Article

Factors Affecting Teaching English as a Second Language (TESL) Postgraduate Students' Behavioural Intention for Online Learning during the COVID-19 Pandemic

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Abstract: Online learning has become essential in education as the spread of coronavirus 19 (COVID-19) pandemic has brought significant changes to the field. However, education should remain welcoming and supportive to all the learners as it is important to keep the students' behavioural intention in any form of learning environment. Thus, this study is significant as online learning is leading the trend of education now. Past studies revealed that the factors of performance expectancy, effort expectancy, social influence, and facilitating conditions under the unified theory of acceptance and use of technology (UTAUT) model affect learners' behavioural intention to use online learning. This study intended to identify the most significant factors that influence TESL postgraduate students' behavioural intention towards the use of online learning during the COVID-19 pandemic. It also examined the relationship amongst the four factors and postgraduate students' behavioural intention to use online learning. The participants consisted of 169 postgraduate students at a public university in Malaysia. To achieve the aim, the study utilized a survey design using a questionnaire. The results from regression analysis revealed that all of the factors have positive effects on postgraduate students' behavioural intention to use online learning. Meanwhile, performance expectancy has the greatest influence on postgraduate students' behavioural intention. Hence, this study concludes that the practicality and the usefulness of online learning should be highlighted by the authorities.

Keywords: online learning; TESL postgraduate students; factors influencing; UTAUT; behavioural intention

1. Introduction

The world with the advancement of technology has brought education towards online learning. Online learning is crucial, especially for higher education, as most colleges and universities have used online course delivery in their learning programs, such as distance education [1]. It also has been a norm in the educational field, especially in tertiary education, where learning with digital technology has become a topical issue in recent years [2,3]. There are many kinds of online teaching and learning tools, such as social media, massive open online courses (MOOC), mobile applications, virtual learning environment (VLE), and other educational web services. Online learning has become more necessary during this period. In the year 2020, the world is attacking by the virus called coronavirus disease 2019 (COVID-19). All of the sectors are affected which includes education. Individuals are advised to stay home and encourage social distancing to prevent the spreading of the virus. Hence, students of all nations are turning their learning approach from the physical classroom to digital learning education [4].

Learners' behavioural intention to use online learning is the main concern in education. Some studies have investigated the perceptions of students on learning English using technology during non-pandemic situations [5–8]. However, there is limited evidence that shows research has been done to investigate postgraduate students' behaviour intention to use online learning during the pandemic. Due to the pandemic, the Prime Minister of

Malaysia announced the Movement Control Order (MCO) to mitigate the spread of COVID-19 through social distancing. All of the sectors, including schools, colleges, and higher-learning institutions, have been forced to close until further announcements. Students from all levels need to continue learning and studying from home through online learning. Therefore, it is important to know whether online learning is good to help postgraduate learners during the pandemic. There are various factors that affect students' behavioural intention, for instance, the lecturer's competence, the lecturer's attitude towards learning, and the nature of the subject are the factors that hinder the adoption of e-learning [9]. However, it is uncertain of which factor most influences the TESL postgraduate students' behavioural intention in online learning.

In understanding the factors that affect the postgraduate students' behavioural intention to use online learning, the unified theory of acceptance and use of technology (UTAUT) has been referred to create a questionnaire in this study. UTAUT is a theory proposed by Venkatesh et al. [10] that tries to incorporate and practically assess elements from various technology acceptance models in technology acceptance. There is a need to find out learners' perceptions of online learning before implementing it in tertiary education [11]. The findings from studies on online learning in other countries are mostly positive. In the context of ESL, researchers believe that students can only learn a second language successfully when they have positive attitudes towards it. In Malaysia, English acts as a second language and it is important in the students' daily lives and tertiary education. There are various factors that affect ESL (English as a second language) postgraduate learners in learning English [12]. Past studies have reported that affective variables are the key to affecting the success of language learning [13–15].

