 X_1 + 0.512 X_2 \quad (2)$$

Where:

X_1: Perceived usefulness

X_2: Perceived ease of use

DISCUSSION

This study found that there was a significant linear relationship between computer self-efficacy, technological complexity, and perceived ease of use, perceived convenience, and perceived usefulness toward academicians' acceptance of E-learning. However, only computer anxiety was found do not has relationship with academicians' acceptance. This is contra with study done by Hong and Koh (2014); Attis (2014); and Al-alak and Almnawas (2011), which found there was a negative association between these variables. Few studies also found that the computer self-efficacy had significant relationship with acceptance of E-learning (Amin, 2007; Park, 2009; Rusu & Shen, 2011; Wong et al., 2012). Aypay et al. (2012) and Attis (2014) also stated that technological complexity and E-learning acceptance have significant negative relationship. On related with significant relationship between perceived usefulness and E-learning acceptance, Tabak and Nguyen (2013) also had similar findings with this study. The study done by Haron (2012) and Abdullah and Toycan (2017) also stated that there is a significant relationship between perceived ease of use and E-learning acceptance.

Based on this study findings, the most contributing factors to the academicians' acceptance toward E-learning are perceived usefulness and perceived ease of use. All others variables were found not significantly contribute to the model. It can be supported from the

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research by Elkaseh et al. (2016). The study showed that perceived usefulness and perceived ease of use were considered to be significant factors in forecasting student' and educator' behavioral intentions to use and accept E-learning in higher education. Moreover, Haron et al. (2012) and Aristovnik (2016) also found that perceived usefulness had influenced the adoption of blended learning. Meanwhile, Al-Busaidi and Al-shihi (2011) found that the E-learning is significantly contribute by perceived ease of use, which is the same with this study finding. Sharing the same finding with Aypay et al. (2012), the self-efficacy is not an indicator factor on E-learning acceptance. As found in the study by Attis (2014) and Kisanga (2016), gender was found as insignificant factor in predicting acceptance of online learning. Kisanga (2016), also stated that educational and working experience factors, does not give an impact to acceptance of online learning.

CONCLUSION

In conclusion, there is a significant relationship between factors (computer self-efficacy, technological complexity, perceived convenience, perceived usefulness and perceived ease of use) and academicians' acceptance on E-learning. Factor such as perceived ease of use and perceived usefulness are significantly affecting the academicians' acceptance on E-learning. When the academicians perceived that online learning is ease to use and very useful, their acceptance on E-learning may increase. When an individual who feels adopting technology is simple, useful and easier, they intend to use E-learning. Most of the academicians prefer to adopt technology as they consider its usefulness. The future studies were recommended to be done since this study found that computer self-efficacy, technological complexity and perceived convenience had relationship with academicians' acceptance on E-learning but not significantly contribute on it. Since this study has a limited sample which were taken only from academicians at UiTM Cawangan Kelantan, future research needs to broaden the population characteristics by considered academicians from other institutions.

REFERENCES

Abdullah, M. S., & Toycan, M. (2017). Analysis of the factors for the successful e-learning services adoption from education providers' and students' perspectives: A case study of private universities in Northern Iraq. *EURASIA Journal of Mathematics, Science and Technology Education*, *14*(3), 1097-1109.

Aguilera-Hermida, A. P. (2020). College students' use and acceptance of emergency online learning due to Covid-19. *International Journal of Educational Research Open*, *1*, 100011.

Al-alak, B. A., & Alnawas, I. A. (2011). Measuring the acceptance and adoption of e-learning by academic staff. *Knowledge Management & E-Learning: An International Journal*, *3*(2), 201-221.

Al-Busaidi, K. A., & Al-Shihi, H. (2010). Instructors' acceptance of learning management systems: A theoretical framework. *Communications of the IBIMA*, *2010*(2010), 1-10.

Al-Busaidi, K.A., & Al-Shihi, H. (2011). Key factors to instructors' satisfaction of learning management systems in blended learning. *Journal of Computing In Higher Education*, *24*(1), 18-39.

Al-Busaidi, K. A., & Al-Shihi, H. (2012). Key factors to instructors' satisfaction of learning management systems in blended learning. *Journal of Computing in Higher Education*, *24*(1), 18-39.

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Alhumaid, K., Ali, S., Waheed, A., Zahid, E., & Habes, M. (2020). COVID-19 & Elearning: Perceptions &Attitudes of Teachers towards E-Learning Acceptance in the Developing Countries. *Multicultural Education*, *6*(2).

