

ACCEPTANCE OF BLENDED LEARNING AMONG EARLY CHILDHOOD EDUCATION STUDENTS

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Abstract

Higher education institutions are increasingly adopting the notion of blended learning. This approach has a tremendous impact on teaching and learning at all educational levels. As a result, utilising the Technology Acceptance Model (TAM) as a framework, this study intends to examine the acceptability of blended learning among Diploma in Early Childhood Education (ECE) students at Mara Poly-Tech College (KPTM) in Kota Bharu, Kelantan. Students who were chosen at random to participate in this survey study were given a set of questionnaires with two sections. The descriptive analysis of quantitative data was carried out with the assistance of the IBM SPSS Statistic 24 programme. Based on the findings, students enthusiastically supported the blended learning technique since it matched their needs and facilitated the educational process. Students value blended learning and want to see it be used throughout the semester.

Keywords: Blended Learning, Technology Acceptance Model, TAM, Mara Poly-Tech College, KPTM, Early Childhood Education (ECE)

Introduction

E-learning began in Malaysia when the notion of education at universities was broadened to include the provision of distance education programmes. E-learning is still a relatively new phenomenon in Malaysia compared to western nations like Singapore (Wahyu & Yahya, 2007; Krishnan et al., 2011). It has become an integral part of the conventional learning process.

Global online learning is one of the ten critical leaps of the Malaysia Education Development Plan 2015-2025 advocated by the Ministry of Higher Education Malaysia (MOHE). This upsurge indicates that e-learning will be a crucial strategy and a necessary component at all levels of education, whether in K-12 or higher education institutions. As a corollary, the Ministry of Higher Education (MOHE) Malaysia established the Council of Chief Coordinators of e-Learning IPTA (MEIPTA) (Mohammad Amin, 2011) in response to the rapid advancement of technology, which influences and inhibits the implementation of e-learning in higher educational institutions. Higher education reform should be consistent with Malaysia's goal of being a developed nation and producing creative, imaginative, and capable human capital.

Blended learning is characterised by the combination of face-to-face and digital approaches. Some content is more effective when delivered virtually, but skill-based material is better taught in a classroom setting where the instructors and learners are physically present (Yusof et al., 2022). The primary objective of blended learning is to integrate the most exemplary aspects of the two approaches (Abdul Ghani et al, 2022; Mohamad et al., 2015). Combining these two approaches can enhance the learning environment, enable self-directed learning, and shorten the duration of conventional teaching and learning processes in the classroom (Abdul Ghani et al., 2022; Daud et al., 2021; Hamzah et al. 2019; Wong et al., 2014; Shivam & Singh, 2015; Mohamad et al., 2015). Thus, blended learning also enhances the structure of the teaching process and assures the flow of learning in the classroom. Incorporating technology and face-to-face learning into the teaching and learning process can result in a blended learning environment that has a good influence on students (Daud et al, 2022; Tselios et al., 2011; Izudin, 2013; Bottge et al., 2014; Norasyikin & Mohd Isa, 2016). Therefore, this study will analyse the acceptance of blended learning among Diploma in Early Childhood Education students at Mara Poly-Teach College Kota Bharu, Kelantan, based on the Technology Acceptance Model (TAM) framework.

Research Background

Previous scholars have intensively disputed the adoption of technology from the perspectives of a broad range of locations, civilisations, and environments while also integrating several theories and models in their work (Sharma & Chandel, 2013), namely Innovation Diffusion Theory (IDT), Theory of Planned Behavior (TPB), Unified Theory of Acceptance and Use of Technology (UTAUT) (Ventakesh et al., 2003; Ventakesh et al.,

2012), the Technology Acceptance Model (TAM), Technology Acceptance Model 2 (TAM2), Technology Acceptance Model 3 (TAM3) (Ventakesh& Davis, 2000), and the Unified Theory of Acceptance and Use (Ventakesh&Bala, 2008). Each of these theories and models offers researchers a variety of ideas and benefits, which vary depending on the relevance of the study being undertaken.

Davis (1989) employed the Technology Acceptance Model (TAM) to characterise computer usage behaviour, allowing him to achieve his results. To be successful with TAM, the primary goal is to find generic indications of computer acceptance that can be used to explain user activities and behaviours. The TAM model's primary goal is to illustrate two cognitive elements: Perceived of Usefulness (PU) and Perceived of Ease of Use (PEOU). Furthermore, in addition to attitudes and behavioural wants, these cognitive qualities impact behaviour. According to Davis (1989), he defined perceived usefulness (PU) as "the degree to which a person believes that using a particular system would be free of physical and mental effort,". On the other hand, he interpreted perceived ease of use (PEOU) as "the extent to which a person thinks that using a certain system would help him or she does a better job." These two aspects are viewed as independent considerations when it comes to affecting how individuals feel about utilising technology. The behavioural intent to utilise technology is ultimately determined by one's views regarding technology and intentions toward using technology. The TAM model described by Davis is depicted in Figure 1 below (1989).