This study is significant in the sense that it addresses specific samples, i.e., TESL postgraduate students at a public university in Malaysia, which provide detailed insights into the Malaysian higher education context. In addition, this study looks into the current trend of the learning approach which is online learning so that it is more relevant to the audience. The findings could be useful to the academic leadership and policymakers as they reported on students' perceptions of online learning. It also raises awareness regarding what factors and obstacles influence students' behavioural intention to use online learning. Therefore, the current study is conducted to investigate the most significant factors that influence TESL postgraduate students' behavioural intention to use online learning and the relationship amongst the four factors (performance expectancy, effort expectancy, social influence, and facilitating conditions) and their behavioural intention to use online learning. First, a concise literature review of researches that has studied the model and the factors will be provided. Following that, it will present the descriptions of the methods of the study and report on the findings of its results. The discussion will then synthesise the content of findings into a new viewpoint. Lastly, the article ends with the limitations and implications of the study in the conclusion.

2. Literature Review

2.1. Online Learning

The growing access to the internet and technology has led the transformation from traditional classroom to online learning. Online learning includes online teaching and learning which engage the learners in the learning process through Internet and digital media [16]. Online learning can be defined as a type of mobile learning through mobile computational devices. Learning could happen anywhere and anytime with the advance of technology as long as the electronic devices are by your side [17]. Mobile equipment like smart phones, laptops, and tablets are living necessities and the process of learning has changed with the use of these electronic devices. Technology-based learning is believed to be an innovative learning technique for primary and secondary schools. However, it is more common in higher-level education. Teaching and learning using technology make the process more interactive and collaborative. The use of ICT in education now is to

help teachers to do administrative tasks more competently and students to learn more efficiently [18].

Online learning has become an alternative approach to conventional face-to-face learning and teaching is no longer confined to classrooms [19]. Internet access transformed education, heralding a new era where technology mediated tools were used to substitute the traditional teaching with a learning process referred to as online learning [20]. The students would be able to communicate with the teachers in the virtual class interactively. The applications like ZOOM and Google Meet enable the lesson to be delivered live, where the students could interact with each other in real time [21]. The teachers could easily grade and comment the students' assignments or tests online to keep track on the students' progression. Online learning would also transfer skills and knowledge to a large number of recipients at the same time which is impossible for the traditional classroom practice. The students could easily access to the knowledge with just a click anytime and anywhere. As long as you have a stable internet connection and usable electronic device, online learning would not be a problem for the users.

Google Classroom as one of the online learning platforms which helps teachers to save time, enhance the interpersonal communication among students and keeps the class in control [22]. Moreover, online learning sessions could be fun they are embedded with game-based learning tools like Quizlet, Kahoot, Plickers, and Quizizz, which helps the teachers in assessing the students while engaging students' attention with a fun learning environment. These online game-based learning tools have been demonstrated to improve the effectiveness of students' learning processes [23–25].

2.2. Online Learning + Pandemic

To control and limit the spread of the COVID-19 pandemic, educational facilities have been temporarily closed down by most governments around the world. COVID-19 is a disease detected in 2019 that is a new virus associated with the same family of viruses as severe acute respiratory syndrome (SARS) and other common cold types that are highly contagious to susceptible individuals [26]. Schools, colleges and universities have been closing rapidly around the world, and the authorities are undertaking to change to replacement which is online learning programs [27]. In Malaysia, on 18 March 2020, the government announced the Movement Control Order (MCO) or 'lockdown' which restricted people in the nation from mass movements and gatherings, preventing travelling and affecting the closure of educational institutions, government, and private premises (except those involved in essential services). Hence, teachers and lecturers have resorted to use the Internet and various online tools to get in touch with their students. This causes a difference use in online learning experience since it is not an optional situation for the students in terms of the pandemic. Online learning gives the recent phenomenon of worldwide lockdown of education institutions due to COVID-19 a big support. Although the schools are closed, all the teachers are ready to continue the teaching and learning process online. There are a total of five principles that helps online learning to deliver successfully for university students [28]. Firstly, the teaching content should correspond to the students' online learning behaviour and readiness. Second, the teaching pace is crucial in ensuring the knowledge is delivered effectively due to students' low concentration levels in learning online. Third, adequate support like after-class email instructions and online video tutoring must be given to ensure the effectiveness of online learning. Fourth, certain steps must be implemented by the teaching assistant to increase the students' engagement in online classes. Lastly, there is a need to prepare contingency plans before the lesson to resolve potential issues such as the problem of poor internet connection [28]. Due to these five principles, the teachers' capability of teaching online is also challenged. This is where teachers' technological pedagogical content knowledge (TPACK) skills need to be reviewed. TPACK was introduced by [29] as a theoretical framework for understanding teacher knowledge required for effective technology integration. In ensuring the effectiveness of

online learning, teachers need to focus on competencies in the interaction of technology, pedagogy, and content [30].

