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The Relationship between Online Learning Acceptance and Emotional Well-Being among Undergraduates

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Abstract

Although online learning promotes many advantages, especially in adapting to the spread of the COVID-19 pandemic, minimal studies have examined the influence of online learning on undergraduates' emotional well-being. This study is crucial to prevent the adverse effects on emotional well-being such as depression, low self-esteem, and lack of self-efficacy, contributing to suicidal thoughts. In attempting to examine the factors that affect students' emotional well-being, this study utilized and extended Technology Acceptance Model (TAM) by adding emotional well-being as a new variable. This study aims to 1) investigate the predicting factors that contribute to online learning acceptance among undergraduates, and 2) examine the relationship between the actual use of online learning and emotional well-being among undergraduates. Online survey research and cross-sectional data were employed to test the conceptual framework and developed hypotheses. The respondents consisted of undergraduates from Universiti Teknologi MARA Pahang who underwent online learning. Structural equation modeling (SEM) was performed in this analysis to test the measurement model and to evaluate the hypotheses. The study found that all the predicting factors had a significant relationship with online learning acceptance except for perceived usefulness. Furthermore, the use of online learning has a significant relationship with emotional well-being whereby the students are able to adapt and feel convenient with the new learning method. The findings of this study are expected to assist educators or instructors in understanding the factors that contribute to online learning acceptance among undergraduate students and conducting their online learning in a way that may not be harmful to students' emotional well-being.

Keywords: Emotional Well-being, Online Learning, Perceived Usefulness, TAM Model.

Introduction

Online learning was not instigated by the outbreak of the COVID-19 pandemic which hit the world recently as this concept was introduced decades ago. Online learning is often referred to as e-learning, distance learning, and even virtual learning. It can be defined as a technological platform that enables learning experiences among students to learn at their own pace and time through the usage of the Internet (Solangi et al., 2018). COVID-19 has prompted the whole world to temporarily shift to full utilization of distance learning as the most convenient alternative for education. Online learning systems are rapidly becoming an integral part of the teaching and learning process. Most universities have implemented online teaching and learning to ensure the smooth running of the current academic calendar. Online teaching methods allow lecturers to teach using a variety of video conferencing platforms such as Zoom, WebEx, Microsoft Teams and Google Meet that enable students to learn anywhere. Many advantages can be obtained from online learning such as flexible schedule and environment, convenience and accessibility, customization and outsourcing, and cost-effectiveness.

Regardless of the advantages of online learning for students and institutions, the need to evaluate the students' emotional well-being towards online learning still exists. The understanding of how people respond and react to the new norm of life including educational activities is still insufficient. As such, the ways students respond to online learning emotionally during pandemic remain unknown and under-explored by researchers. Emotional well-being encompasses emotional quality when an individual is experiencing a positive or negative situation. The ability to deal and cope with stress can make them enjoy their lives and achieve the desired goals. On the other hand, the failure to control emotions will bring many adverse effects such as depression, anxiety, and stress which can all affect mental and emotional health and day-to-day living. Many university students are struggling in managing their time for studying and completing assignments to meet deadlines, and they worry that online learning will affect their academic performance which will lead to depression, loss of motivation, and loss of interest in learning. Furthermore, some students get stressed due to technical problems such as Internet access disruptions, unfamiliarity with the platform and the systems used, teaching mediums that are not user-friendly, and lack of support from families and lecturers. These arguments illustrate that there is a need to examine students' emotional well-being towards online learning. This means that if emotional well-being issues are not addressed immediately, it will cause emotional instability that can lead to adverse effects such as stress, depression, low self-esteem, and poor self-efficacy, as a result of challenges and issues in online learning (Nurtjahjanti et al., 2021; Saade et al., 2017; Sim et al., 2020).

In attempting to examine factors that affect students' emotional well-being, this study utilized and extended the Technology Acceptance Model (TAM) by incorporating emotional well-being as a new variable. TAM is the most widely applied model of users' acceptance and usage of technology, which is influenced by perceived ease of use, perceived usefulness, and attitude. TAM encompasses vital behavioral elements and assumes that when someone forms an intention to act, they will be free to act without limitation. Given that students are essential participants in the university's online learning system, this study considers evaluating students' emotional well-being towards online learning by focusing on students' perceived ease of use, perceived usefulness, attitude, and intention to use online learning. Hence, the objectives of this study are: 1) to examine the predicting factors that contribute to online learning acceptance among undergraduates, and 2) to investigate the relationship

between the actual use of online learning and emotional well-being among undergraduates. This study is expected to assist the lecturers and instructors in identifying suitable online learning platforms that can facilitate undergraduates to use the platforms, reduce their stress, and enhance their emotional well-being.