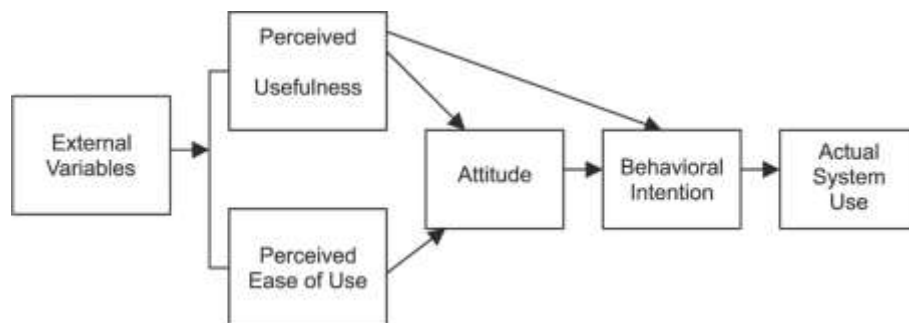


Figure 1. Technology Acceptance Model (David, 1989)

Literature Review

Several empirical studies have been undertaken to measure the level of acceptance of technological systems. Individual acceptance of technology methods has frequently been used in previous studies to measure individual adoption of new technology. In 2013, Abu-Al-Aish and Love (2013) presented a model to identify the variables influencing m-learning in higher education. A secondary purpose of this study is to see if previous mobile device experience influences the acceptance of m-learning. The researchers used a Structural Equation Model (SEM) to analyse the data received from 174 students. The data indicated that performance expectations, effort expectations, lecturer influence, service quality, and personal inventiveness all impact behavioural intentions to use m-learning. A moderator effect for previous experience with mobile devices was also observed, which was shown to regulate the effects on behavioural intent.

Thomas, Singh, and Gaffar (2013) studied the use of mobile learning in higher education in Guyana using the Unified Theory of Acceptance and Use of Technology (UTAUT) paradigm, and their findings were published in the journal Higher Education. According to their questionnaire data, 322 students responded sufficiently. As per the findings, expectations regarding achievement, effort, and social elements all positively influence behavioural intentions. Furthermore, the physical surroundings significantly impacted the intention to behave. The results also revealed that expectations about performance, effort expectations, social factors, and expectations about facilities affect attitudes toward behavioural objectives.

Juinn Bing Tan (2013) used the UTAUT model created by himself in 2012 to examine the variables influencing the adoption of English e-learning in Taiwan (2012). This survey collected responses from 176 Taiwanese students from 10 different institutions. According to the findings, students' behavioural intentions when using English e-learning websites were influenced by performance expectations, effort expectations, and social influence. As a result, site designers are advised to strengthen the information management function while also making the user interface more user-friendly. Furthermore, students should be informed that the physical elements of the facility support the website.

Between the aforementioned perspectives, Alharbi and Drew (2014) used the TAM model to anticipate the adoption of a Learning Management System (LMS) at Saudi Arabia's ShaqraUniversity. This TAM model has been modified by incorporating three external factors: prior experience with LMS, related activities, and the absence of LMS availability (Figure 1). In all, 59 academics from various disciplines were asked to complete a set of questionnaires. The outcomes of this study demonstrate that all of the TAM model aspects, namely

perceived ease of use, perceived utility, and attitude, influence behaviour intention either directly or indirectly, depending on the scenario.

Alshibly (2014) conducted a study at the University of Amman, Jordan, using the TAM model to identify the factors that drive e-learning adoption at the university. Four hundred fifty students were given a questionnaire with 23 items distributed in a set. In this study, we observed that the perception of one's self-efficacy positively influenced the motivation to use an e-learning platform. Additionally, the sense of one's own potential to succeed has a favourable effect on one's assessment of the usefulness of a product. Self-efficacy assessments also had a positive impact on views of the LMS's effectiveness.

