Labuan Bulletin of International Business & Finance

Volume 19 Issue 1 eISSN 2600- 7894



FACTORS DETERMINING BLENDED LEARNING RECEPTIVENESS AMONG MALAYSIAN ACADEMICIANS

Nurjeehan Binti Ayub^{1*}, Md Hafizi Bin Ahsan @ Miskam¹, Nur Shahirah Binti Azman¹

¹Labuan Faculty of International Finance, University Malaysia Sabah, Labuan, Malaysia. *Corresponding author's email: nurjeehanana@ums.edu.my

ABSTRACT

This study aimed to reveal the level of blended learning receptiveness among Malaysian academicians strictly during the Covid-19 pandemic, and applied the Theory of Planned Behaviour (TPB) in examining the factors determining blended learning receptiveness among Malaysian academicians. Malaysian higher learning institutions practised blended learning following learning method efficiencies and the significance of the Malaysia Education Blueprint 2025. Five independent variables (attitudes, subjective norms, and perceived behavioural control, organisational assistance, and literacy) were investigated in the study context. Specifically, 250 questionnaires were distributed to respondents during the working hours of chosen private universities. Smart Partial least squares (PLS) analysis tool is employed to examine the model fits and hypothesis testing. Findings show that all variables have a positive and significant relationship with the receptiveness of blended learning among academicians. Thus, this study shows that blended learning receptiveness is high, especially during pandemic and lockdown situations. This study proved essential for Malaysian academicians, specifically regarding blended learning utilisation and implementation. As blended learning was predictably time-consuming and deterred the implementation process, this study strived to promote blended learning among Malaysian educators. The Covid-19 pandemic resulted in the complete utilisation of blended learning using digital platforms. Most academicians could not conduct faceto-face classes due to the restrictions on physical contact. Hence, this study proved essential for educators in wholly implementing blended learning amid the outbreak.

JEL classification: I21; I23.

Keywords: Blended learning receptiveness, COVID-19 pandemic, Theory of Planned Behaviour.

Received: March 30, 2021 Revised: June 25, 2021 Accepted: June 26, 2021

1. INTRODUCTION

Technological advancement has generally impacted knowledge availability, transparency, and attainment. The education sector is currently undergoing a distinct transformation following the pandemic since 2020. Specifically, the digitisation of the education industry led to the incorporation of blended learning and subsequent conversion to novel educational modules. In Vo et al. (2017), 21st-century blended learning reflected sophisticated educational concepts and styles. Graham (2006) stated that blended learning was initially an integration of face-to-face learning in class with computerised learning delivery. As such, the effect of blended learning on learner achievement was examined in diverse settings, such as higher educational programmes (Vo et al. 2017). Moreover, Horn et al. (2014) opined that blended learning involved a structured learning curriculum that enabled learners to obtain information and flexible learning (time and location-wise) using online delivery.

In Nor and Kasim (2015), blended learning instruments needed to be upgraded, reliable, and user-friendly for meaningful educational implications. Ceylan and Elitok Kesici (2017) asserted that blended learning instruments facilitated organisation and communication and monitored achievement apart from aiding online system-learning. As such, academicians should play a substantial role in ensuring blended learning success. Conventional classroom learning techniques seemed inefficient as learners differed based on gender, culture, and personality. Following the aforementioned variances, tertiary education has become more complex compared to previous years (Tempelaar et al., 2012). Hence, educators were required to plan efficiently on the nature and approaches of successful and appealing learning processes, such as the integration of face-to-face learning with digital elements. Despite the popularity of blended learning among many instructors, some failed to be interested and preferred to select conventional teachercentric classroom communication.

1.1 Malaysia Education Blueprint

The Malaysian government designed a detailed education blueprint encompassing rapid and efficient education system development until 2025 (Ministry of Higher Education Malaysia, 2013). The blueprint was incorporated to facilitate blended learning, including the conversion from conventional classroom learning to blended learning strategies.

1.2 Problem statement

Although lectures have been extensively utilised as a tertiary educational technique, conventional teaching was currently denoted as passive teaching methods as learners were discouraged from critical knowledge selection (Francis Norwood et al., 2021). Additionally, Wolff et al. (2015) implied that face-to-face learning was inefficient as generation Z learners were more inclined towards technological implementation. For example, learners preferred to seek other appealing activities as a distraction rather than focusing in class. In this regard, face-to-face teaching strategies were not conducive for collaborative learning and deterred educators from incorporating higher-order thinking skills (Ananga & Biney, 2017). In line with Gomis-Porqueras and Rodrigues-Neto (2018), the shift from conventional education to a digital counterpart proved intricate for many tertiary level instructors. As such, this study strived to investigate the effects of attitude, subjective norm, and perceived behaviour control, literacy, and organisational aid on blended learning receptiveness among Malaysian educators. As the Covid-19 outbreak led to home-based online learning in several nations, including Malaysia, academicians were also required to work from home and utilise digital platforms to

conduct classes albeit with low technological expertise (Hussein et al., 2020). Therefore, the objectives of this study are:

- (i) To investigate the level of blended learning receptiveness among Malaysian academicians strictly during the Covid-19 pandemic.
- (ii) To determine the factors determining blended learning receptiveness among Malaysian academicians by applying the Theory of Planned Behaviour (TPB).