2.3. Unified Theory of Acceptance and Use of Technology (UTAUT)

Figure 1 shows Venkatesh et al. [10] proposed UTAUT which was integrated from eight models: Fishbein and Ajzen's theory of reasoned action (TRA), technology acceptance model (TAM), the motivational model (MM), theory of planned behaviour (TPB), TAM and TPB combined, the model of PC utilization (MPCU), the innovation diffusion theory (IDT), and the social cognitive theory (SCT). One of the most common theoretical models for explaining the user's behavioral intentions in technology adoption is UTAUT. Venkatesh et al. [10] proposed four behavioural intentions in UTAUT: effort expectancy (EE), performance expectancy (PE), social influence (SI), and facilitating conditions (FCs). The questionnaire for this study is therefore intended to determine the most significant factors influencing the postgraduate students' behavioural intention to use online learning.
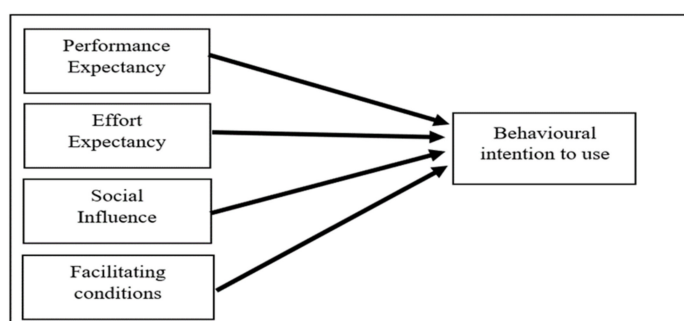

Figure 1. UTAUT Model (Venkatesh, et al., 2003).

Published studies have confirmed the effectiveness of the UTAUT model in investigating the students' acceptance of e-learning. For example, the acceptance and preparedness of students for e-learning in northeastern Thailand [31], a study of e-learning acceptance in postgraduate program at Universitas Negeri Makassar, Indonesia [32], e-learning acceptance level among accounting lecturers in the universities in Padang, Indonesia [33], factors that influence the intent of teachers in higher education to use e-learning in hybrid environments [34], and the evaluation on WhatsApp as a tool for learning during COVID-19 at a Zimbabwean University [35]. However, few if any studies have considered Malaysian post graduate students' behavioural intention to use online learning during the pandemic. Therefore, this study provides a precise summary of the factors affecting postgraduate students' behavioural intention to use online learning, and is also used as a guideline for the successful development of online learning.

2.3.1. Performance Expectancy

According to Venkatesh et al. [10], the performance expectancy was how much a person trusts that using ICT will help increase the accomplishment of their task. It was also theorized by perceived usefulness, comparative benefit, extrinsic motivation and result expectancies of the use of online learning. In this study, performance expectancy was described as the degree to which participants assume that using online learning would improve their learning process during COVID-19 pandemic. According to previous studies [31,36–38], performance expectancy is a significant factor that affect students' behavioural intention.

2.3.2. Effort Expectancy

Effort expectancy in this study relates to the perceived ease of use of online learning, whether easy or complicated [10]. If the participants expect online learning to perform excellently during COVID-19, they are more likely to use online learning. Past studies [31,35,39]

claimed that effort expectancy would affect students' behavioural intention. Therefore, it was considered as the participants' perceived effortless use of online learning, which might affect their intention to have online learning class. The teaching assistant who had been trained in using online teaching materials would be able to help their students better [40].

2.3.3. Social Influence (SI)

Social cognitive theory (SCT) [41] is a theory that underpinned the social influence factor in this study. SCT established that environmental influences for example social pressure and special situational features. Social pressure refers to the participants perceived the importance that the people around them believe they should use the online learning platform for learning [10]. Social influence was described in this study as a participant's opinion on what other important individuals (such as their lecturer and classmates) perceive their use of online learning to be. However, special situational features in this factor implies the COVID-19 pandemic. It also relates to the social impact factor that affects the behavioural intention of students to use online learning. Past studies found that social influence significantly affected students' behavioural intention [34,37,42].