Al-Rahmi, W. M., Othman, M. S., & Yusuf, L. M. (2015). The effectiveness of using e-learning in Malaysian higher education: A case study Universiti Teknologi Malaysia. *Mediterranean Journal of Social Sciences*, *6*(5), 625-625.

Ali, W. (2020). Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *Higher Education Studies*, *10*(3), 16-25.

Amin, H. (1970). Internet banking adoption among young intellectuals. *The Journal of Internet Banking and Commerce*, *12*(3), 1-13.

Aristovnik, A., Keržic, D., Tomaževic, N., & Umek, L. (2016). Determining Factors of Students' Perceived Usefulness of E-Learning in Higher Education. *International Association for Development of the Information Society*.

Attis, J. (2014). An investigation of the variables that predict teacher e-learning acceptance.

Aypay, A., Celik, H. C., & Sever, M. (2012). Technology Acceptance in Education: A Study of Pre-Service Teachers in Turkey. *Turkish Online Journal of Educational Technology-TOJET*, *11*(4), 264-272.

Ball, D. M., & Levy, Y. (2008). Emerging educational technology: Assessing the factors that influence instructors' acceptance in information systems and other classrooms. *Journal of Information Systems Education*, *19*(4), 431.

Brown, H. D. (2000). *Principles of language learning and teaching* (Vol. 4). New York: Longman.

Chang, S. E. (2005). Computer anxiety and perception of task complexity in learning programming-related skills. *Computers in Human Behavior*, *21*(5), 713-728.

Cheok, M. L., Wong, S. L., Ayub, A. F., & Mahmud, R. (2017). Teachers' perceptions of e-learning in Malaysian Secondary Schools. *Malaysian Online Journal of Educational Technology*, *5*(2), 20-33.

Coman, C., Țîru, L. G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M. C. (2020). Online Teaching and Learning in Higher Education during the Coronavirus Pandemic: Students' Perspective. *Sustainability*, *12*(24), 10367.

Daud, M. Y., Khalid, F., Ahmad, M., Abd Rahman, M. J., & Karim, A. A. (2016). "To Participate or Not?": Identifying the Factors Affecting University Students' Participation in an e-Forum. *Creative Education*, *7*(18), 2791-2802.

Elkaseh, A. M., Wong, K. W., & Fung, C. C. (2016). Perceived ease of use and perceived usefulness of social media for e-learning in Libyan higher education: A structural equation modeling analysis. *International Journal of Information and Education Technology*, *6*(3), 192.

Endut, A., Isa, P. M., Aziz, S. R. A., Jono, M. N. H. H., & Aziz, A. A. (2012). E-Learning for Universiti Teknologi MARA Malaysia (UiTM): Campus wide implementation and accomplishments. *Procedia-Social and Behavioral Sciences*, *67*, 26-35.

Engin, M. (2017). Analysis of Students' Online Learning Readiness Based on Their Emotional Intelligence Level. *Universal Journal of Educational Research*, *5*(n12A), 32-40.

Eslaminejad, T., Masood, M., & Ngah, N. A. (2010). Assessment of instructors' readiness for implementing e-learning in continuing medical education in Iran. *Medical teacher*, *32*(10), e407-e412.

Haron, H., Abbas, W. F., & Abd Rahman, N. A. (2012). The adoption of blended learning among Malaysian academicians. *Procedia-Social and Behavioral Sciences*, *67*, 175-181.

Hasan, B. (2007). Examining the effects of computer self-efficacy and system complexity on technology acceptance. *Information Resources Management Journal (IRMJ)*, *20*(3), 76-88.

Hong, K. S., & Koh, C. K. (2002). Computer anxiety and attitudes toward computers among rural secondary school teachers: A Malaysian perspective. *Journal of Research on Technology in Education*, *35*(1), 27-48.

Special Issue: Vol. 18. No.4 (2021). 78-91. ISSN: 1823-884x
Theme: New Media, Culture anda Social Learning

Hung, M. L. (2016). Teacher readiness for online learning: Scale development and teacher perceptions. *Computers & Education*, *94*, 120-133.

Ismail, N. S., Bakar, N. M. A., & Wafa, S. W. W. S. S. T. (2020). Online Learning Challenges during Pandemic COVID-19 in Malaysian Higher Learning Institution. *Universal Journal of Educational Research*, *8*(12), 7151-7159. 10.13189/ujer.2020.081282

Ismail, M. A., Mahmud, R., Nor, N. M., Ahmad, J., & Rahman, M. J. A. (2011). Computer Self Efficacy: Teacher Readiness in Accepting Malaysian EduwebTV.