Attuquayefio and Addo (2014) conducted research to better understand student acceptance of Information and communication technologies (ICT). To collect data, 345 students from Methodist University's Faculty of Social Studies and Business Administration were given a series of questionnaires. The primary instrument was questionnaires. Structural Equation Model (SEM) analysis was performed on the collected data using the SPSS 16 and Analysis of Moment Structures (AMOS) 20 software tools. The findings indicated that attempts to explain behaviour using ICT far surpassed expectations. However, social influences and performance expectations had no statistically significant impact on behavioural intentions. The results also revealed that the simplicity with which a facility may be accessed has a significant impact on user behaviour.

Research by Fathema, Shannon, and Ross (2015) examined LMS utilisation in higher education. Intentions and usage of the LMS were analysed using the TAM model. SEM was used to analyse the findings of questionnaires completed by 560 lecturers. External factors such as system quality, performance requirements, and amenities significantly impact lecturers' use of LMS.

Shin and Kang (2015) evaluated student acceptability of m-learning and factors impacting learning performance using the TAM model. The study included 1117 undergraduates from the University of South Korea. Personal innovation and access methods have an impact on opinions of usability. This demonstrates how these characteristics stimulate the use of technology. According to the research, perceived usefulness is the most significant element in behavioural intention to use m-learning.

The TAM model was used as a framework by Siang and Santoso (2015) when they evaluated actual usage and behavioural intention. Three hundred fifteen students were given a questionnaire and asked to complete all of the questions. The four critical criteria investigated are attitude toward technology usage, behavioural intention, and technological use. According to the findings, perceptions of usability influence attitudes toward technology, and attitudes toward technology determine behavioural goals. The results vary depending on the faculty.

Teo, Fan, and Du (2015) evaluated gender disparities in technology acceptance among trainee instructors using the TAM model. A total of 339 trainee teachers have registered in Southeast Asian training institutes. There were no statistically significant gender differences in computer perspectives, attitudes, or behavioural intentions. Female trainee teachers scored lower on usability perceptions than male trainee teachers, indicating that female trainee teachers found it more challenging to use technology.

Daud and Ghani (2017) used TAM to analyse Early Childhood Education students' acceptability of the Schoology learning management system. This study involved 90 ECE students who took Arabic studies at Mara Polytech College (KPTM). The findings demonstrated that students chose and liked Schoology for Arabic studies. Other advantages include improved learning outside of the classroom, faster completion of tasks, and increased academic productivity at KPTM.

An adoption of a web-based learning management system for Arabic language courses was also studied by Ghani and Daud (2017). A questionnaire with five components was presented to 100 Diploma in Islamic Studies students: usefulness, usability, attitude, system accessibility, behavioural intention, and user satisfaction. The findings portrayed that e-learning in Arabic classrooms was well-received by students. E-learning also allows students to engage in self-directed learning, and its adoption is impacted by usability and utility judgments.

Methodology

This study examines the acceptance of blended learning among Early Childhood Education (ECE) students at Mara Poly-Tech College in Kota Bharu, Kelantan (KPTMKB), as well as other students. A survey is implemented to obtain data for this quantitative study (Creswell, 2011).

Sampling

The research population consisted of 500 third-year students enrolled in KPTMKB's ECE programme. The study sample included 226 ECE students from KPTMKB who were chosen at random. According to the sample

size determination table produced by Krejcie and Morgan (1970), the number of samples used was adequate to fulfil the sampling criterion.

Instruments

Questionnaires are employed as the primary data collection instrument in this study. It was adapted from a previous study (Masrom, 2007) and modified to be more applicable to the current research effort. This instrument is divided into two sections. Part A of the paper studies the demographic context, while Part B analyses the acceptance of blended learning in the workplace. PU is perceived usefulness, PEOU denotes perceived usability, AT represents attitude, and BE indicates behaviour in relation to blended learning. This section entails 15 items organised into four fundamental constructs: perceived usefulness, perceived usability, attitude, and behaviour towards blended learning (BI).

Pilot study

The objective of the pilot study was to obtain an early peek at a broader research endeavour before moving ahead with it. Furthermore, the questionnaire is used to validate the eligibility and comprehension of those who responded to the questionnaire's questions. If any items are deemed unsuitable, confusing, or difficult to comprehend, they can be modified or eliminated from the questionnaires. Donald and Pamela (2003) advocated pilot research of 25 to 100 people. A pilot study requires a minimum sample size of 30 participants and a maximum sample size of 100 participants; according to Johanson and Brooks (2010), after randomly selecting 100 non-respondent pupils, researchers conducted a pilot study to test the reliability of the instrument for future research. Cronbach's Alpha Coefficient was calculated using the IBM SPSS Statistics 24 programme.