2. LITERATURE REVIEW

2.1 Blended learning receptiveness

The word 'receptive' is willing to listen to and accept new ideas and suggestions (Brown, 2020) or in other words receptiveness has the same meaning with acceptance but not adoption. In the pursuit of determining the receptiveness of individuals towards e-learning system, a variety of models and theories of values exist (Hamzah et al., 2016). Thus in this study the focus is to use Theory of Planned Behaviour (Ajzen, 1991) in determining the receptiveness of blended learning. Due to the heterogeneity of blended learning among Malaysian academicians. Mohd Azli Yeop, (2013) noted that diversity methods and use of technology in implementing blended learning activities has lead to the receptiveness of blended learning and this is proven with active participation of students and lecturers in conducting blended learning in class.

2.2 Blended learning during Covid-19 pandemic

With a global health crisis going on, higher educational institutions around the world are now started to changed their techniques of teaching and learning to a more convenient ways of delivering. The global impact of the COVID-19 pandemic has been frightened the entire world. COVID-19 has urged experts to reconsider appropriate teaching– learning strategies that will be sustainable during the crisis (Saboowala & Manghirmalani Mishra, 2021). As a result, blended learning is one of the methods proposed by various academics and research scholars as a viable and best-fit alternative for universities for at least a few months post pandemic.(Saboowala & Manghirmalani Mishra, 2021). Bordoloi et al., (2021) explained that blended learning should be apply extensively especially during the Covid-19 lockdown because it allows both teachers and students to receive the necessary educational inputs, training, and skills even in the midst of a pandemic.

2.3 Theory of Planned Behaviour (TPB)

The underlying theoretical base in this study corresponded to TPB. It was theoretically predicted that intention was derived from attitudes, subjective norms, and perceived behavioural control in line with behavioural intentions (Ajzen, 1991). Following TPB, desirable attitudes, subjective norms, and perceived behavioural control (over specific behaviours) led to higher behavioural intention (Zoellner et al., 2012). In the study context, attitude denoted Malaysian academicians' response towards the integration of blended learning techniques with teaching styles, whereas subjective norms denoted the extent to which Malaysian educators were inclined to implement blended learning methods. Meanwhile, perceived behavioural control demonstrated the ease or difficulty confronted by academicians in incorporating blended learning strategies.

In some studies, TPB and other technology adoption models and techniques have been used to examine the factors determining learning acceptance through blended learning. For instance,(Raza et al., 2018) showed that TPB variables including attitude, subjective norm, and perceived behaviour control have a positive and significant effect on the acceptance of blended learning in both Pakistani students n teachers. Results of a study

done by (Cheon et al., 2012) also revealed that TPB is a determinant of intention of American students and lecturers to use blended learning approach.

Although there are many criticisms of theory of planned behaviour (TPB), such as the fact that it ignores unconscious motives and spontaneous choices (Yuzhanin & Fisher, 2016), it still gains theoretical and population generalisations due to its broad-based applications, and educational disciplines are no exception. Teachers' attitudes, for example, have been shown to influence students interest in blended learning receptiveness (Knauder & Koschmieder, 2019). Nevertheless, due to the unprecedented Covid-19 pandemic crisis that would fit naturally to the TPB conception, thus there is a need for some modifications or additions of factors as authors want to see from other angles to enhance understanding of additional knowledge.

2.4 Blended learning

Blended learning offered innovative educational alternatives for most academicians and trainers with a successful combination of conventional and digitised learning. Consequently, students could download learning materials or flexibly attend virtual lectures. For example, learners might reflect more interest in the integration of blended learning elements regarding the course content. Driscoll (2002) stated that blended learning portrayed a fusion of teaching styles for educational goal attainment, whereas Garrison and Kanuka (2004) implied that the blending process denoted a combination of conventional face-to-face teaching methods and digital experiences for better educational outcomes (Garrison & Kanuka, 2004).

2.5 Attitude

Under social psychology, attitude initially reflected a tendency to behave in a specific manner towards an object (Gamble et al., 2018). A more specific definition by Eagly and Chaiken (1993: 1) within the aforementioned field implied that "attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour." For example, Ramos et al. (2011) revealed the main study experiences and outcomes from three distance education project initiatives in Cape Verde and Mozambique. Notably, educators hesitated to rethink and refine current strategies and be trained or counselled to fulfil students' educational needs. Resultantly, it was proposed that educators be trained to re-orientate relevant attitudes and practices (Hinneburg et al., 2020) to enhance the motivation in incorporating blended learning techniques (Ibrahim & Nat, 2019). As such, the following hypothesis was developed:

H1: There is a significant relationship between attitude and blended learning receptiveness among academicians.

2.6 Subjective norms

Fishbein and Ajzen (2011) denoted subjective norms as "a person's perception that most people who are important to him or her think he or she should or should not perform the behaviour in question." Subjective norms encompassed the impact of important educators, colleagues, departments, and individuals on oneself. Kumar and Daniel's (2016) survey of 55 self-chosen lecturers among polytechnics in Fiji revealed that most participants were aware of other academicians' utilisation of different education-oriented technological instruments. The colleagues were also more inclined to encourage technological adoptions. On another note, Kanthawongs and Kanthawongs (2013) reported that only subjective norms and perceived usefulness were positively connected to learning management system (LMS) usage intention through multiple regression statistics. Predictably, students preferred to employ the LMS system if educators, friends, relatives, and family members facilitated system utilisation and efficiency for higher homework outcomes, learning success, and productivity in work processes. Hence, the following hypothesis was developed:

H2: There is a significant relationship between subjective norms and blended learning receptiveness among academicians.