Literature Review

Underpinning Theory

Technology Acceptance Model (TAM) was introduced by Davis (1989) as depicted in Figure 1. This model aims to explain user intentions in using technology and subsequent usage behavior. TAM has become one of the prominent models employed to explain the adoption and usage of technology by individuals. This model focuses on two theoretical constructs: perceived usefulness and perceived ease of use. According to Davis (1989), perceived usefulness is the “degree to which a person believes that using a particular system would enhance his or her performance” while perceived ease of use refers to “the degree to which a person believes that using a particular system would be free of effort” (Davis, 1989). This means that when technology can benefit the user, and it is easy to use, the attitude towards using the technology will be positive, then the intention to use the technology will be higher which will lead to actual use. Many researchers have extended the original model of TAM to investigate the factors determining the success of online learning implementation in Saudi Arabia (Solangi et al., 2018) and to examine the impact of individual-level culture on how online learning tools are embraced by students in Lebanon (Tarhini et al., 2017). Therefore, this study has introduced a new construct, namely, emotional well-being as an extension of the existing TAM.

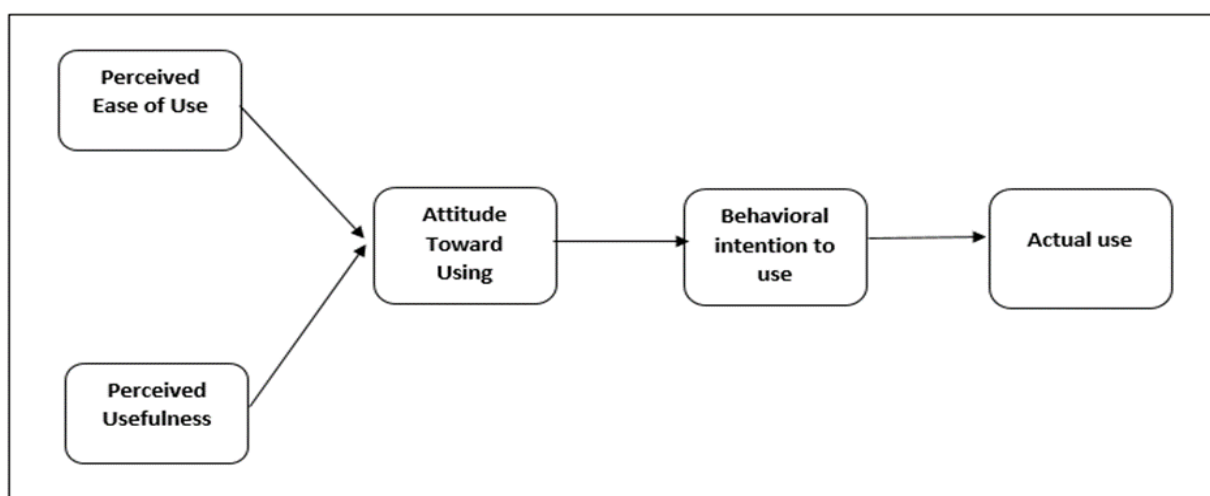


Figure 1. Original model of Technology Acceptance Model by Davis (1989)

Perceived Usefulness

Perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989). The perceived usefulness of online learning would enhance the attitude of students towards their learning experience and would encourage them to adopt the teaching and learning process via the Internet. Kerzic et.al (2019) stated in their study that online learning is perceived to be useful when teachers are engaged with their activities and students showed a positive attitude in the virtual classroom. Alsabawy et al (2016) investigated the effect of Information Technology (IT) infrastructure services and IT quality of e-learning systems on perceived usefulness towards

720 university students in Australia. They identified a relationship between perceived usefulness and e-learning system. However, this result is incongruent with Ibrahim et al. (2017) who revealed perceived usefulness had an insignificant relationship with online learning acceptance among undergraduates. Therefore, it is postulated that:

H1: There is a significant relationship between perceived usefulness and attitude towards using online learning.

Perceived Ease of Use

Perceived ease of use is the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). Many past researchers had investigated the relationship between perceived ease of use and attitude towards using online learning. Farhan et al (2019) examined 102 undergraduates in Canada and found a significant relationship between perceived ease of use and students' attitude towards using web programming languages to support instructional communication in an online learning environment. Hussein (2017) also found perceived ease of use as a significant predictor of student's intention to use online learning. However, Ibrahim et al (2017) did not find any relationship between perceived ease of use of the technology and online learning among undergraduate students in Malaysia. Based on the above argument, it is hypothesized that:

H2: There is a significant relationship between perceived ease of use and attitude toward using online learning.

Attitude towards Using

Attitude towards use relates to the feeling of the students towards online learning whether it is good or bad. Weng et al. (2018) found a significant relationship between attitude towards using and intention to use multimedia material in the teaching and learning process in Taiwan. The result of this study is congruent with Zhu et al (2013) who investigated 120 undergraduates in Australia and exposed a correlation between students' attitudes toward and behavioral intention towards online learning in a blended course. Peytcheva-Forsyth et al (2018) also investigated 590 university students in Bulgaria and found a correlation between attitudes of the students to online learning and distance education. Based on the above argument, it is hypothesized that:

H3: There is a significant relationship between attitude toward using and behavioral intention to use online learning.

