Assessing Foundation Students' Acceptance in Using Video Conferencing Technologies (VCTs) as Online Learning Platforms during the Pandemic

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Abstract: The COVID-19 pandemic has significantly affected Higher Education Institutions (HEIs) in Malaysian education system. Due to this, the HEIs have implemented online learning to be replaced with physical classrooms to ensure that all students able to reach their learning potentials. As such, video conferencing technologies (VCTs) have been employed nationwide for effective learning activities. Previous research have shown that teaching and learning using VCTs are beneficial for online learning, however, not many studies focused on the student's acceptance of VCTs during unforeseen situations. This study intends to overcome this research gap by investigating the factors influencing the foundation students' acceptance of VCTs during the outbreak. Therefore, the facilitating conditions and computer self-efficacy factors are integrated into the Technology Acceptance Model (TAM) for analysis. For this purpose, the PLS-SEM was used to analyze the data collected from 231 participants of selected higher education institutions in Malaysia. The finding revealed that 'attitude towards use' and 'intention to use' VCTS have a positive relationship with the actual use of VCTs. Furthermore, the result indicated that facilitating condition has significantly impacted the 'perceived ease of use' of the VCTs. However, 'computer self-efficacy' has no significant impact on the 'perceived usefulness' of the VCTs. It is also learned that using VCTs is acceptable for remote and online learning mode, particularly amid the current COVID-19 pandemic. The outcomes of this study are able to improve the existing knowledge on the student's acceptance of VCTs and provide useful insights into the curriculum designated for the HEIs. Hence, it can be concluded that our findings validated the model used in this study and offered valuable guidelines in developing online learning approaches that promote learning through varied platforms.

Keywords: Foundation students, Higher education, Technology Acceptance Model, Video Conferencing Technologies.

1. Introduction

Due to the strikes of the COVID-19 pandemic in 2020, online or electronic learning (e-learning) has grown in popularity worldwide. The pandemic has significantly affected the education system in Malaysian higher education institutions (HEIs). As education becomes a top-notch priority by the Malaysian government, it is vital to ensure that all Malaysian students have equal opportunities to fulfill their learning potential regardless of background, especially during this pandemic (Ministry of Education Malaysia, 2015). Therefore, HEIs have temporarily suspended face-to-face teaching and learning in preference for a remote and distance alternative. This learning platform allows students to engage in tasks in a virtual environment and provides a means of communication with lecturers, even at university levels. While most students engage in this mode of learning in some manner, they decide to engage in online learning (Alfadda & Mahdi, 2021; Ismail, Che Mat & Mohd Ali, 2022). However, the COVID-19 pandemic has caused online learning becomes mandatory instead of optional in recent years. Regarding the shift to online classes conducted, the process could have been more natural and straightforward. Consequently, the HEIs must revoke from physical classrooms to online mode. Lecturers and students were forced to use online learning technology to continue their classroom activities throughout the pandemic. On the part of the lecturers, they must also embrace the dynamic nature of remote learning technology to keep providing educational services to students despite the drastic changes of the pandemic (Camilleri & Camilleri, 2021).

Since the first declaration of the Movement Control Order (MCO) in March 2020, the Ministry of Higher Education (MOHE) of Malaysia has introduced online learning as the standard and sole distance learning mode in the Malaysian HEIs to respond to such an unprecedented event (Chung et al., 2020; Nassr, Aborujilah, Aldossary & Aldossary, 2020). Throughout the MCO period, the MOHE has issued teaching and learning (T&L) implementation guide that requires online learning conducted via web-based Video Conferencing Technologies (VCTs). This includes the use of online platforms such as MS Teams, Zoom, Facebook Live, and Google Classroom for the video conferencing platforms beginning 1st April 2020. This policy ensures that students are not left out from education since this technology enables all students enrolled in their respective course are able to access educational materials regardless of locations or time constraints. However, two years after the pandemic, many lecturers and students still continue their T&L activities through online learning platforms such as LMSs and VCTs (Prabawangi, Fatanti & Ananda, 2021). It is learned that they are familiar with the online technologies particularly it facilitated asynchronous learning through recorded videos during the outbreak. This new academic norm suits the Web 2.0 generation by integrating social and technological aspects into learning activities, as seen by the growth of VCTs as one of the online learning platforms used for teaching. Owing to the rapid development of VCTs, the vast array of online learning platforms and online educational tools on the internet has indeed transformed lecturers-students engagement.