2.7 Perceived behavioural control

In Fishbein and Ajzen (2011), perceived behavioural control demonstrated the potential for behavioural performance. For example, perceived behavioural control assumably enabled instructors to perform specific behaviours (van Twillert et al., 2020). Ajzen (1991) also denoted perceived behavioural control as the observed ease or complexities involving behavioural performance. The statement corresponded to (Haron et al., 2012), wherein educators preferred familiar and convenient educational technologies as blended learning instruments when teaching. Somchai and Damnoen (2020) elaborated that perceived behavioural control led to higher intention levels through blended learning. Additionally, both learners and instructors claimed to be technology savvy and prepared to implement digital and blended learning in education. As such, the following hypothesis was developed:

H3: There is a significant relationship between perceived behavioural control and blended learning receptiveness among academicians.

2.8 Perceived literacy

Facilitators (teachers, academicians, or trainers) observed that digital literacy levels should be able to incorporate advanced hardware and software into the blended learning platform to ensure the fulfilment of teaching and learning aims (Tang & Chaw, 2015). Given that the blended learning environment was structured through digital materials, examinations, and tests (Eryilmaz, 2015), educators required the necessary skills and expertise through technology. The fact that most educators were yet to master the fundamentals of computer usage might hamper the implementation of blended learning strategies (Nawaz & Kundi, 2010). Turisiana Ahmad Buhari and Fauziah Saadah Abdul Halim (2014) denoted that although most instructors were willing to employ blended learning (due to digitisation) for more appealing and aspiring educational experiences, the technology was not incorporated into teaching techniques, hence disregarding the method. Notably, appropriate training and skills were prerequisites for all academicians towards successful blended learning implementation. Inadequate training inevitably hampered effective online course content delivery. Following Oghenevwede (2017), educators should possess Information and Communication Technology (ICT) skills and knowledge, specifically in emerging nations where technological skills and utilisation were relatively low. Hence, the following hypothesis was developed:

H4: There is a significant relationship between perceived literacy and blended learning receptiveness among academicians.

2.9 Perceived organisational support

Alabi and Okemakinde (2010) opined that blended learning was challenging to implement due to inadequate organisational aid (specific facilities). Pro-technology learning policies and strategies were highly crucial in line with environmental concerns

(paperless environment) for a sound understanding of the subject matter (Mitchell et al., 2012). For example, Alabi and Okemakinde (2010) discovered that inadequate facilities and basic infrastructure proved ineffective for educational planning. On another note, Al-Omar et al. (2019) implied that organisational support demonstrated an appositive relationship with employee engagement. Additionally, Ola and Alimi (2015) claimed that sufficient network infrastructure (high Internet speed, adequate service and assistance, and a reliable and affordable internet connection and hardware and software) were vital in a blended learning environment. The management was required to ensure that basic features (internet connectivity on campus) facilitated lecturers and students' task fulfilment with blended learning. Reportedly, educators digital literacies, educational Information and Communication Technology (ICT) training, and Internet access were key determinants in blended learning implementation (Badia et al., 2014). As such, the following hypothesis was developed:

H5: There is a significant relationship between perceived literacy and blended learning receptiveness among academicians.



Figure 1: The research framework.

3. METHODOLOGY

The inquiry paradigm for this study was post-positivism with a quantitative- method that involved conducting surveys in a selected case-site (a private higher learning institution) implementing blended learning. Furthermore, this study employed a random sampling method involving Multimedia University (MMU) educators in the Malacca, Cyberjaya, and Nusajaya campuses. Interestingly, MMU was selected as the population sample following the institution ranking (one of the best in Malaysia) that was awarded by the Ministry of Higher Education (MOHE) for spearheading the Premier Digital Tech Institutes (Multimedia University Corporate Communication Unit, 2019). A selfadministrated survey questionnaire was distributed among MMU educators, wherein 214 valid questionnaires were received and employed for analysis with a response rate of only 21.4 per cent. Researchers have decided to change the analysis tools from using SPSS to Smart PLS due to in SPSS they must compute the AVE, Composite Reliability and weighted manually, while in PLS it is easy to assess the validity like convergent and discriminant and the reliability. In addition to the measure of attitudes, the analysis included five known correlates of attitudes develop by (Weng et al., 2018). Subjective norms and perceived behavior control was measured using the five-item scale developed by Smith (2015). Meanwhile, perceived organizational support was adopted from the work of Eisenberger et al., (2002) and perceived literacy items was adopted from the work of (Sum et al., 2018). In order to measure the independent variables, this study adopted the work of (Weng et al., 2018). The independent variables examined were attitude, subjective norm, and perceived behaviour control, perceived literacy, organisational support, and interest, whereas the dependent counterpart was blended learning receptiveness among educators. The study data were then assessed with SPSS . The Pearson correlation and multiple regressions were also implemented to investigate the connection between independent and dependent variables. A five-point scale was utilised to identify the relevance level of a specific item (the lowest scale point denoted "strongly disagree," whereas the highest counterpart denoted "strongly agree."). Table 1 shows measurement items for all variables.

Variable	Code	Measurement item
Receptiveness of BL (RBL) (Weng et al.,	RBL1	I tend to use blended learning materials in my class.
2018)	RBL2	I would make an effort to use blended learning in my class to enhance students' learning interest.
	RBL3	My acceptance to adopt blended is higher
	RBL4	I am aiming to use blended learning strategies in my classroom to increase students critical thinking development
	RBL5	In the future, I will make sure that blended learning is compulsory to apply for all my subject
Attitude (ATT) (Weng et	ATT1	Applying blended learning in class is a good idea
al., 2018)	ATT2	By using the blended learning it will make learning and teaching more interesting
	ATT3	I like the idea of using blended learning in class to attract student interest in my subject
	ATT4	I think it is a trend to use multimedia material in class
	ATT5	To me using blended learning in class is pleasant
Subjective norms (SN) (Smith, 2015)	SN1	My Head of Department would approve my blended learning teaching strategies in my classroom
(,,,,	SN2	Students that I teach would approve my using blended learning teaching strategies in my classroom
	SN3	If I apply blended learning method most of the people who are important to me will regard them as useful
	SN4	If I apply blended learning method most of the people who are important to me will regard them as valuable
	SN5	Generally speaking, I do what most people who are important to me professionally think I should do
Perceived behavioral control (PBC) (Smith,	PBC1	I have ability to take up blended learning method
2015)	PBC2	I have the resources necessary to use blended learning method
	PBC3	I have the knowledge necessary to use the system.
	PBC4	Given the resources, opportunities and knowledge it takes to use the system, it would be easy for me to use the system.
	PBC5	I am confident that I can use blended learning teaching strategies in my classroom

Table 1(continued).