Behavioral Intention

Almaiah and Alyoussef (2019) explored the main factors influencing students' actual use of e-learning systems in Saudi Arabia. The results showed that the factors of course design, course content support, course assessment, and instructor characteristics have a significant effect on the actual use of e-learning systems. Diop et al (2019) examined the factors associated with road users' behavioral intention to use Variable Message Sign (VMS) information and found that perceived ease of use has a significant relationship with behavioral intention in using VMS. A study by Wang et al (2019) also found that computer self-efficacy and enjoyment significantly affect the behavioral intention to continue using online learning applications in their studies. Therefore, it is postulated that:

H4: There is a significant relationship between behavioral intention to use online learning and actual use of online learning.

Actual Use

Many previous studies have investigated the association between the actual use of online learning and emotional well-being. Li and Tsai (2017) investigated the students' use of behavior in online learning and found that many respondents have consistently used online learning, including, video lectures, and shared assignments. Besides, Wang et al (2020) explored learning performance and behavioral patterns of online collaborative learning. They revealed that students would be more engaged with online learning when there is an interactive version as compared to the text version. Estacio and Raga (2017) also examined students' online learning behavior in blended courses using Moodle and found that most of the students still prefer face-to-face classroom discussions compared to online learning. Twenge and Campbell (2108) explored the association between screen time and emotional distress among adolescents in the United States. They found that more hours of daily screen time were associated with emotional distress, including lower self-control, more distractibility, more difficulty making friends, and less emotional stability. Hoang (2015) also examined the relationship between stress and distance learning among 321 undergraduates in the United States. The study exposed that the stress level is higher among older students due to a lack of experience in using information technology. Moreover, a study shows that there is a relationship between the actual use of Internet usage and emotional well-being (Porter & Donthu, 2006). Several researchers also found that online education exerts a direct impact on human well-being. Saade et al (2017) investigated the relationship between anxiety and performance in online courses among 1377 undergraduates in Canada. The result of the study revealed that 30% of respondents appear to experience some sort of anxiety with online courses. On the other hand, innovation on the Internet brings benefits to human well-being when information communication technology (ICT) tools such as new apps in education caused students to better manage their online learning. Also, online course platforms offer low or no-cost learning materials from teachers and academics around the world, possibly enhance educational capabilities and well-being (Castellacci & Tveito, 2018).

Students' well-being and emotions are also linked to self-regulated learning behavior. Self-regulated learning refers to learning that is guided by metacognition, strategic action in terms of planning, monitoring, evaluating progress against a standard, and motivation to learn (Zimmerman, 1990). It relates to a student's ability to understand, plan and control a learning environment that can affect their emotions either positively or negatively. Previous studies also found that self-regulated learning strategies can be used to increase students' positive emotions and enjoyment (Leo and Muis, 2020) and can increase student's academic performance during COVID 19 (Sutarni et al., 2021). In the context of online learning, Holzer et al (2021) found that there is a positive relationship between self-regulated learning and positive emotions among Austrian students who undergoing online learning. The results of the above study show that students can control their emotions and show a positive attitude through their self-efficacy and support from lecturers while using online learning. This is consistent with the findings by Zheng et al (2020) who found the relationship between teachers' autonomy support through self-regulated learning can enhance students' well-being and emotions. Hence the self-regulated learning behaviors also contribute to students' well-being and emotions. Based on the above argument, it is hypothesized that:

H5: There is a significant relationship between actual use of online learning and emotional well-being.

Research Framework

Following the extant literature, a research framework was developed. The framework posits that the attitude toward using will influence the behavioral intention to use online learning and actual use. Also, the actual use of online learning has a significant relationship with emotional well-being. Besides, attitude toward using is expected to be affected by perceived usefulness and perceived ease of use (Figure 2).