2.3.4. Facilitating Conditions

Facilitating conditions were connected to the technical infrastructures, organisation and administrative problems that might influence a student's attitude towards the task [10]. Skills, resources, knowledge, and support regarding the use of online learning was also considered as the facilitating conditions in this study. In the case of this survey, participants will be willing to go for online learning if they believe the infrastructure and resources are highly supported. The researcher found that students' behavioural intention and e-learning acceptance were affected by facilitating conditions based on the results collected from the survey [37].

2.4. The Present Study

Education has changed dramatically due to the COVID-19 pandemic and online learning is undertaken remotely in the year 2020. Based on the review of literature, it could be seen that each of the factors has significant effect on students' behavioural intention to use online learning. Since previous studies were done in various contexts, it is also important to understand students' behavioural intention in the context of ESL. The present study focuses the questions of TESL postgraduate students' behavioural intention to use online learning during COVID-19. The findings of the analysis would definitely answer the research questions as follows:

RQ1 : To what extent is there a relationship between the factors (performance expectancy, effort expectancy, social influence, and facilitating conditions) and TESL postgraduate students' behavioural intention to use online learning during COVID-19 pandemic?

RQ2 : What is the most significant factor that influences TESL postgraduate students' behavioural intention to use online learning during COVID-19 pandemic?

Based on the four core determinants performance expectancy, effort expectancy, social influence and facilitating conditions in the UTAUT model, the researcher developed four null hypotheses for this study.

Hypothesis 1: *There is no significant relationship between performance expectancy and TESL postgraduate students' behavioural intention to use online learning during the COVID-19 pandemic.*

Hypothesis 2: *There is no significant relationship between effort expectancy and TESL postgraduate students' behavioural intention to use online learning during the COVID-19 pandemic.*

Hypothesis 3: *There is no significant relationship between social influence and TESL postgraduate students' behavioural intention to use online learning during the COVID-19 pandemic.*

Hypothesis 4: *There is no significant relationship between facilitating conditions and TESL postgraduate students' behavioural intention to use online learning during the COVID-19 pandemic.*

3. Methodology

3.1. Research Design

This study utilized a survey research design that used a questionnaire to measure the postgraduate students' behavioural intention to use online learning with the variables affecting students' behavioural intention to use online learning during COVID-19. The results from the survey were then analysed quantitatively by the researcher.

3.2. Participants

The researcher conducted the research at a public university in Malaysia. It is the first university which offers a masters programme during school holidays for local teachers. The participants in this study were selected through purposive sampling. They are the students who took the part time courses in teaching English as a second language (TESL) masters program. These courses held during every school holiday in UKM. Total students enrolled are 199 and the return rate is 169 (84.9%) to the survey which achieved the goal of response rates that approximately 60% for most of the research [43]. They are working as an English teacher and lecturer in primary, secondary and tertiary education. Based on the results from the questionnaire, demographics of participants are shown in Table 1. The age group of the participants is important as it will affect the result in the factor of effort expectancy. The participants are from different states in Malaysia. Some are from rural area and some of them stay in suburban or urban areas. These are some of the important participants' demographic details which support the factors that affect postgraduate students' behavioural intention.

Table 1. Demographics of Participants.

	Frequency (n)	**Percent (%)**
Age Group (years)		
20–29	117	70.5
30–39	35	21.1
40–49	11	6.6
50–59	3	1.8
Location of home		
Urban	77	46.4
Suburban	74	44.6
Rural	15	9

Note: Total of participants is 169.

3.3. Instrument

In this research, a questionnaire was used to analyse the behavioural intention of students to use online learning during the pandemic. The survey consists of 23 questions and divided into 2 parts which the first about postgraduate students' demographic details and second on factors that influence postgraduate students' behavioural intention to use online learning. Section A of the survey contained demographic items such as age, location of home and state they are staying in.