The growing popularity of information and communication technology (ICT) supports the widespread use of online technologies to improve the learning process. The switch of learning using VCTs is highly preferred since it connects the lecturer to the student or one student to another when students are required to study remotely instead of attending physical classes (Nguyen, Pho, Luong & Cao, 2021). This has resulted in an increasing number of studies focusing on technology acceptance in education (Alfadda & Mahdi, 2021; Camilleri & Camilleri, 2021) and the relevance of technology during the pandemic (Aguilera-hermida, 2020; Ismail et al., 2022; Nassr et al., 2020). Thus, the acceptance of students of online learning technologies is among the well-researched topics on distance learning to facilitate online learning (Salloum, Alhamad, Al-Emran, Abdul Monem & Shaalan, 2019; Sukendro, Habibi, Khaeruddin, Indrayana, Syahruddin, Makadada & Hakim, 2020). However, the current learning environment tests the abilities of lecturers and students to incorporate technology into the designated syllabus. Due to inadequate internet access, lack of proper technical equipment, concentration problems, and other challenges, students face significant difficulties towards their online lessons. These problems have affected their online learning activities since most university students are not able to continue their studies at home during the COVID-19 outbreak (Ag-Ahmad, 2021).

This study aims to assess the foundation students' experiences in using VCTs as their online learning platforms during the pandemic in a selected Malaysian higher education institution. Therefore, this study seeks to examine the students' VCTs acceptance during such an unprecedented event by utilizing the Technology Acceptance Model (TAM), which serves as the theoretical framework for this research. To date, there have not been enough findings on the students' acceptance of VCTs, particularly those studying at a foundation level in universities (Jailani et al., 2020; Novel, Ajisuksmo & Supriyantini, 2019). Hence, it is essential to investigate the acceptance and intention of the foundation students in using VCTs as their online learning platforms. As such, this study will examine the students' acceptance of the VCTs' facilitating condition, 'computer self-efficacy,' 'perceived usefulness,' 'perceived ease of use, attitude, behavioral intention', and 'actual use' among university students at the foundation level in Malaysia.

2. Literature Review

Clark and Mayer (2016) defined online learning (alternatively referred to digital learning, e-learning, or computer-based learning) as class instruction delivered on the internet and digital devices to facilitate learning. The definition includes three aspects of what, how, and why online learning is conducted: (a) what, the content presented consists of spoken or written words and graphics such as animation, video, images or illustrations; (b) how, the platform is a computer-based system such as laptop, tablet, smartphone or virtual reality; and (c) how, the educational objectives is to trigger concrete improvement during the learning activities. During the online learning process, technology has played a critical role. Online learning requires various ICT resources, including a desktop computer, laptop, tablet, smart screen, internet access, and online learning platforms (software/mobile apps). Students should have access to at least one of these devices to participate effectively in the online classroom. Online learning has been widely introduced in education since the 1990s. Hence, prestigious institutions, such as the University of North Texas (starting 1995) and Stanford University (starting 2005), have embraced and offered this mode of learning (Mad et al., 2020).