Variable	Code	Measurement item
Perceived organisational support (POS) (Eisenberger et al., 2002)	POS1	My university provided sufficient resources to conduct blended learning in class
	POS2	My university has enhance the technological infrastructure in classrooms
	POS3	My university provide workshops on blended learning for each faculty
	POS4	My university provide training to all staff to encourage us to apply blended learning in class
	POS5	My university set blended learning as part of the performance assessment
Perceived literacy (PL) (Sum et al., 2018)	PL1	I am capable in using blended learning tools to conduct assessment(such as quiz online, midterm online or submit assignment online)
	PL2	I am confident with the basics use of computer to conduct blended learning
	PL3	I have develop my ICT skills once I started to adopt blended learning mode.
	PL4	I have the knowledge and ability to use blended learning strategies in my classroom
	PL5	Overall e-learning has helped me to increase my literacy

4. RESULTS AND DISCUSSION

Table 2 presents the respondents' demographic background, such as gender, age, ethnicity, and education through frequency statistics. A total of 215 MMU educators participated in answering online and offline questionnaires on blended learning receptiveness among Malaysian educators. The sampled respondents involved 17.2 per cent males and 82.8 per cent females. Most respondents were aged between 31 and 40 years old (64.6 per cent). Additionally, most respondents possessed Master degrees (77.7 per cent) with lecturing positions (83.3 per cent), thus contributing to much feedback in the study context (see Table2).

Profile	Classification	Frequency (n)	Percentage (%)	
Gender	Female	178	82.8	
	Male	37	17.2	
Age (year old)	21 - 30	43	20	
	31 - 40	139	64.6	
	41 - 50	26	12.1	
	51 and above	7	3.3	
Education level	Degree	1	0.5	
	Master/MBA	167	77.7	
	PhD/DBA/EdD/MD	47	21.9	
Working experience	2 - 5	142	66	
(years)	6 - 10	54	25.1	
	11 - 15	16	7.4	
	16 >	3	1.4	
Position	Tutor	1	0.5	
	Lecturer	179	83.3	
	Senior lecturer	28	13	
	Associate Professor	5	2.3	
	Professor	2	0.9	

Table 2: Frequency statistics (demographic background).

4.1 Measurement model

Researchers employ SmartPLS3.0 (Hair et al., 2015) in order to examine the research data and for that the report are drawn. Nevertheless, (Chin et al., 2010) determine that two-stage approach is used stages namely measurement model and structural analysis. Table 3 shows that all factor loadings for the dimensions are greater than the recommended value of 0.7, implying their acceptability and confirmation on discriminant validity. As shown in Table 3, all items have high loadings on their constructs. This implies the battery items' acceptability to represent the constructs under consideration.

		Lable		iouums.		
	ATT	SN	PBC	POS	PL	RBL
ATT1	0.815					
ATT2	0.757					
ATT3	0.857					
ATT4	0.753					
ATT5	0.821					
SN1		0.867				
SN2		0.783				
SN3		0.803				
SN4		0.732				
SN5		0.874				
PBC1			0.824			
PBC2			0.849			
PBC3			0.846			
PBC4			0.923			
PBC5			0.987			
POS				0.887		
POS2				0.886		
POS3				0.887		
POS4				0.875		
POS5				0.821		
PL1					0.917	
PL2					0.925	
PL3					0.878	
PL4					0.937	
PL5					0.943	
RBL1						0.917
RBL2						0.852
RBL3						0.862
RBL4						0.931
RBL5						0.919

Table 3:	Factor	loading.
I ante or	I actor	ioaumge

Following Table 4, reports the outcomes for AVE, composite reliability and Cronbach's alpha. The reported composite reliability exceeds the suggested value of 0.7 (Lee & Kozar, 2008). According to Fornell & Larcker, (1981),the AVE values for all constructs' AVE values are greater than the threshold value of 0.5, indicating convergent validity. Taber (2018) denoted that a Cronbach's Alpha value from 0.50 was deemed appropriate albeit being low, whereas values exceeding 0.70 denoted a high internal consistency. Consequently, all the study variables reflected sufficient reliability.

Discriminant validity is tested in accordance with Fornell & Larcker, (1981) recommendation. Table 5 shows the discriminant validity results, which reveal that the values for the square root of the AVE of the variables under investigation are higher than the threshold value of 0.7, indicating discriminant validity.

CALLACTED (IT V L).				
	Cronbach Alpha	CR	AVE	
ATT	0.832	0.852	0.634	
SN	0.890	0.819	0.791	
PBC	0.839	0.862	0.892	
POS	0.925	0.845	0.788	
PL	0.791	0.878	0.705	
RBL	0.808	0.873	0.875	

Table 4: Cronbach's alpha	composite reliability (CR) and average variance
	extracted (AVE).