The second part of the survey contains 5 sections (Sections B–F) to test factors that influence students' behavioural intention to use online learning. Then, 16 questions were

adapted from the unified theory of acceptance and use of technology (UTAUT) scale, created by Venkatesh et al. [10]. It tested on performance expectancy (4 items), effort expectancy (4 items), social influence (4 items), facilitating conditions (4 items) and behavioural intention to use (4 items). For part two, the survey questions will use a 5-point Likert scale, with responses varying from strongly disagree to strongly agree to respond to their agreement stage [10].

3.4. Data Collection

The data collection procedure is fully online based due to the COVID-19 pandemic. The survey is shared to the samples through social media groups such as WhatsApp and Telegram. The survey data was collected in three weeks for the participants to fill in the Google Forms questionnaire. The participants who voluntarily took part in the survey would enter the link given on social media. An online survey is a kind of data collection method which is very convenient to the participants. As the smartphone is now a basic necessity for everyone and it helps people to connect, thus the participants can answer the survey easily at anytime and anywhere. All questions were set with the function 'required' so that the participants need to complete all questions to submit the survey before they exit it. This is also good to avoid incomplete responses in the survey. The survey results from Google Forms were then transferred into Excel and SPSS for data analysis.

3.5. Data Analysis

3.5.1. Validity and Reliability Analysis

The researcher tested for internal validity and explained the fundamental aspects of the data in the study by using differential statistics. Face validity and content validity by the experts are carried out for the questionnaire in this study. Cronbach's Alpha was used to measure the survey items from UTAUT for each variable for reliability analysis. The collected results were analysed using Statistical Package for Social Science (SPSS). The compound reliability range must exceed the recommended reliability coefficient of 0.70 to be considered as accepted in most of the social science research situations. The Cronbach alpha values for the questionnaire are included in Table 2. Based on the Cronbach alpha values, all of the five sections in the questionnaire had exceeded 0.85, and thus the constructs were all considered reliable.

Table 2. Reliability of research variable.

	Cronbach's Alpha
Performance expectancy	0.869
Effort expectancy	0.850
Social influence	0.850
Facilitating conditions	0.865
Behavioural intention to use	0.971

Referring to Table 2, there are a total of two experts helped in checking the validity of the questionnaire in this study. Both of them are the experts in teaching English as the head panel in school and the senior lecturer in university. They are required to fill in a content validation form and rate the instruments accordingly. The researcher then modified the questions in the survey before distributed it to the participants.

3.5.2. Descriptive Analysis

The data obtained from the survey was analyzed using descriptive statistics analysis after checking reliability. There are four types of descriptive statistics, such as frequency measurements, central pattern measurements, dispersion or variance indicators, and measures of position. However, measures of position are not applicable in this research. The

researchers used the measures of frequency to analyse on count, percent and frequency. This is a type of measure to show how often something appears and how often a response is presented. Next, measures of central tendency were used to account for mean, median, and mode of the responses collected from the survey. This allows to place the distribution by various points and present the average or most frequently directed response. Lastly, measures of dispersion or variation are used to know the range, variance, and standard deviation of the collected responses. These measures were to identify the spread of scores by stating intervals and to see the way the data spread out because it might affect the mean. The measure for range was able to detect high and low points in the data whereas standard deviation or variance was to look for the difference between perceived score and mean. All of these measures were presented in tables to give the readers a clear understanding.

3.5.3. Correlation Analysis

This research used the Pearson correlation coefficient to find out the relationship between the variables. The strength of the relationship between independent and dependent variables is calculated. It is ranging from -1 to $+1$, a value of -1 shows a perfect negative relationship which means they are inversely related. Conversely, a value of $+1$ indicates that there is a perfect positive relationship between two or more variables and the variables are moving in the same direction.

3.5.4. Regression Analysis

In this study, the regression analysis estimates the relationships between the two sets of variables that are the dependent variable (behavioural intention to use) and the independent variables (performance expectancy, effort expectancy, social influence, and facilitating conditions). The p-values help to assess the relationships that also exist in the larger population that the researchers found in the samples. If the p-value is greater than the degree of significance, it implies that there is an important correlation between the variables. However, if the p-value is less than the degree of significance, it means that there is no meaningful relationship between the variables.