Online learning enables every student to access educational materials anytime and anywhere. Hence, online and remote learning needs a platform to deliver educational materials, and video conferencing is one of the most used platforms worldwide. Djojo, Hafizh, Gui, Shaharudin, Karmawan and Suryanto (2021) describe VCTs as technological tools that allow two individuals or groups to join from different locations via a virtual environment using audio and videos. Due to the rapid advancement of technology, students can access all learning materials via multiple devices, such as smartphones, tablets, or computers, and retrieve the learning materials online from any locations. Before the spread of the COVID-19 pandemic, most classes in the HEIs were conducted in conventional face-to-face sessions, which required the students to attend their classes. However, this conventional method is costly and demands efforts from both higher learning institutions and students. However, it is believed that the use of VCTs fosters close interaction between lecturers and students as they can meet during regular class hours. Most HEIs must conduct online classes or webinars using several VCTs platforms, including Microsoft Teams, Hangout, Skype, Zoom, Webex, and Google Meet. This technology serves several benefits on the part of the students and the lecturers teaching the course contents. This mode of learning does not require the students to be physically present on the campus, which is in line with the guidelines endorsed by the federal government of Malaysia to prevent the spread of COVID-19 and to ensure the student's safety and well-being. The pandemic has forced HEIs to migrate from physical classrooms to online settings, which necessitates any communication via VCTs. This platform also transforms physical classrooms into a virtual learning environment in which the students can learn and interact with their lecturers and peers during the lesson.

There are few studies on the acceptance of VCTs from the standpoint of learners (Camilleri & Camilleri, 2021; Nguyen et al., 2021). It is noted that from the online learning viewpoint, research on the perspectives of foundation students had received less attention in the body of literature, with the majority of research mainly focusing on undergraduate students. Additionally, the acceptance of online learning has been heavily studied from the lecturers' perceptions. As the acceptability of online

learning is also critical from the learners' perspective, there is a need to validate the same area of concern. In terms of the acceptance of VCTs, relatively few studies on the acceptance of HEIs students in Malaysia are available. To fill these gaps, this study addresses research questions as follows: a) What is the level of acceptability of VCTs from the foundation students' standpoint? b) Is VCTs a suitable platform for conducting online classes? Thus, this study seeks to examine the acceptance of VCTs from the perspective of Malaysian HEIs' foundation students using the Technology Acceptance Model (TAM), a verified and proven model for technology acceptance (Al-Nuaimi & Al-Emran, 2021). TAM is an analytical model commonly used to study factors affecting user acceptance of new technologies. Davis (1989) established TAM, a significant representation of the socio-psychological approach to technology adoption study from its inception. Although it seems that TAM is a tailored form of Theory of Reasoned Action (TRA), the experimentally proven descriptive analysis of the TAM variables in various circumstances qualifies this model as a unique Information System Theory that examines the linear relationships between "beliefs, attitudes, intentions, and actual system utilization" at macro level.

At its core, TAM postulates that the desire to use a specific application is determined by two external variables: perceived usefulness (PU) and perceived ease of use (PEOU). For PU, it is defined as the degree to which an individual feels that employing a certain system would improve their progress at any task. Meanwhile, PEOU refers to an individual's belief that utilizing selected technologies is effortless (Davis, 1989). To add, attitudes can entirely or moderately mediate the effects of 'perceived usefulness' and 'perceived ease of use' on behavioral intentions. In addition, the expanded versions of TAM require that both 'perceived utility and 'perceived ease of use are regressed against various external factors (Davis, 1989). As this framework specializes in its adaptability, flexibility, and simplicity, several external variables can be included in its original structure. A closer examination of the theoretical models used in previous research based on the TAM framework indicates that the external factors included in the model were not restricted to the antecedent variables impacting 'perceived ease of use and 'perceived usefulness. There are other external variables directly affect the endogenous variables in TAM, such as attitudes, behavioral intentions, and actual system use. This study added 'computer self-efficacy' and 'facilitating conditions' as external variables influencing PU and PEUO.

2.1 Hypothesis Development

This study aims to identify the foundation's students' acceptance of the VCTs for online learning influenced by the dependent and independent variables. The independent variables employed for the present study are 'facilitating conditions', 'computer self-efficacy', 'perceived ease of use', 'perceived usefulness', and 'attitude towards use'. Meanwhile, the dependent variables are 'behavioral intention' and 'actual use' of VCTs for online learning. The facilitating condition (FC) is introduced as an external variable to supplement the central TAM-based construct. FC is defined as the degree to which the students believe that organizational and technical resources are needed to assist online learning during the pandemic. Previously, it was observed that the enabling condition strongly predicted 'perceived ease of use' regarding technology integration in educational contexts (Sukendro et al., 2020). It is supported by Kamal et al. (2020) that if the technical support was sufficiently provided, many students believe that online learning could effectively replace their face-to-face classes. Therefore, it is postulated that:

H1: Facilitating conditions significantly affect perceived ease of use towards VCTs acceptance.