Table 5: Discriminant validity.						
Variable	ATT	SN	PBC	POS	PL	RBL
ATT	0.88788					
INT	0.7837	0.8936				
PA	0.5605	0.5873	0.7921			
PBC	0.7535	0.784	0.4679	0.8245		
PV	0.7297	0.7704	0.7937	0.6372	0.8122	
SN	0.789	0.823	0.5287	0.7692	0.7614	0.8987

4.2 Structural model analysis

H5

Table 6 report the outcomes of the structural model analysis. The analysis reported the R^2 value of 55.1% and adjusted R^2 value of 54.2%, generally considered a moderate effect size (Zikmund et al., 2013). In line with past research, these analysis was utilised as a statistical technique to examine the linear relationship between the dependent variable (blended learning adoption receptiveness) and independent variables (attitude, subjective norms, and perceived behavioural control, literacy, and organisational support) (Alariqi, Najafi, Abdulrab, Murray & Slimanzai, 2019). In this vein, the aforementioned technique proved essential in evaluating the significant relationship between dependent and independent variables. A p-value of 0.05 (5%) and 0.10 (10%) was also used in this study (the test would prove significant if the *p*-value was under 0.05 and 0.10).

Standard Standard Result Hypothesis Relationship beta Error T-value P Values H1 ATT -> RBL 0.289 0.070 2.987 0.001* Accepted H2 SN->RBL 0.251 0.105 1.914 0.069** Accepted H3 PBC -> RBL 0.236 0.079 2.987 0.001* Accepted 0.256 H4POS -> RBL 2.545 0.028* 0.072 Accepted

Table 6: Structural analysis.

0.054

0.031*

Accepted

3.421

<u>PL -> RBL</u> Note: *p < 0.05; **p < 0.10; ATT = Attitude; SN = Subjective norms; PBC = Perceived behaviour control; PL = Perceived literacy; POS = Perceived organisational support = POS; RBL= Receptiveness of blended learning

0.217

This research was performed to identify if different characteristics potentially affected educators' tendency to incorporate blended learning methods in classrooms. Hypothetically, attitude, subjective norms, and perceived behaviour control, organisational support and literacy positively forecasted blended learning receptiveness. Following the structural analysis, 55.1 per cent of the variance in blended learning receptiveness could be explained with five factors. Based on the novel factor contributions of educators, the outcomes demonstrated that attitudes ($\beta = 0.289$, t = 2.97, p = 0.001), subjective norms ($\beta = 0.251$, t = 1.914, p = 0.069), perceived behaviour control ($\beta = 0.236$, t = 2.987, p = 0.01), perceived literacy ($\beta = 0.217$, t = 3.421, p =0.031), and perceived organisational support ($\beta = 0.256$, t = 2.545, p = 0.028) positively impacted blended learning receptiveness. The TPB construct (attitudes, subjective norms,

and perceived behaviour control) was positively significant following Ulker-Demirel and Ciftci (2020) who revealed that all three constructs significantly influenced the development of intention.

The first objective of this research study was to investigate the level of blended learning receptiveness among Malaysian academicians strictly during the Covid-19 pandemic. Result from the study confirmed that MMU academicians have no choice other than a need to conduct the blended learning approach during the pandemic and lockdown situation. Further, this is supported with a research done by (Mahyoob, 2020) that during the pandemic, online learning was the best option for continuing education, particularly in tertiary education.In addition, Bordoloi et al., (2021) also noted that the sudden outbreak of the Covid-19 pandemic undoubtedly increased the use of blended learning. Nevertheless it is important to realize that blended learning strategies became crucial to all students n lecturers of MMU as an alternative ways to reduce or minimise physical contact.

The second objective of the study was to determine the factors determining blended learning receptiveness among Malaysian academicians by applying the Theory of Planned Behaviour (TPB). Research found that attitude is significantly determining the receptiveness of blended learning among Malaysian academicians. Specifically, MMU lecturers opined that blended learning was a successful teaching approach that substituted face-to-face teaching techniques, specifically during the outbreak. Result was supported by Wasserman and Migdal (2019) who revealed a significant correlation between educators' attitude and digital learning approaches. Similarly, Birbal et al. (2018) maintained that educators' attitudes towards blended learning potentially differed following environmental, atmospheric, and cultural components. Resultantly, attitude was significant towards blended learning adoption.

Second, subjective norm indicated a significant relationship towards blended learning receptiveness among Malaysian academicians. In this vein, MMU educators conceded that colleagues and other surrounding individuals remarkably affected blended learning adoption intentions. Likewise, Verpoorten et al. (2020) affirmed that educators were affected by colleagues who utilised blended learning in at least one course. Perceived behavioural control also demonstrated a significant relationship with blended learning receptiveness among Malaysian academicians. As it was believed that blended learning was viable in the wake of the health crisis, this is parallel with previous study done by Somchai and Damnoen (2020) who conceded that the blended learning method presently conducted online amid the outbreak enhanced educators' readiness to adopt the technique towards increased and effective student participation.

It was also discovered that perceived literacy remarkably affected blended learning receptiveness among Malaysian educators. For example, over 83 per cent of MMU academicians possessed ICT knowledge and skills, specifically concerning blended learning platform utilisation. Likewise, (Pardede, 2019) denoted that high instructor participation in digital platform usage led to increased literacy skills in blended learning adoption. The study also revealed that perceived organisational support reflected a significant relationship with blended learning receptiveness among Malaysian academicians. For example, MMU educators firmly conceded that tertiary institutions should offer adequate facilities to perform blended learning, including good network coverage and blended learning platforms. The finding corresponded to a past study done by Ibrahim & Nat, (2019) that proposed educational institutions to prepare adequate facilities in promoting a blended learning environment.