4. Results and Findings

4.1. Descriptive Analysis

Based on the results from the questionnaire, means and standard deviations between the variables are shown in the following table (Table 3).

Table 3. Descriptive analysis for the variables.

Variables	M	SD
Performance Expectancy (PE)	3.75	0.85
Effort Expectancy (EF)	3.89	0.93
Social Influence (SI)	3.89	0.85
Facilitating Conditions (FC)	3.97	0.85
Behavioural Intention to Use (BI)	3.74	1.02

The results shown in Table 3 are based on the participants' perceptions of the items. The results explained that facilitating conditions variable get the highest mean among other variables. "The online learning system is compatible with other application programs" matches the highest mean value (M = 4.08) among all the items. However, behavioural intention to use is oppositely the lowest average value between the variables (M = 3.74). Although it is the lowest, the difference with facilitating conditions is only 0.23. Among the items, "I intend to continue my learning through online learning classes," is the lowest mean which influences the low mean value of behavioural intention to use. Descriptive analysis for the results emphasised the contribution of items to each variable. This directly

and indirectly explains the influences between the variables and is used to support the results of the hypothesis.

4.2. Correlation Analysis

Pearson correlation analysis was used in this study to measure the statistical relationship between two continuous variables. Factor loadings are suggested to be greater than 0.50 [44]. The correlation of factors is shown in Table 4.

Table 4. Correlation of factors.

	PE	EE	SI	FC	BI
PE	1.000				
EE	0.734 **	1.000			
SI	0.330 **	0.234 **	1.000		
FC	0.550 **	0.740 **	0.214 **	1.000	.
BI	0.787 **	0.586 **	0.347 **	0.447 **	1.000

Note: PE = performance expectancy; EE = effort expectancy; SI = social expectancy; FC = facilitating conditions; BI = behaviour intention; ** Correlation is significant at the 0.01 level.

In Table 4, the correlation data analysis of the factors is shared. In the study, all of the factors show a positive relationship which is more than 0.2. The highest correlation among all the factors is 0.787 which shows very strong positive relationship between BI and PE. Meanwhile, the lowest is the correlation between SI and FC (0.214). This implies that PE and BI have the strongest relationship as compared to other variables in this study. However, the correlation coefficient of all the items that are greater than zero, suggesting a positive relationship between two variables. All the items in the test are significant with a value $p < 0.01$. All factors considered in the analysis therefore demonstrate appropriate reliability and convergent validity.

Based on the result, PE has the strongest correlation with the dependent variable (BI) in this study, with a Pearson correlation value of 0.787, r (167) = $p < 0.01$. The weakest correlation of the independent variable with the dependent variable (BI) is SI, with a Pearson correlation value of 0.347, r (167) = $p < 0.01$.

4.3. Regression Analysis

In the research, regression analysis was used to analyse the effect of performance expectancy, effort expectancy, social influence, and facilitating conditions on behavioural intention to use. Table 5 shows the regression of factors on behavioural intention to use (BI).

Table 5. Regression of Factors on Behavioural Intention to Use (BI).

	Standard Coefficients (β)	t-Value	Sig.	R^2
PE	0.787	16.332	0.000	0.619
EE	0.586	9.263	0.000	0.344
SI	0.347	4.744	0.000	0.121
FC	0.447	6.407	0.000	0.200

Note. PE = performance expectancy; EE = effort expectancy; SI = social expectancy; FC = facilitating conditions; BI = behaviour intention.

Based on Table 5, the findings showed that all independent variables had a major impact on behavioural intention to use. The most important factor, based on the beta value (β) of standardised coefficients, was the performance expectancy (β = 0.787) and it is with the highest R2, PE (R2 = 0.619) indicated that approximately 61.9% of the variation in postgraduate students' BI (dependent variable) can be explained by PE (independent variable). The evaluation of postgraduate students' behavioural intention to use online learning established that performance expectancy was analytically proven to provide a

significant effect on behavioural intention to use online learning for the TESL postgraduate students in UKM. Online learning was perceived by the postgraduate students to improve their learning performances, allowing them to do more work in less time, and providing useful learning in their postgraduate studies. This finding corresponds with many of the researches which showed that performance expectancy had significantly affected postgraduate students' behavioural intention to use online learning [31,36–38].