Self-efficacy is an individual's confidence in their ability to take the necessary actions to deal with future challenges (Salloum et al., 2019). In this study, self-efficacy is examined concerning computer systems (i.e., the student's ability to use the VCTs). According to Compeau and Higgins (1995), 'computer self-efficacy' plays an important role in shaping an individual's feelings and behavior. Computer self-efficacy was discovered to be the most frequently used external factor of TAM (Alfadda & Mahdi, 2021; Salloum et al., 2019). Numerous empirical research has established

that 'computer self-efficacy' significantly affects the 'perceived usefulness' and 'ease of use of e-learning systems'. Hence, we make the following hypothesis:

H2: Computer self-efficacy significantly affects perceived usefulness towards VCTs acceptance.

Perceived usefulness is 'the extent to which an individual believes that utilizing a certain technology will improve his or her job performance' (Davis, 1989). It is learned that high perceived usefulness is critical in understanding the positive relationship between user performance and user satisfaction (Turner et al., 2010). Past studies demonstrated that 'perceived usefulness' positively impacts users' attitudes and behavioral intentions (Davis, 1989). Lecturers and students embrace new digital technology in teaching and learning activities which positively affects their practice (Granić & Marangunić, 2019). Therefore, the following hypothesis is formulated:

H3: Perceived usefulness significantly affects students' attitudes toward VCT acceptance.

Perceived ease of use (PEOU) is defined as 'the degree to which an individual believes that utilising a certain system would be effortless in terms of a physical and mental effort' (Davis, 1989). PEOU has a strong and significant effect on attitude towards use and behavioral intentions (Sukendro et al., 2020; Yang & Wang, 2019). Therefore, PEOU also influences PU. PEOU and PU have a good association if the new technology's features are simple and beneficial for online learning. This is supported by few studies focusing on online learning platforms in education asserting that PEOU affects PU (Hernandez, 2021; Salloum et al., 2019). Thus, the hypothesis is as follows:

H4: Perceived ease of use significantly affects students' attitudes towards VCTs acceptance.
H5: Students' acceptance of VCTs' ease of use positively affects their perceived usefulness.

Attitude is 'a person's positive or negative assessment of a certain object,' and behavioral intention refers to 'an individual's probability of performing a specific behavior' (Ajzen et al., 1991). Past studies established a positive and significant relationship between an individual's attitude and behavior (Alfadda & Mahdi, 2021). The term 'actual use' refers to 'a person's actual technological use' (Venkatesh et al., 2016). Specific research papers used actual use as an outcome variable, whereas others combined behavioral intention and actual use (Granić & Marangunić, 2019). Numerous research has shown that behavioral intention is the primary predictor of the actual use of an online learning system (Hernandez, 2021; Sukendro et al., 2020).

H6: Attitude towards usage (ATT) will positively influence students' behavioral intention (BI) to accept VCTs.
H7: Behavioral intention (BI) will positively influence the students' actual use (AU) of the VCTs.