The effect of the pandemic has impacted almost all sectors and educational institutions are no exception. The blended learning module has induced relevant parties (academic and non-academic staff and students) to implicitly engage in blended learning implementation. The study findings also offered useful insights into the emergence of blended learning as an effective digital instrument and valuable resource to determine various educational intricacies in MMU, particularly amid the outbreak. The convergence approach should then be promoted between traditional and online distance learning (ODL) institutions for a better collaborative experience so that learners from both modes can take advantage of learning at their own pace and place.

5. CONCLUSIONS

5.1 Research contribution

From the research analysis, it was found that all variables denoted a positive and significant relationship with the receptiveness of blended learning among academicians. Thus, this study shows that blended learning receptiveness are high especially during pandemic and lockdown situation. The contribution of the study will benefited both students and lecturers for which it will enhances the quality management of university itself especially in providing more training skills to academicians in which platform are fit to conduct blended learning. In addition, it will also develop a new perspective and understanding of receptiveness of blended learning during Covid-19 pandemic among students especially in Malaysia context.

5.2 Limitation and study forward

As this study solely involved MMU educators, the outcomes could not be generalised to other higher learning institutions. Additionally, the emphasis was placed on blended learning receptiveness among educators rather than students. Hence, future studies may involve other local public universities with different behavioural theories. Moreover, researchers do not further analyse the control variables in this research paper. Control variables are mainly the demographic data (i.e.; gender, age and education level). Authors did not hypothesize the relationship with control variable because their focus was to determine the receptiveness of blended learning among Malaysia academicians mainly during pandemic. Thus, they did not include the control variables into the development of hypothesis. Therefore in future, it is recommended that study could be conducted to see the relation between control variables with blended learning receptiveness.

ACKNOWLEDGEMENT

The authors would like to thank the Universiti Malaysia Sabah(SLB0176) for providing financial supports in conducting this research.

REFERENCES

- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Bhevaior and Human Decision Process*, 50, 179–211. https://doi.org/10.1080/10410236.2018.1493416
- Al-Omar, H. A., Arafah, A. M., Barakat, J. M., Almutairi, R. D., Khurshid, F., & Alsultan, M. S. (2019). The impact of perceived organizational support and resilience on pharmacists' engagement in their stressful and competitive workplaces in Saudi Arabia. *Saudi Pharmaceutical Journal*, 27(7), 1044–1052. https://doi.org/10.1016/j.jsps.2019.08.007
- Alabi, A. O., & Okemakinde, T. (2010). *Effective Planning as a Factor of Educational Reform and Innovation in Nigeria*. 2(6), 316–321.

- Ananga, P., & Biney, I. K. (2017). COMPARING FACE-TO-FACE AND ONLINE TEACHING. January 2018.
- Badia, A., Meneses, J., Sigalés, C., & Fàbregues, S. (2014). Factors Affecting School Teachers' Perceptions of the Instructional Benefits of Digital Technology. *Procedia* - Social and Behavioral Sciences, 141, 357–362. https://doi.org/10.1016/j.sbspro.2014.05.063
- Birbal, D. R., Ramdass, D. M., & Harripaul, M. C. (2018). Student Teachers' Attitudes towards Blended Learning. *Journal of Education and Human Development*, 7(2). https://doi.org/10.15640/jehd.v7n2a2
- Bordoloi, R., Das, P., & Das, K. (2021). Perception towards online/blended learning at the time of Covid-19 pandemic: an academic analytics in the Indian context. *Asian Association of Open Universities Journal*, *16*(1), 41–60. https://doi.org/10.1108/aaouj-09-2020-0079
- Brown, J. (2020). *Receptive*. In E. M. Sanchez (Ed.), Merriam-Webster.com dictionary. Merriam-Webster. https://www.merriam-webster.com/dictionary/receptive
- Ceylan, V. K., & Elitok Kesici, A. (2017). Effect of blended learning to academic achievement. *Journal of Human Sciences*, 14(1), 308. https://doi.org/10.14687/jhs.v14i1.4141
- Cheon, J., Lee, S., Crooks, S. M., & Song, J. (2012). An investigation of mobile learning readiness in higher education based on the theory of planned behavior. *Computers and Education*, 59(3), 1054–1064. https://doi.org/10.1016/j.compedu.2012.04.015
- Chin, W., Vinzi, V. E., Henseler, J., & Wang, H. (2010). How to Write Up and Report PLS Analyses. In *Berlin, Germany: Springer-Verlag.* (Issue 1). https://doi.org/10.1016/S0021-9258(18)71293-3
- Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I. L., & Rhoades, L. (2002). Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology*, 87(3), 565–573. https://doi.org/10.1037/0021-9010.87.3.565
- Eryilmaz, M. (2015). The Effectiveness Of Blended Learning Environments. *Contemporary Issues in Education Research (CIER)*, 8(4), 251–256. https://doi.org/10.19030/cier.v8i4.9433
- Fishbein, M., & Ajzen, I. (2011). Predicting and changing behavior: The reasoned action approach. Predicting and Changing Behavior: The Reasoned Action Approach, January 2007, 1–518. https://doi.org/10.4324/9780203838020
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39. https://doi.org/10.2307/3151312
- Francis Norwood, M., Lakhani, A., & Kendall, E. (2021). Teaching traditional indoor school lessons in nature: The effects on student learning and behaviour. *Landscape* and Urban Planning, 206(September 2020), 103963. https://doi.org/10.1016/j.landurbplan.2020.103963
- Gamble, A., Gärling, T., & Michaelsen, P. (2018). Young Adults 'Attitudes Toward Borrowing. Springer International Publishing. https://doi.org/10.1007/978-3-030-13996-4
- Gomis-Porqueras, P., & Rodrigues-Neto, J. A. (2018). Teaching technologies, attendance, learning and the optimal level of access to online materials. *Economic Modelling*, 73(May 2017), 329–342. https://doi.org/10.1016/j.econmod.2018.04.009
- Graham, C. R. (2006). Blended learning systems: Definition, current trends, and future directions. *Handbook of Blended Learning: Global Perspectives, Local Designs, January 2006*, 3–21.