Constructs	Cronbach Alpha	Number of Items
Perception of Effective Use (PU)	0.908	4
Perception of Ease of Use (PEOU)	0.903	4
Attitude (BI)	0.928	4
Behaviour (AT)	0.921	3
Total Items		15

Table 1 Value of Cronbach's Alpha Coefficient

The data from the measuring scale's reliability testing is presented in the table above. Cronbach's Alpha coefficient dependability score is higher than 0.70, indicating a high level of reliability (Pallant, 2007). The questionnaire instrument utilised in this study is exceptionally reliable, as evidenced by the high Cronbach's alpha value.

Findings

This study looks at whether blended learning is acceptable for Early Childhood Education (ECE) students at KPTMKB. The data was gathered from 226 students chosen at random to participate in the study. The data was then descriptively analysed using IBM SPSS Statistics 24 software. The findings are provided in two parts: part A describes the students' demographic background, and part B investigates the extent to which the students use blended learning. Both parts are presented in this section of the paper. The findings that were obtained are summarised below.

Section A: Demographic Background

Section A contains the findings of the participants' demographic backgrounds. It consists of inquiries on gender, age, and prior experience in blended learning environments. The quantitative data were descriptively analysed and reported using frequencies and percentages, among other approaches.

1) Gender

Item	Sub-item	Frequency (n)	Percentage (%)
Gender	Male	59	26.1
	Female	167	73.9
Total		226	100

Table 2 Gender

According to the statistics in the table above, female students accounted for 73.9 percent of the entire proportion, with 167 students being the total number. In contrast, the survey gathered 59 male students (26.1 percent).

2) Age

Item	Sub-item	Frequency (n)	Percentage (%)
Age	18-20	0	0
	21-23	207	91.6
	24-26	19	8.4
	Total	226	100

Table 3 Age

The age distribution of the respondents is seen in the table above. There were 207 students between the ages of 21 and 23, accounting for 91.6 % of the student population, with just 19 students (8.4 %) between the ages of 24 and 26.

3) Experience of Blended Learning

Item	Sub-item	Frequency (n)	Percentage (%)
Experiences in Blended Learning	Less than 6 Months	0	0
	6 Months – 1 year	2	0.9
	1-2 years	114	50.4
	2 years above	110	48.7
	Total	226	100

Table 4 Experiences in blended learning

The table above summarises the outcomes of the study on blended learning experiences. According to the findings, 114 students (50.4 %) had one to two years of experience, while 110 students (48.7 %) had more than two years of experience.

Part B: Adoption of Blended Learning

Section B presents the data on the level of acceptance of blended learning among ECE students. Part B has four major constructs: utility perception (PU), usability perception (PEOU), attitude (AT), and conduct (BI). The mean and standard deviation were used in the descriptive analysis and presentation of quantitative data (SP). The interpretation value of the mean value score of blended learning acceptability is based on Nunally's (1978) evaluation standards of 1.00 - 2.00 (low), 2.01 - 3.00 (medium low), 3.01 - 4.00 (medium high), and 4.01 - 5.00 (high).

Item	Mean	SD	Level
PU1: Blended learning will increase my learning effectiveness.	4.23	0.591	High
PU2: Blended learning will improve my course performance.	4.21	0.588	High
PU3: Blended learning will increase my productivity in my coursework.	4.19	0.630	High
PU4: I find blended learning very useful.	4.29	0.576	High
Total mean	4.23		

Table 5 Students' perception of usefulness towards blended learning

The table above shows the mean score values for the first construct, the concept of utility, which has four components. The item's overall mean value is 4.23, which is quite high. This item had the highest mean score of 4.29 because students saw blended learning as extremely valuable. Furthermore, students agreed that blended learning might improve the efficacy of their knowledge, with a mean score of 4.23 at the highest level, followed by a mean score of 4.21 for questions referring to how blended learning may improve the performance of specified topics. In contrast, concerns regarding blended learning to improve course productivity had the lowest mean score of 4.19. Nonetheless, the average score remains high.

Item	Mean	SD	Level
PEOU1: I find OLES easy to use.	4.29	0.576	High
PEOU2: Learning to use OLES will be easy for me.	4.23	0.594	High
PEOU3: My interaction with OLES is clear and easy to understand.	4.13	0.616	High
PEOU4: I find it easier to find information through OLES.	4.26	0.624	High
Total Mean	4.23		

Table 6 Students' perception of blended learning

The mean score values for the second construct, which consists of four questions and usability measures, are displayed in the table above. The total mean value of the item is 4.23, which is rather high. The highest mean score value of items connected to blended learning in KPTMKB is simple to use (4.29), which is at a high level,

followed by items linked to discovering subject knowledge through Online Learning System (OLES), which is also at a high level. Furthermore, students recognised that OLES streamlines the learning process by receiving an above-average mean score of 4.23. Similarly, items linked to student engagement with OLES are straightforward and easy to understand, receiving the lowest score for ease-of-use (4.13), but still at a high level.