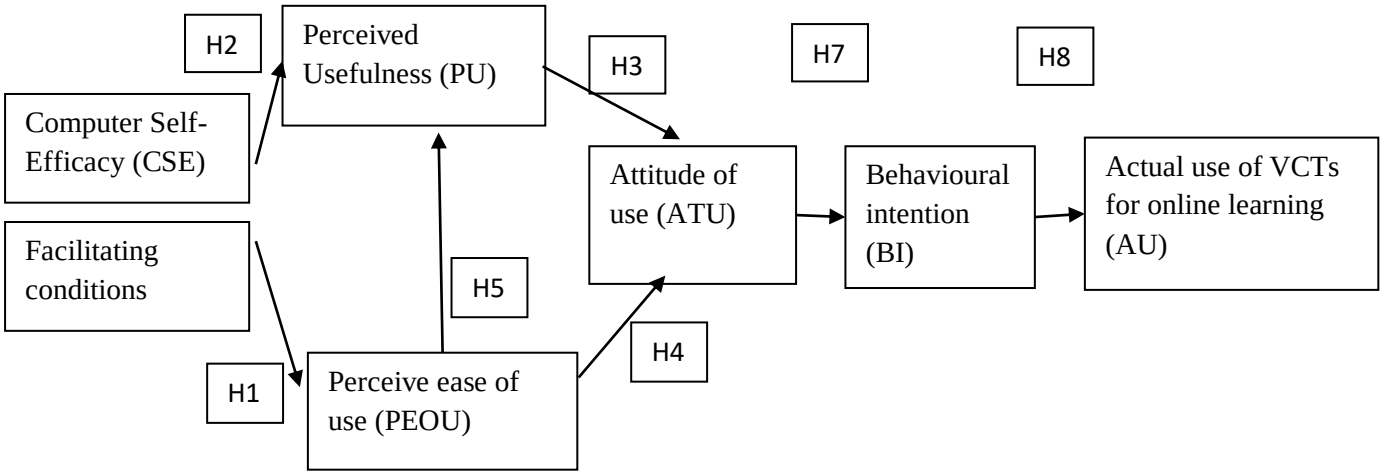

Fig. 1 Proposed framework

3. Methodology

This research employs a quantitative method that involves data collection and analysis. The instrument used for this study is a questionnaire to validate the hypothesis that contains 21 items; each question corresponds to a different construct. The instrument is designed to accomplish the research goals (Sukendro et al., 2020). An adapted survey instrument was used in this study to determine the variables associated with the use of VCTs during COVID-19 from several relevant studies. In this study, the questionnaire was adopted from previous studies where the reliability and validity of the instrument employed was verified respectively (Salloum et al., 2019; Yang & Wang, 2019; Alfadda & Mahdi, 2021). For a Likert-type questionnaire, the respondents were asked the level of agreement to the statements. Ranging from a scale of 1 to 5, this scale is represented as follows; 1 indicates "strongly disagree," 2 indicates "disagree," 3 indicates "neutral," 4 indicates "agree," and 5 indicates "strongly agree" (Salloum et al., 2019; Yang & Wang, 2019; Alfadda & Mahdi, 2021). The adaption process developed a new instrument for the current study where the indicators were differentiated and tailored to the scope of study, namely, COVID-19 and the use of VCTs in the classroom.

The data was analyzed using the reflection modeling of Smart PLS version 3.3.3 software, a widely used multivariate analytical tool. Hence, the Partial Lease Square Structural Equation Modelling (PLS-SEM) was selected for this study for several reasons. First, the PLS-SEM is the most beneficial analysis method during primary research to establish the current study. Second, the PLS-SEM assists the researchers with complicated model-based investigations. Third, rather than splitting the model into groups, the PLS-SEM examines the entire model as a single entity. Finally, the PLS-SEM enables the concurrent analysis of the measurement and structural model, resulting in precise calculations. Hair et al. (2019) also stated that the SEM analysis enables the identification of causal effect relationships between constructs by combining factor analysis and multiple linear regressions The convenience sampling method was used for this study for its feasiblitity as the participants were easily reached to participate in this research. McBurney and White (2004) asserted that this method identified the intended group of participants out of the total number of a population (p. 248). This method is indeed suitable for the nature of this research as it requires quite a large number of participants within a short time frame (Mitchell & Jolley, 2004, p. 205).

The respondents for this study are currently studying at Malaysian HEI in Kuala Lumpur. The questionnaire was available online via Google Forms to reach a wider range of respondents and for ease of access. For data collection, the students received the questionnaire link via email. These students were contacted directly by the research team members who involved in the VCTs during the pandemic. 231 respondents filled out the forms, and they were deemed valid for analysis. This sample size was sufficient for data analysis and to compare constructively with similar samples of research projects. The data consist of 111 males and 120 females, mainly 18 to 24 years old, with a majority of

these students studying undergraduate programs. The students used VCTs in combination with the Learning Management System (LMS) for the academic year of 2020/2021, which corresponded with the closure of HEIs due to the pandemic. The survey was conducted based on the student's willingness to participate in the research as they had previously experienced using the VCTs as the platforms to assist their online learning.