4.4. Confirmation of Hypotheses

Hypothesis 1: *There is no significant relationship between performance expectancy and TESL postgraduate students' behavioural intention to use online learning during the COVID-19 pandemic.*

Hypothesis 1 was rejected as the result (β = 0.787, $p < 0.05$) showed that performance expectancy positively affects TESL postgraduate students' behavioural intention to use online learning. This indicates that students increase their behavioural intentions to use online learning when they expect online learning increases their performances.

Hypothesis 2: *There is no significant relationship between effort expectancy and TESL postgraduate students' behaviour intention to use online learning during COVID-19 pandemic.*

The result (β = 0.586, $p < 0.05$) indicates that effort expectancy positively affects TESL postgraduate students' behavioural intention to use online learning. Therefore, Hypothesis 2 is rejected. This means that they maximize their behavioural intentions to use it as postgraduate students consider online learning to be user-friendly.

Hypothesis 3: *There is no significant relationship between social influence and TESL postgraduate students' behaviour intention to use online learning during COVID-19 pandemic.*

The result showed that social influence positively affects postgraduate students' behavioural intention to use online learning (β = 0.347, $p < 0.05$). Hence, Hypothesis 3 is rejected. This shows that when someone important to the postgraduate students suggested them to use online learning, they increase their behavioural intention to use it.

Hypothesis 4: *There is no significant relationship between facilitating condition and TESL postgraduate students' behaviour intention to use online learning during COVID-19 pandemic.*

Hypothesis 4 is rejected as the result (β = 0.447, $p < 0.05$) indicates that facilitating condition positively affects TESL postgraduate students' behavioural intention to use online learning. This implies that when TESL postgraduate students expect facilitating conditions around them to be good enough, they increase their behavioural intentions to use online learning.

5. Discussion

The COVID-19 pandemic has changed the path of learning in all sectors, and it provides opportunities for the students and educators to explore online learning. Online learning was previously known as a face-to-face learning alternative. Online learning was the only way to support teaching and learning processes during the COVID-19 pandemic outbreak. Since online learning was not wholly designed in Malaysia, many factors could affect postgraduate students' behavioural intention to use online learning in the future.

5.1. Factors Affecting Acceptance of Online Learning

The findings from the questionnaire indicated that performance expectancy, effort expectancy, social influence and facilitating conditions significantly correlated with the behavioural intention to use online learning in the future.

To assess the extent of variables affecting the behavioural intention of TESL postgraduate students to use online learning, the level of performance expectancy (mean = 3.75), effort expectancy (mean = 3.89), social influence (mean = 3.89), and facilitating conditions (mean = 3.74) associated with the use of online learning as noted by the participants was moderate as the difference between the mean was not obvious. As for performance expectancy, the result shows that most of the TESL postgraduate students benefited from the opportunities related with the use of online learning. Majority of the participants feel that online learning is useful for their postgraduate study which is identical with the previous study [36]. Most of the participants also had the view that they are proficient and skilful at using online learning based on the factor of effort expectancy. This is aligned with their professions as a teacher in the schools as they need to carry out the lesson with their students online during COVID-19. Furthermore, most of the participants (70.5%) are from the age group of 20–29, they are born in the technology era so learning with technology is not a problem for them. From the participants' standpoint on social influence, most of them agreed that online learning is the current trend in 2020 and universities in the world have since totally adopted online learning to replace face-to-face learning [45]. In addition, the result concerning facilitating conditions shows that the participants were satisfied with the level of infrastructure that aids the use of online learning. This agrees with the participants' location of home as 91% of them are staying in urban and suburban area. The internet connection in urban area is better and it is important in the era of globalisation to improve human activities [46]. This shows that the postgraduate students are well prepared with the necessary gadgets and an internet connection when they are participating online classes.

5.2. Relationship between the Factors and TESL Postgraduate Students' Behavioural Intention

Based on the results from the questionnaire, it indicated that performance expectancy, effort expectancy, social influence and facilitating conditions significantly correlated with the TESL postgraduate students' behavioural intention to use online learning.