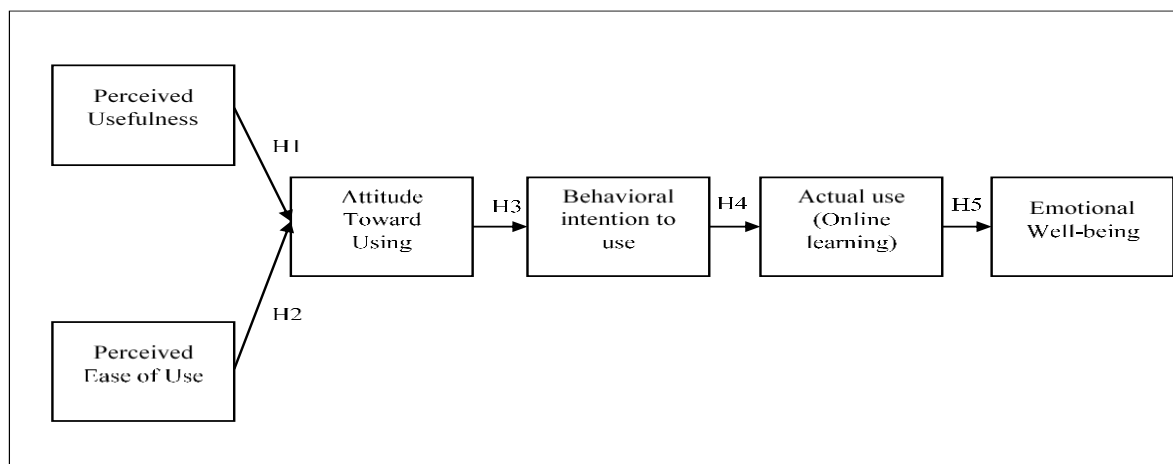


Figure 2. Research Framework

Methodology

This study employed online survey research and cross-sectional data to test the conceptual framework and developed hypotheses. The population for this study involved students from Universiti Teknologi MARA Pahang who underwent online and distance learning. Questionnaires, in the form of Google Forms, were distributed to the respondents. A total of 247 students answered the questionnaire. A set of 40 measurement items from the technology acceptance literature was adopted and adapted to the specific context of this study on the acceptance and usage of online learning (Davis, 1989; Diop et al., 2019; Ibrahim et al., 2017; Porter & Donthu, 2006; Saade et al., 2017; Tsaroucha et al., 2012; and Weng et al., 2018). Perceived ease of use, perceived usefulness, behavioral intention, and attitude towards use were measured using five (5) items each. The actual use of online learning, and emotional well-being were measured using three (3) items, and nine (9) items, respectively. The responses of the survey participants to each of the items were measured using a ten-point Likert scale, ranging from 1 (strongly disagree) to 10 (strongly agree). The operationalization of the constructs is listed in Table 1.

Operationalisation of Constructs

Variables	Items	Source	
Perceived Usefulness	PU1	Using online learning can help my learning be more efficient.	Davis (1989); Ibrahim et al (2017)
	PU2	Using online learning can help me acquire the information I want.	
	PU3	Using online learning can be helpful to my work or learning.	
	PU4	Online learning would improve my learning performance.	
	PU5	Online learning would increase my academic productivity.	
Perceived Ease of Use	PEU1	Interacting with the online learning system does not require a great mental effort.	Davis (1989); Ibrahim et al (2017)
	PEU2	I find the online learning system is easy to use.	
	PEU3	It is easy to become skilful when using an online learning system.	
	PEU4	It would be easy for me to find information at online learning system.	
	PEU5	Online learning is easy to understand.	
Behavioral Intention	BI1	I intend to use online learning in the future.	Diop et al (2019)
	BI2	I would continue to see myself using online learning for handling academic matters.	
	BI3	Using online learning makes learning more interesting.	
	BI4	I would seriously consider studying in online learning mode again.	
	BI5	I will use online learning if it is available.	
Emotional well-being	EW1	I have a lot of confidence when it comes to studying online.	Saade et al (2017); Tsaroucha et al (2012)
	EW2	I got a good feeling when using online learning.	
	EW3	I am exciting while using an online learning.	
	EW4	I feel I can control my study when studying online.	
	EW5	I feel an emotional connection to lecturers and friends even I am using online learning.	
	EW6	I do not feel mentally stressed when studying online.	
	EW7	I do not feel physically stressed when studying online.	
	EW8	Online learning does not reduce my recreational activities.	
	EW9	Online learning does not decrease my interaction with family members.	
Attitude Toward Using	ATT1	Using online learning is a good idea.	Weng et al (2018)
	ATT2	Generally, I have a positive attitude on using online learning.	

	ATT3	It is a positive influence for me to use online learning.	
	ATT4	I think it is valuable to use online learning.	
	ATT5	I think it is a trend to use online learning	
Actual use	AU1	I use online learning very often.	Porter & Donthu (2006)
	AU2	I use the online learning quite often for academic purpose.	
	AU3	I spend a lot of time on the online learning for academic use.	