~~4.~~ Results

First, the reliability and validity of the instrument used for this research were evaluated. Second, the SEM analyses were conducted to assess the hypotheses suggested. The PLS path modeling is a well-supported approach to estimating complicated cause-and-effect research models (Latif et al., 2020). Any models that consist of many constructs, indicators, and structural relationships can be easily solved using the PLS-SEM analysis. The PLS-SEM is suitable especially for designing and testing the theory at an early stage. It also facilitates the analysis of complicated structural model constructs and relationships (Hair et al., 2019).

4.1 Measurement Model Assessment

As a part of the model assessment, the factor loading of each variable was verified as the values needed to be above 0.708 (Bhatt & Shiva, 2020). Cronbach Alpha is the most often employed method to determine the instrument's reliability and consistency. This reliability coefficient ensures that all the scale's items are adequately interrelated. Cronbach's Alpha surpasses the 0.7 value, as stated by Hair et al. (2019). To validate the examined model, convergent validity, which comprises average variance extracted (AVE), and composite reliability (CR), must be tested. Hair et al. (2019) also postulated that AVE and CR values should be above or close to the recommended levels of 0.5 and 0.7, respectively. As shown in Table 1, Cronbach's Alpha, AVE, and CR values were all greater than the suggested levels for this measurement model. Thus, no items were deleted. These results established construct reliability, and all constructs were deemed accurate.

Table 1. Construct Reliability and Validity

Construct	Cronbach's Alpha	CR	AVE
CS	0.859	0.914	0.779
FC	0.727	0.841	0.639
PEU	0.830	0.898	0.746
PU	0.913	0.945	0.851
ATT	0.884	0.928	0.811
BI	0.904	0.940	0.838
AU	0.713	0.837	0.631

The discriminant validity examines to what extent the test measures the concept it was designed to evaluate. To measure discriminant validity, the Fornell-Lacker Criterion ratio was calculated. Fornell and Larcker (1981) proposed the Fornell and Larcker Criterion to assess discriminant validity, which was diagonally greater than the inter-item correlation values under the

root of AVE. The model is reflective, which means that each construct is unique from one another. Thus, the study is very suitable for final analysis, as in Table 2.

Table 2. Fornell-Larcker Scale

	ATT	**AU**	**BI**	**CS**	**FC**	**PEU**	**PU**
ATT	**0.901**						
AU	0.604	**0.794**					
BI	0.773	0.603	**0.916**				
CS	0.504	0.415	0.432	**0.883**			
FC	0.551	0.431	0.489	0.473	**0.779**		
PEU	0.763	0.565	0.721	0.635	0.540	**0.864**	
PU	0.684	0.577	0.659	0.470	0.478	0.631	**0.923**

4.2 Structural Model Assessment

The structural assessment was used to explain how latent constructs relate from one to another. The predictive relevance and relationship between constructs can be assessed through this assessment. Two measures were provided for evaluating the structural model: hypothesis testing and coefficient of determination (R^2). The path coefficient analysis has been used to investigate the different predicted hypotheses in the developed model. The significance of the path was determined by running the model through a bootstrap re-sampling method. Bootstrapping is a nonparametric method to determine the degree of significance of partial least square estimates. Table 3 illustrates the relationship, path coefficient (β), t-value, p-value, and decisions. A t-value greater than 1.657 is required for the hypothesis to be significant at the 0.05 significance level (i.e., p 0.05). The outcome of hypothesis testing is shown in Table 3. Based on the table, six of the seven hypotheses investigated were supported..