- Hair, J. J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2015). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). In *International Journal of Research & Method in Education* (Vol. 38, Issue 2). https://doi.org/10.1080/1743727x.2015.1005806
- Hamzah, M., Yeop, M. A., Menengah, S., Sultan, S., & Jiwa, M. (2016). Frog VLE (persekitaran pembelajaran maya) dalam pengajaran dan pembelajaran: Penerimaan dan kaedah pelaksanaannya. *Journal of Research, Policy & Practice of Teachers & Teacher Education*, 6(2), 67–77.
- Haron, H., Abbas, W. F., & Rahman, N. A. A. (2012). The Adoption of Blended Learning among Malaysian Academicians. *Procedia - Social and Behavioral Sciences*, 67(November 2011), 175–181. https://doi.org/10.1016/j.sbspro.2012.11.318
- Hinneburg, J., Hecht, L., Berger-Höger, B., Buhse, S., Lühnen, J., & Steckelberg, A. (2020). Development and piloting of a blended learning training programme for physicians and medical students to enhance their competences in evidence-based decision-making: Development and piloting of a blended learning training programme. Zeitschrift Fur Evidenz, Fortbildung Und Qualitat Im Gesundheitswesen, 150–152, 104–111. https://doi.org/10.1016/j.zefq.2020.02.004
- Horn, M. B., Staker, H., & Christensen, C. M. (2014). Blended: Using Disruptive Innovation to Improve Schools. 304.
- Hussein, E., Daoud, S., Alrabaiah, H., & Badawi, R. (2020). Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE. *Children and Youth Services Review*, 119(November), 105699. https://doi.org/10.1016/j.childyouth.2020.105699
- Ibrahim, M. M., & Nat, M. (2019). Blended learning motivation model for instructors in higher education institutions. *International Journal of Educational Technology in Higher Education*, 16(1). https://doi.org/10.1186/s41239-019-0145-2
- Kanthawongs, P., & Kanthawongs, P. (2013). Individual and Social Factors Affecting Student's Usage Intention in Using Learning Management System. *Procedia - Social* and Behavioral Sciences, 88, 89–95. https://doi.org/10.1016/j.sbspro.2013.08.484
- Knauder, H., & Koschmieder, C. (2019). Individualized student support in primary school teaching: A review of influencing factors using the Theory of Planned Behavior (TPB). *Teaching and Teacher Education*, 77, 66–76. https://doi.org/10.1016/j.tate.2018.09.012
- Kumar, S., & Daniel, B. K. (2016). Integration of learning technologies into teaching within Fijian Polytechnic Institutions. *International Journal of Educational Technology in Higher Education*, *13*(1). https://doi.org/10.1186/s41239-016-0036-8
- Lee, Y., & Kozar, K. A. (2008). An empirical investigation of anti-spyware software adoption: A multitheoretical perspective. *Information and Management*, 45(2), 109– 119. https://doi.org/10.1016/j.im.2008.01.002
- Mahyoob, M. (2020). Challenges of e-Learning during the COVID-19 Pandemic Experienced by EFL Learners. *Arab World English Journal*, 11(4), 351–362. https://doi.org/10.24093/awej/vol11no4.23
- Ministry of Higher Education Malaysia. (2013). Malaysia Education Blueprint 2013 -2025.Education,27(1),1–268.http://linkinghub.elsevier.com/retrieve/pii/S0742051X10001435
- Mitchell, J. I., Gagné, M., Beaudry, A., & Dyer, L. (2012). The role of perceived organizational support, distributive justice and motivation in reactions to new information technology. *Computers in Human Behavior*, 28(2), 729–738. https://doi.org/10.1016/j.chb.2011.11.021
- Mohd Azli Yeop. (2013). Kesan Pendekatan Pembelajaran Berasaskan Projek

Berteraskan. Jurnal Pendidikan Bitara UPSI, July 2013, 1-14.