Findings

Respondents Profile

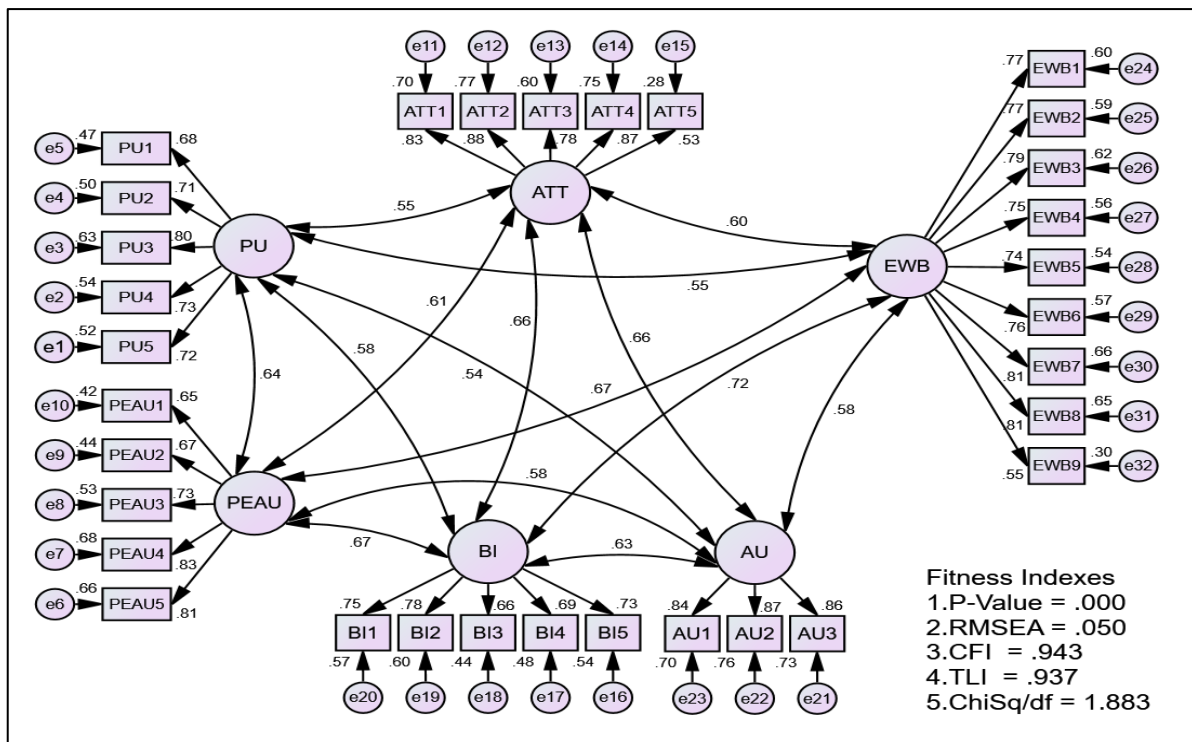
Table 2 depicted the respondents' profile. A total of 247 respondents was involved in this study, with 34 per cent of them were diploma students, and 66 per cent were bachelor's degree students. 74.5 per cent of the respondents were female students, while the remaining 25.5 per cent were male students. Respondents aged between 18 and 21 years attained 76.9 per cent. In comparison, 23.1 per cent were respondents aged 22 years and above. In terms of the respondents' division, 51.4 per cent of the respondents were students from the Faculty of Business and Management, 25.5 per cent were students from the Faculty of Applied Sciences, and 22.7 per cent were students from the Faculty of Accountancy. Regarding the fraction of the residential areas while pursuing online learning, 44.1 per cent of students pursuing online learning were from urban areas, 37.2 per cent were from small towns or suburban areas and 18.6 per cent were pursuing online learning from villages or rural areas. For online learning method used, where respondents can indicate more than one learning method, a total of 229 students (92.7 per cent) used video conference applications (e.g., hangout meet, Zoom, Webex, WhatsApp video, Microsoft Teams), 219 students (88.7 per cent) used LMS (e.g., Google Classroom, U-Future, Microsoft Teams, Socrative), and 212 students (85.8 per cent) used social media/web 2.0 (e.g., Facebook, Instagram, YouTube, Twitter, WhatsApp, Telegram).

Table 2. Respondents Profile

	Frequency	Percentage
Level of education		
Bachelors degree	84	34
Diploma	163	66
Gender		
Male	184	74.5
Female	63	25.5
Age		
18 to 21 years	190	76.9
22 years and above	57	23.1
Faculty		
Faculty of Business and Management	127	51.4
Faculty of Applied Sciences	63	25.5
Faculty of Accounting	56	22.7
Residential areas while pursuing online learning		
Urban areas	109	44.1
Small towns or suburbans areas	92	37.2
Village or rural areas	46	18.6
Online learning method used		
Video conference applications (hangout meet, Zoom, Webex, Whatsapp video, Microsoft Team)	229	92.7
LMS (Google classroom, U-Future, Microsoft team, socrative)	219	88.7
social media/web 2.0 (Facebook, Instagram, Youtube, Twitter, WhatsApp, telegram)	212	85.8
Telephone	192	77.7
Email	98	39.7
Live chat	28	11.3
SMS	5	2

Confirmatory Factor Analysis (CFA)

The purpose of conducting confirmatory factor analysis (CFA) was to evaluate the hypothetical model of this study. The results of the confirmatory factor analysis are shown in Figure 3 and Table 3.