Table 3. Hypothesis-testing (significant at $^{**}p \leq 0.01$)

Hypothesis	**Path**	**Mean**	**T Statistic**	**P Values**	**Direction**	**Decision**
H_1: FC->PEU	0.540	0.540	9.381	0.000**	Positive	Accepted
H_2: CS->PU	0.115	0.122	1.742	0.082	Positive	Rejected
H_3: PU->ATT	0.335	0.332	4.564	0.000**	Positive	Accepted
H_4: PEU->ATT	0.552	0.554	7.223	0.000**	Positive	Accepted
H_5: PEU->PU	0.540	0.552	8.935	0.000**	Positive	Accepted
H_6: ATT->BI	0.773	0.601	20.270	0.000**	Positive	Accepted
H_7: BI->AU	0.603	0.601	10.396	0.000**	Positive	Accepted

Based on Table 3, the first hypothesis established a relationship between the 'facilitating condition' (FC) and 'perceived ease of use' (PEU) (β = 0.540, t = 9.381). The outcome of this hypothesis demonstrated that facilitating conditions significantly affect the 'perceived ease of use' of VCTs and resulted in a positive outcome. Thus, H1 for this study is supported. For the second hypothesis, it is reported that there is no relationship between 'computer self-efficacy' (CS) and 'perceived usefulness' (PU) (β = 0.115, t = 4.564). This hypothesis indicates that computer self-efficacy has no obvious effect on the perceived usefulness of VCTs. Therefore, H2 is rejected. This finding indicated that students' computer ability had no positive impact on the perceived usefulness of VCTs. Likewise, PU has a statistically significant positive effect on ATT (β =0.335, $p < 0.05$), confirming H3. As can be observed, PEU has a significant positive correlation with PU (β =0.552, $p < 0.05$) and ATT (β =0.540, $p < 0.05$), implying that H4 and H5 are supported. Similarly, the data suggest that ATT has a positive effect on BI (β =0.773, $p<0.05$) and BI has a positive effect on AU (β =0.603, $p<0.05$), hence supporting H6 and H7. This finding indicated that the students believe that using VCTs may improve their learning ability, leading towards their intentions and actual use of the platform for online learning. The last hypotheses clearly show a strong significant positive effect of attitude toward system use on behavioral intention to use the VCTs for online learning.