Kisanga, D. (2016). Determinants of teachers' attitudes towards e-learning in Tanzanian higher learning institutions. *International Review of Research in Open and Distributed Learning: IRRODL*, *17*(5), 109-125.

Li, C., & Lalani, F. (2020, April). The COVID-19 pandemic has changed education forever. This is how. In *World economic forum* (Vol. 29).

Liu, L., Jones, P. E., & Sadera, W. A. (2010). An investigation on experienced teachers' knowledge and perceptions of instructional theories and practices. *Computers in the Schools*, *27*(1), 20-34.

News, N. and Trillion, M. (2018). Malaysia's E-Learning Income Is Expected to Exceed USD 2 Trillion – the Daily Blaze. Retrieved from https://www.thedailyblaze.com/malaysias-e-learning-income-is-expected-to-exceed-usd-2-trillion/

Nikian, S., Nor, F. M., & Aziz, M. A. (2013). Malaysian teachers' perception of applying technology in the classroom. *Procedia-Social and Behavioral Sciences*, *103*, 621-627.

Park, S. Y. (2009). An analysis of the technology acceptance model in understanding university students' behavioral intention to use e-learning. *Journal of Educational Technology & Society*, *12*(3), 150-162.

Park, J. H., & Choi, H. J. (2009). Factors influencing adult learners' decision to drop out or persist in online learning. *Journal of Educational Technology & Society*, *12*(4), 207-217.

Phan, T. T. N., & Dang, L. T. T. (2017). Teacher readiness for online teaching: A critical review. *International Journal Open Distance E-Learn. IJODeL*, *3*(1), 1-16.

Radin Salim, K., Abdullah, M., Liza Ali, N., & Ali, R. (2018). Usage of Online Learning Resources among Academic Staff at a Malaysian University. *International Journal of Engineering & Technology*, *7*(3), 1.10.14419/ijet.v7i3.30.18143

Rogers, E. M. (2002). Diffusion of preventive innovations. *Addictive behaviors*, *27*(6), 989-993.

Rusu, R. F., & Shen, K. N. (2011). An empirical study on e-banking acceptance in the United Arab Emirates (UAE).

Rusdin, N. M. (2018). Teachers' readiness in implementing 21st century learning. *International Journal of Academic Research in Business and Social Sciences*, *8*(4), 1293-1306.

Salleh, M. F. M. (2008). E-learning issues in Malaysian higher education.

Setyarini, M. C. E. (2018). Understanding Teachers' Computer Anxiety. *ETERNAL (English Teaching Journal)*, *6*(1).

Tabak, F., & Nguyen, N. T. (2013). Technology acceptance and performance in online learning environments: Impact of self-regulation. *Technology*, *9*(1), 116-130.

Teo, T. (2010). Development and validation of the E-learning Acceptance Measure (ElAM). *The Internet and Higher Education*, *13*(3), 148-152.

Teo, T. (2012). Modelling the Influences of Beliefs on Pre-Service Teachers' Attitudes towards Computer Use. *European Journal of Educational Research*, *1*(1), 13-22.

Teo, T. (2014). Unpacking teachers' acceptance of technology: Tests of measurement invariance and latent mean differences. *Computers & Education*, *75*, 127-135.

Veloo, A., Krishnasamy, H. N., & Md-Ali, R. (2015). Teachers' Knowledge and Readiness towards Implementation of School Based Assessment in Secondary Schools. *International Education Studies*, *8*(11), 193-203.

Watkins, R. (2005). Preparing e-learners for online success. *Learning Circuits: ASTD*. Retrieved from http://www.learningcircuits.org/2005/Watkins.htm.

Special Issue: Vol. 18. No.4 (2021). 78-91. ISSN: 1823-884x
Theme: New Media, Culture anda Social Learning

Wong, K. T., Teo, T., & Russo, S. (2012). Influence of gender and computer teaching efficacy on computer acceptance among Malaysian student teachers: An extended technology acceptance model. *Australasian Journal of Educational Technology*, *28*(7).

Yiong, B. L. C., Sam, H. K., & Wah, T. K. (2008). Acceptance of e-learning among distance learners: A Malaysian perspective. In *Proceedings: Ascilite Conference*.

Yoon, C., & Kim, S. (2007). Convenience and TAM in a ubiquitous computing environment: The case of wireless LAN. *Electronic Commerce Research and Applications*, *6*(1), 102-112.

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