Note: N = 237; PU = Perceived Usefulness; PEU = Perceived Ease of Use; ATT = Attitude; BI = Behavioural Intention; AU = Actual Use; EWB = Emotional Well-Being

Figure 3. The CFA Results

The construct validity was achieved when the fitness indexes achieved the following requirements: RMSEA < 0.08, CFI > 0.90 and ChiSq/df < 3.00 (Awang, 2015). Figure 3 and Table 3 illustrate the fitness indexes by which the absolute, incremental, and parsimonious fits achieved the required level with RMSEA = 0.050, CFI = 0.943, and Chisq/df = 1.883. These results indicate that the model is fit for the data in hand.

Table 3. Goodness-of-fit Indices

Name of Category	Goodness-of-fit Measures	Acceptable Value	Index Value
Absolute fit	RMSEA	< 0.08	0.050
Incremental fit	CFI	> 0.90	0.943
Parsimonious fit	ChiSq/df	< 3.00	1.883

Table 4 presents the reliability of the construct and the average variance score extracted from the various factors obtained. As indicated in Table 4, construct reliability (CR) of all constructs has factor loadings exceeding the threshold value of 0.60, (Awang, 2015), ranging from 0.869 to 0.952. AVE for all constructs was greater than the acceptable limit of 0.5, (Awang, 2015) ranging from 0.518 to 0.788, which further supports the validity of convergent constructs. These results indicate the internal consistency of the instruments used in this study.

Table 4. Average Variance Extracted (AVE) and Construct Reliability (CR) of Confirmatory Factor Analysis

Construct	Items	Construct Reliability (CR ≥ 0.6)	The average variance extracted (AVE ≥ 0.5)
Perceived usefulness	5	0.870	0.532
Perceived ease of use	5	0.858	0.550
Attitude	5	0.889	0.622
Behavioral intention	5	0.845	0.523
Actual use	3	0.892	0.734
Emotional well-being	9	0.941	0.568

Table 5 demonstrates the correlation values between the constructs. The issue of multicollinearity exists when the correlation between exogenous constructs is more than 0.85 (Awang, 2015). Table 5 exhibits that the diagonal values (in bold) are higher than those in the rows and columns. The result indicated that the discriminant validity criteria were achieved because the square root of the average variance extracted (AVE) of each construct (in bold) was greater than the correlation values between the construct and all other constructs (Awang, 2015). Consequently, we concluded that the discriminant validity was satisfied. Taken together, we concluded that the model fit the observed data, with significant path coefficients and satisfactory reliability and validity.

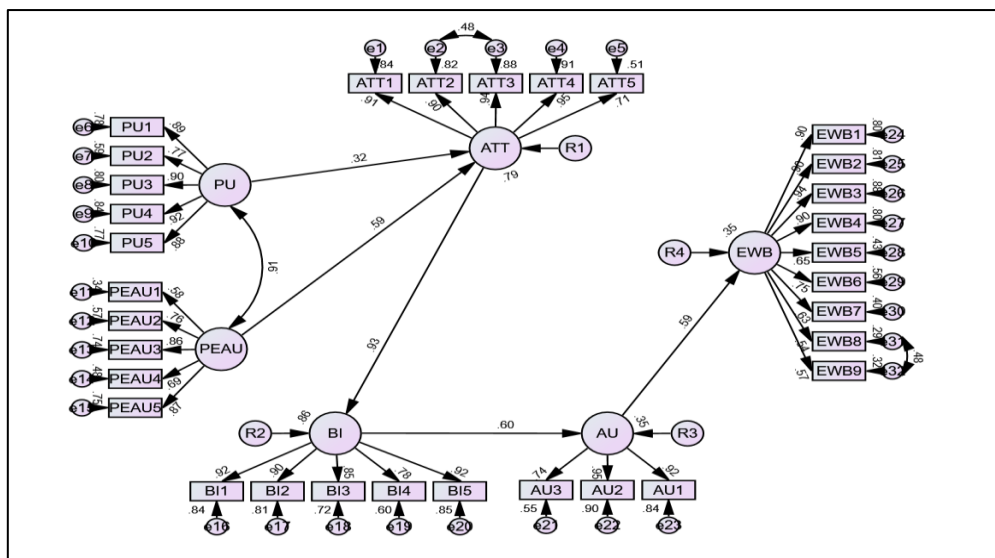
Table 5. Discriminant Validity

	Perceived usefulness	Perceived ease of use	Attitude	Behavioral intention	Actual use	Emotional well-being
Perceived usefulness	0.73					
Perceived ease of use	0.64	0.74				
Attitude	0.55	0.61	0.79			
Behavioral intention	0.58	0.67	0.66	0.72		
Actual use	0.54	0.58	0.66	0.63	0.86	
Emotional well-being	0.55	0.67	0.60	0.72	0.58	0.75

Note: N = 237; the diagonal values (in bold) are the square root of the average variance extracted (AVE). Values in the off diagonals are the correlations among constructs, which are the values extracted from Figure 3.