Item	Mean	SD	Level
AT1: I like the idea of blended learning.	4.19	0.607	High
AT2: I have a more positive attitude towards blended learning.	4.16	0.622	High
AT3: I believe blended learning is a good idea for my coursework.	4.18	0.607	High
AT4: Blended learning is a brilliant idea.	4.22	0.614	High
Total Mean	4.19		

Table 7 Students' attitudes towards blended learning

The mean score values for the third construct, attitudes, which consists of four items, are shown in the table above. The total mean value of the item is 4.19, which is quite high. Majority of students thought blended learning was a meaningful idea, with this item having the highest mean score (4.22 at a high level) for this construct. A mean score of 4.19 suggests that students like the idea of incorporating blended learning into the teaching and learning process. Furthermore, items linked to KPTMKB students' beliefs that blended learning is a good concept for their courses were assessed highly, with a mean score of 4.18. The item with the lowest mean score was students' willingness to develop blended learning, which obtained a mean score of 4.16.

Item	Mean	SD	Level
BI1: I want blended learning throughout the semester.	4.17	0.633	High
BI2: I will always use OLES.	4.12	0.636	High
BI3: I will use OLES regularly for my coursework.	4.14	0.628	High
Total Mean	4.14		

Table 8 Students' behaviour towards blended learning

The table above shows the mean scores for the fourth component, behavioural desire, which consists of three items. The item's overall mean value is 4.14, which is rather high. With a mean score of 4.17, majority of students want to use blended learning throughout the semester. Furthermore, a mean score of 4.14 suggested that students agreed to use OLES regularly for course-related assignments. The item with the lowest mean score value was related to the frequency with which students utilise OLES; yet its mean score value of 4.12 is still high.

Discussion

The great majority of KPTMKB students are females between the ages of 21 and 23. A great number of students (114 in total) had prior experience with blended learning, with the majority having one to two years of experience. Meanwhile, 110 students have knowledge that is equivalent to or greater than two years. This difference was made because respondents in this survey were unlikely to have been exposed to blended learning in their first or second years of education. Due to the opposition of lecturers and students to the use of blended learning, students at KPTMKB have unique times of experience, even though they are all enrolled in diploma programmes concurrently.

Furthermore, when examining the overall acceptability of blended learning among ECE students, the perception of utility and ease of use received the highest overall mean score. This illustrates that the characteristics of utility and ease of use are critical in the acceptance of blended learning and have an impact on the element. These findings are consistent with previous study conducted by other researchers (Alharbi & Drew, 2014; Alshibly, 2014; Khechine et al., 2014).

Data indicates that blended learning has a substantial impact on the entire learning process. These findings are similar to a previous study (Ghani and Daud, 2017; Shin and Kang, 2015), which discovered that the notion of blended learning had a positive impact on students' behaviour. Furthermore, most students stated that OLES in KPTMKB is straightforward to use. Furthermore, the use of blended learning at KPTMKB substantially simplifies the teaching and learning procedure for students. This is true for a variety of reasons, including the fact that students may contact their lecturers and other classmates via OLES, and that students can choose the topics they want to study based on the level in which they are presently enrolled.

ECE students at KPTMKB, on the whole, are enthusiastic about blended learning in the framework of the teaching and learning process. This is due to the fact that it simplifies things for students, motivates students to enrol in the class, and has the potential to improve students' overall performance in the class. Blended learning

involves activities that can help students improve soft skills such as discussion, sharing perspectives, technology abilities, and so on. Blended learning also includes activities that might help students improve their academic performance. Students are enthusiastic about blended learning and plan to utilise it for the duration of this semester and the next.

Conclusion

In light of the statistics, blended learning is seen favourably by ECE students at KPTMKB because they feel it is more in line with their existing way of life. The in-person format has many benefits, but with its help, the online format might facilitate and improve the teaching and learning process. Institutions might support this proposal by offering the necessary infrastructure, such as improved Wi-Fi on campus. This will allow students to participate in online learning outside of the normal classroom setting. Teachers should continue to support blended learning by encouraging students to engage in online activities. Throughout the course, this should be done once more. A survey study has been suggested by researchers to assess the variables affecting blended learning's adoption at the higher education institution level. In order to assess the effectiveness of blended learning strategies in higher education institutions, experimental methodologies may also be applied.

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