- Multimedia University Corporate Communication Unit. (2019). *MMU Strengthens Its Premier Digital Tech Institution Status*. https://www.mmu.edu.my/2019/06/mmustrengthens-its-premier-digital-tech-institutes-status/
- Nawaz, A., & Kundi, G. M. (2010). Digital literacy: An analysis of the contemporary paradigms. *International Journal of Science and Technology Education Research*, 1(2), 19–29. http://www.academicjournals.org/journal/IJSTER/article-abstract/68579321822
- Nor, A. S. M., & Kasim, N. A. A. (2015). Blended Learning Web Tool Usage among Accounting Students: A Malaysian Perspective. *Procedia Economics and Finance*, 31(15), 170–185. https://doi.org/10.1016/s2212-5671(15)01144-2
- Oghenevwede, R. I. (2017). Adoption of Blended Learning Into the Nigerian Education System: Prospects and Challenges. *PEOPLE: International Journal of Social Sciences*, 1(1), 129–142. https://doi.org/10.20319/pijss.2015.s21.129142
- Pardede, P. (2019). Pre-Service EFL Teachers' Perception of Blended Learning. JET (Journal of English Teaching), 5(1), 1. https://doi.org/10.33541/jet.v5i1.955
- Ramos, F., Tajú, G., & Canuto, L. (2011). Promoting distance education in higher education in Cape Verde and Mozambique. *Distance Education*, 32(2), 159–175. https://doi.org/10.1080/01587919.2011.584845
- Raza, S. A., Umer, A., Qazi, W., & Makhdoom, M. (2018). The Effects of Attitudinal, Normative, and Control Beliefs on M-Learning Adoption Among the Students of Higher Education in Pakistan. *Journal of Educational Computing Research*, 56(4), 563–588. https://doi.org/10.1177/0735633117715941
- Saboowala, R., & Manghirmalani Mishra, P. (2021). Readiness of In-service Teachers Toward a Blended Learning Approach as a Learning Pedagogy in the Post-COVID-19 Era. *Journal of Educational Technology Systems*, 004723952110152. https://doi.org/10.1177/00472395211015232
- Smith, A. Y. (2015). Attitude, Subjective Norm, and Perceived Behavioral Contr al Control as Indicators for Nurse Educators' Intention to Use Critical Thinking Teaching Strategies: a Structural Equation Model Analysis. *File:///C:/Users/Namputi/Desktop/YES.Pdf.*

https://digitalcommons.andrews.edu/dissertations/1576

- Somchai, P., & Damnoen, P. (2020). Theory Of Planned Behavior In Support For Post Covid-19 New Normalization Responses Of Teachers Towards Online And Blended Learning. October.
- Sum, K. W. R., Cheng, C. F., Wallhead, T., Kuo, C. C., Wang, F. J., & Choi, S. M. (2018). Perceived physical literacy instrument for adolescents: A further validation of PPLI. *Journal of Exercise Science and Fitness*, 16(1), 26–31. https://doi.org/10.1016/j.jesf.2018.03.002
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(6), 1273–1296. https://doi.org/10.1007/s11165-016-9602-2
- Tang, C. M., & Chaw, L. Y. (2015). Digital literacy and effective learning in a blended learning environment. *Proceedings of the European Conference on E-Learning*, *ECEL*, 14(1), 601–610.
- Tempelaar, D. T., Rienties, B., Giesbers, B., & van der Loeff, S. S. (2012). How cultural and learning style differences impact students' learning preferences in blended learning. In *Transcultural Blended Learning and Teaching in Postsecondary Education* (Issue October). https://doi.org/10.4018/978-1-4666-2014-8.ch003
- Turisiana Ahmad Buhari, & Fauziah Saadah Abdul Halim. (2014). Lecturers' Perceptions

of Blended Learning Readiness. Journal of Practices in Language Learning and Teaching, 2(2), 50–63.

- Ulker-Demirel, E., & Ciftci, G. (2020). A systematic literature review of the theory of planned behavior in tourism, leisure and hospitality management research. *Journal of Hospitality and Tourism Management*, 43(April), 209–219. https://doi.org/10.1016/j.jhtm.2020.04.003
- van Twillert, A., Kreijns, K., Vermeulen, M., & Evers, A. (2020). Teachers' beliefs to integrate Web 2.0 technology in their pedagogy and their influence on attitude, perceived norms, and perceived behavior control. *International Journal of Educational Research Open*, 1(September), 100014. https://doi.org/10.1016/j.ijedro.2020.100014
- Verpoorten, D., Huart, J., Detroz, P., & Jérôme, F. (2020). Blended Learning in Higher Education: Faculty Perspective through the Lens of the Planned Behaviour Theory. *E-Learning and Digital Education in the Twenty-First Century - Challenges and Prospects [Working Title]*. https://doi.org/10.5772/intechopen.95375
- Vo, H. M., Zhu, C., & Diep, N. A. (2017). The effect of blended learning on student performance at course-level in higher education: A meta-analysis. *Studies in Educational Evaluation*, 53, 17–28. https://doi.org/10.1016/j.stueduc.2017.01.002
- Wasserman, E., & Migdal, R. (2019). Professional development: Teachers' attitudes in online and traditional training courses. *Online Learning Journal*, 23(1), 132–143. https://doi.org/10.24059/olj.v23i1.1299
- Weng, F., Yang, R. J., Ho, H. J., & Su, H. M. (2018). A tam-based study of the attitude towards use intention of multimedia among school teachers. *Applied System Innovation*, 1(3), 1–9. https://doi.org/10.3390/asi1030036
- Wolff, M., Wagner, M. J., Poznanski, S., Schiller, J., & Santen, S. (2015). Not another boring lecture: Engaging learners with active learning techniques. *Journal of Emergency Medicine*, 48(1), 85–93. https://doi.org/10.1016/j.jemermed.2014.09.010
- Yuzhanin, S., & Fisher, D. (2016). The efficacy of the theory of planned behavior for predicting intentions to choose a travel destination: a review. *Tourism Review*, 71(2), 135–147. https://doi.org/10.1108/TR-11-2015-0055
- Zikmund, W. G., Carr, J. C., Babin, B., & Griffin, M. (2013). *Business Research Methods*. Fort Worth: Harcourt College Publisher. https://www.academia.edu/33978482/Business_Research_Method_Zikmund_8th_e dition_pdf
- Zoellner, J., Krzeski, E., Harden, S., Cook, E., Allen, K., & Estabrooks, P. A. (2012). Qualitative Application of the Theory of Planned Behavior to Understand Beverage Consumption Behaviors among Adults. *Journal of the Academy of Nutrition and Dietetics*, *112*(11), 1774–1784. https://doi.org/10.1016/j.jand.2012.06.368