Structural Equation Modelling (SEM)

In this study, SEM-AMOS was used to evaluate the measurement model and to test the hypotheses. The regression path coefficients of the direct relationship between constructs are illustrated in Figure 4 and Table 6 below. Figure 4 presents the coefficient value of determination R^2 value of 0.79 for student attitude towards online learning. The figure indicates that both perceived usefulness and perceived ease of use contribute to student attitude towards online learning by 79 per cent.



Note: N = 237; PU = Perceived Usefulness; PEU = Perceived Ease of Use; ATT = Attitude; BI = Behavioural Intention; AU = Actual Use; EWB = Emotional Well-Being

Figure 4. The Standardised Path Coefficients (Direct Relationship)

Table 6 presents the result of the hypotheses tested. It can be seen that perceived usefulness is not a significant factor in attitude towards using online learning ($\beta = 0.359, p > .005$). Therefore, *H1: There is a significant relationship between perceived usefulness and attitude towards using online learning* was rejected. The finding also revealed that perceived ease of use has a significant relationship with the attitude towards using online learning ($\beta = 0.636, p < .001$). Thus, *H2: There is a significant relationship between perceived ease of use and attitude towards using online learning* was supported.

Then, *H3: There is a significant relationship between attitude toward using and behavioral intention to use online learning* was also supported ($\beta = 0.973, p < .001$). This significant relationship emphasized that the students have a positive attitude and intention to use online learning in the future. The result of this study also discovered that there is a significant relationship between behavioral intention to use online learning and actual use of online learning ($\beta=0.575, p<.001$). Hence, *H4: There is a significant relationship between behavioral intention to use online learning and actual use of online learning* was also supported. Finally, this study also found a significant relationship between the actual use of online learning and emotional well-being ($\beta=0.549, p<.001$). Therefore, *H5: There is a significant relationship between the actual use of online learning and emotional well-being* was also supported. The positive significant relationship shows that the actual use of online learning does not have a negative impact on students' emotional well-being.

Table 6. The Standardised Regression Weights and Its Significance

				Estimate	S.E.	C.R.	P	Results	Hypotheses
H1	PU	→	ATT	.359	.136	2.643	.008	Not Significant	Rejected
H2	PEU	→	ATT	.636	.137	4.635	***	Significant	Accepted
H3	ATT	→	BI	.973	.048	20.393	***	Significant	Accepted
H4	BI	→	AU	.575	.059	9.820	***	Significant	Accepted
H5	AU	→	EWB	.549	.057	9.615	***	Significant	Accepted

Discussion

In accordance with the aims of this study, this research examined the predicting factors that contribute to online learning acceptance and investigated the relationship between the actual use of online learning and emotional well-being among undergraduates in UiTM Pahang. Accordingly, a new model was proposed through the extension of TAM, with the most important factors that were obtained from the literature analysis result in this study. The proposed model adding emotional well-being as a new variable and investigated TAM constructs (perceived ease of use, perceived usefulness, behavioral intention, attitude towards use and actual use of online learning). The research model and hypotheses were evaluated using the SEM method. The results are discussed below.

The results showed that all hypothesis relationships show significant result except H1. H1 sought to determine whether there is significant relationship between perceived usefulness and attitude towards using online learning. Result obtained showed that there is no significant relationship between perceived usefulness and attitude towards using online learning. The result of this study is congruent with previous studies (Ibrahim et al., 2017) that found a non-significant relationship between perceived usefulness and attitude towards using online learning. Perceived usefulness does not influence the students' attitude towards using online learning since this teaching and learning method is compulsory to be used by all UiTM students during the COVID-19 pandemic. Even though students have admitted to the usefulness of online learning, most of the students disagreed that they have a positive attitude towards online learning. This is due to students' preferences on traditional face-to-face class that enable them to get immediate response from lecturers for any queries that they need further clarification, particularly for courses that involve calculation and experiments. In order to make online learning is perceived to be useful, the lecturers should engage with their activities and provide timely feedback to their students. The lecturers' role in designing and organizing e-course and assisting the students during online learning process are essential in determining effective online learning implementation (Kerzic et.al., 2019).

Next, H2 was supported whereby perceived ease of use has a significant relationship with the attitude towards using online learning. This result indicates that the ease of use of online learning platforms enables undergraduates to have an interest and positive attitude towards using online learning. This is because majority of respondents are Generation Y who are mostly information technology literate. Thus, they are convenient with online learning platforms such as Google Meet, Telegram, WhatsApp, and so on because generation Y is easily exposed to the recent technology, and they quickly adapt to the use of current information technology. The result of this study is coherent with former studies that revealed perceived ease of use is predictive of student attitude for future use of online learning (Farhan et al., 2019).