Performance expectancy is an important factor that affects TESL postgraduate students' behavioural intention, as stated by Venkatesh et al. [10], p. 447, as "the degree to which the user expects that using the system will help him or her to attain gains in job performance". Past studies have proposed that performance expectancy is one of the most significant factors to predict learners' behavioural intention to use technology [31,34–36]. Subsequently, the predicted complexity of the technology and the degree of energy required to use can be explained as effort expectancy. The impact on behavioural intention to effort expectancy in this study was moderated by experience and it is also important to identify TESL postgraduate students' behavioural intention. The effect was more significant for less experienced technology users [10].

Social influence corresponds to the expectation of important others that the new system should be accepted by the individual. It is a significant factor as the effect of social power is even greater in the case of non-voluntary use [10]. Professional development of the lecturer could affect the students' social influence on using online learning, hence the universities should focus on the professional development and improve on the pedagogical approaches on online teaching [47,48]. Finally, the facilitating conditions factor is also significant as it covers the degree to which a person perceives that online learning can be implemented using infrastructure. Technical and financial resources for the electronic devices are the main concerns for adopting online learning among the postgraduate students.

5.3. Most Significant Factor

Amongst the four factors discussed based on the UTAUT model, even though EE, SI, and FC had a significant relationship with the behavioural intention to use ICT, PE is the most important factor that affects TESL postgraduate students' behavioural intention to use online learning as supported by past studies [31,36–38]. In this situation, the university authorities play a major role in ensuring that online learning is both feasible and beneficial for the learning process. The five principles suggested by Bao [28] were important to

ensure the students' performance on online learning. The outcome of online learning was being concerned by the TESL postgraduate students the most as it affects their behavioural intention to use online learning. Online learning needs to assist them to perform better and more professionally in the lectures. This can relate to their working profession as a teacher in the school and institutions. These results should arouse further attention among researchers on how the level of EE, SI, FC, and most specifically PE related with the use of online learning can be improved. The postgraduate students will be able to adopt online learning more effectively if this step is done.

6. Conclusions

The COVID-19 pandemic has caused a terrific impact on the education system worldwide. The government has taken action to stop the spreading of the virus which is the closure of educational institutions. Thus, educators and students have to face the new trend of learning in which they can only interact through the Internet. However, several variables have arisen that have influenced the TESL postgraduate students' behavioural intention to embrace online educational technology in the future. The aims of this study are to identify the most significant factors that influence TESL postgraduate students' behavioural intention towards the use of online learning and to examine the relationship amongst the four factors and postgraduate students' behavioural intention to use online learning during the COVID-19 pandemic. The factors of performance expectancy, effort expectancy, social influence, and facilitating conditions were strongly correlated with TESL postgraduate students' behavioural intention. Of all the factors, the most important factor which influences the intention of TESL postgraduate students to implement online education technology is the performance expectancy. Based on the study's results, for most of the TESL postgraduate students, the outcomes of online learning are much more important than others. Hence, the authorities of the university should consider postgraduate students' performance expectancy in planning the programme. In addition to the organised courses, the authorities should conduct surveys on how to improve online learning and consider the suggestions from the students as their opinions might give great help in increasing the effectiveness of online learning. Several limitations are presented in this study. First of all, the participants are mostly from the age group 20 to 29 and they are generally stay in the urban and suburban areas. Postgraduate students from different age groups and locations face different types of challenges, specifically about educational technology. Accessible infrastructure and students' technological competence are a few challenges faced by the elder and rural students. To improvise the study, participants from different age groups should be determined before distributing the questionnaire. The participants are asked to voluntarily participate in the survey, thus there might not be all of them take part in this study and it limits the generalizability of the results. Another methodological limitation is that the current study collects data using cross-sectional methods, whereby the data are collected at one point of time on different samples. Therefore, the TESL postgraduate students' behavioural intention to use online learning is not collected over a period of time, and hence, it does not provide data over a period of time. Moreover, the survey is conducted during the COVID-19 pandemic period where all the schools, colleges, and higher institutions are still closed. So, there is no face-to-face interaction occurring between the researcher and the participants. The data are being collected online only. Future research may compare TESL and other courses of postgraduate students on their behavioural intention on online learning and investigate their similarities and differences. A face-to-face interview is encouraged to acquire a better result for participants' perspectives on online learning.

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