H3 was also supported whereby there is a significant relationship between attitude toward using and behavioral intention to use online learning. This significant relationship emphasized that the students have a positive attitude and intention to use online learning in the future. Also, most of the students would seriously consider using online learning if it is available after the COVID-19 pandemic. This situation is potentially attributable to the advantages that can be obtained from online learning such as flexible schedule and environment, convenience, ease of use, and accessibility. Thus, most respondents claimed that they have the intention to use online learning as one of the main methods of teaching and learning in the future. This result is consistent with previous studies (Peytcheva-Forsyth

et al., 2018; Weng et al., 2018; Zhu et al., 2018) who found a significant relationship between techno-uncertainty and performance expectancy.

The result of this study also showed that H4 was supported. Hence, there is a significant relationship between behavioral intention to use online learning and actual use of online learning. This result proved that UiTM students spend a lot of time on online learning for academic purpose including attending lectures, having discussion on assignments with other students and preparing for tests, quizzes, and final examination. This is because online learning is the main platform for teaching and learning during the COVID-19 pandemic aside from the many advantages that can be obtained such as improved self-efficacy and enjoyment (Wang et al., 2019). This result is similar to an earlier study by Wang et al (2019) who exposed that computer self-efficacy and enjoyment significantly affect the undergraduates' behavioral intention to continue using online learning in their studies.

Finally, H5 was also supported. This study also found a significant relationship between the actual use of online learning and emotional well-being. The positive significant relationship shows that the actual use of online learning does not disturb the students' emotional well-being. This finding shows that the students able to handle and cope with the new teaching and learning method since most of the students admitted that they experience good feelings and excitement when using online learning since they can learn anywhere, and a flexible environment enables them to enjoy the learning process which will lead to good emotional health. Furthermore, they admit that online learning does not decrease the interaction with family members, friends and they can still communicate with lecturers if they face any questions or problems related to the lessons learned. This result is consistent with prior studies (Castellacci & Tveito, 2018) who found a significant relationship between the actual use of online learning and emotional well-being. Online learning can positively affect students' well-being through an increase in the amount and organization of knowledge, as well as the quality of knowledge delivery. Besides, the educator's role is also important in ensuring students' emotional well-being because excessive tasks given by them may result students undergoing learning in the state of restlessness and anxiety (Ningsih et al., 2020).

Conclusion

This study adds new contributions to existing research on online learning acceptance among undergraduates. It also examines the relationship between the actual use of online learning and emotional well-being. An adapted TAM model was used to identify the important factors that affect students' actual use of online learning from the perspective of Malaysian undergraduates. The findings from the study concluded that four out of five hypotheses were accepted. Therefore, factors that contribute to online learning acceptance are perceived ease of use, behavioral intention, attitude towards use and actual use of online learning. However, perceived usefulness does not contribute to online learning acceptance. In addition, this study also found significant relationship between the actual use of online learning and emotional well-being. The positive significant relationship shows that the actual use of online learning does not affect the students' emotional well-being. Thus, the findings of this study are expected to assist undergraduates to identify the factors that can influence their emotional well-being, particularly when dealing with online learning that pose many challenges. This study also can provide insight to lecturers and instructors on dealing with online teaching and learning so that the students' emotional well-being will not be disrupted.

This study sample included the students of Universiti Teknologi MARA Pahang Campus (both Jengka and Raub branches). As the samples only included participants from UiTM

Pahang, their views may or may not differ from other public universities or even private universities. Thus, future research should consider other higher education institutions students from private or public universities so that the result can be generalized. The positive and significant relationship shows that the actual use of online learning does not have negative effects on students such as depression, anxiety, and stress. Instead of that, well-structured online content, assignments, and assessments are factors that make online learning successful. This means that students can handle and adapt to new teaching and learning methods because most students admit that they experience good feelings and enthusiasm when using online learning because they can learn anywhere, and the flexible environment allows them to enjoy learning. The survey results on lecturer behaviors and practical topics can help teachers understand the impact of their behaviors and attitudes on student learning in the online environment.

Students' reflection on psychological issues can help teachers or instructional designers to tailor the online learning environment according to the needs of students during the COVID19 period. The process leads to freedom from mental stress. In addition, they admit that online learning will not reduce interaction with family and friends, if they find any problems or problems related to the course they are studying, they can still contact the lecturers. This study investigated the emotional well-being and the attitudes of the students toward online learning without considering the type of course learned, the external environment at home, and the state of connections. Therefore, future research should contemplate the type of course learned and the external environment that might provide different results. This research also can be a basis of future research on developing a policy or standard operating procedures in ensuring the teaching and learning process happen effectively so that students' well-being could adhere according to their needs.

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