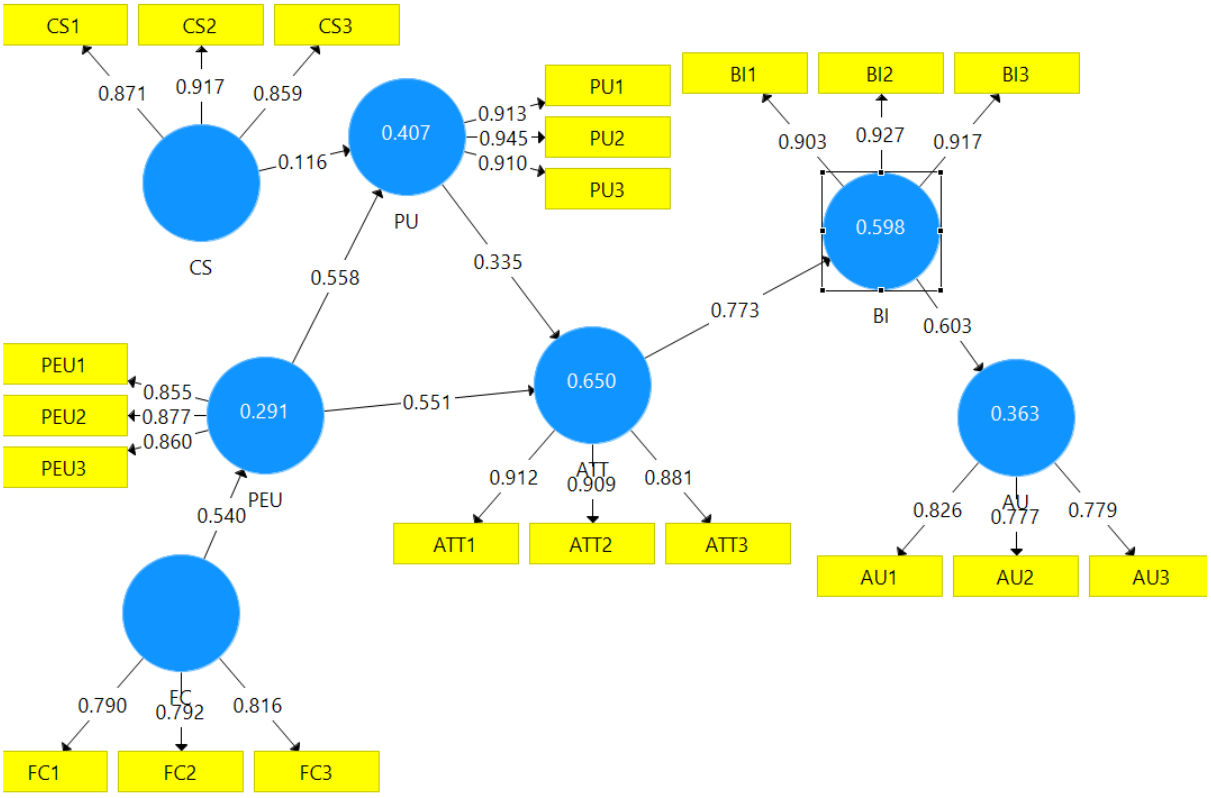

Fig. 2 Path coefficient of the Model (significant at $^{**}p \leq 0.01$**)**

5. Discussion and Conclusions

The VCTs were assessed using an extended version of the TAM for this study. Through the review of literature on distance learning and VCTs, we developed the extension of TAM with two external factors: computer self-efficacy (CS) and, facilitating conditions (FC) to understand the students' acceptance of VCTs as tools to support their online learning during the stay-at-home period caused by COVID-19 pandemic. The results were discussed from the spectacles of TAM constructs and the external factors. A measurement model and content validity verified the model's reliability and validity. From the data, it can be concluded that FC influences students' acceptance of VCTs, but CS does not. Considering that PEU and PU are the primary determinants of the TAM model, the

finding showed that both constructs are critical for ATT. In this study, ATT can affect the students' level of acceptability and, as a result, students' intention to use the VCTs. PEU's findings indicate that it is a predictor of PU. This finding means that when the students view the VCTs as a simple platform, they may see the usefulness of the teaching videos for their learning activities. Therefore, the findings indicated that PEOU and PU positively affected ATT, impacting students' favorable attitudes about the VCTs. When most students believe that the VCTs facilitate and benefit them during the online learning environment, they are more likely to use the VCTs for online learning, which may enhance their overall online learning activities.

In line with the TAM constructs, our research matches both TAM uses and results from previous studies on technology acceptance among the students at higher education level. PU and ATT of VCTs in distance learning are proven to be highly and positively influenced by PEU, which conforms to the theoretical base of TAM proposed by David and previous studies (Bhatt & Shiva, 2020; Raju, Md Noh, Ishak & Eri, 2021; Salloum et al., 2019; Sukendro et al., 2020). The result also corresponds to the hypothesis that a majority of the students reported that the VCTs is user-friendly leading to an increase in its usefulness and attitudes (Salloum et al., 2019). The examined model helps explain the VC platform adoption during the COVID-19 outbreak. It is noted that the use of VCTs as online learning platforms has a bright future since it is still regarded as relatively new and evolving in teaching and learning. With the unforeseen event of COVID-19 that unexpectedly changed the world's landscape and the adoption of these technologies by the HEIs in Malaysia, using VCTs eventually facilitates lecturers in developing new skills that enhance and improve the ways the lesson are taught in the classroom (Aguilera-hermida, 2020). Future research will focus on developing a framework compatible with various platforms while supporting traditional methods. This effort will benefit and help the HEIs by developing a new T&L method and enhancing an existing one via an online platform.

The findings of the present study practically provides evidence from foundation students' standpoint about their acceptance of VCTs. Apart from being the added body of knowledge to the research on TAM, the data developed may encourage the administrators from the institutions to conduct training sessions outside their regular classroom hours to educate students with a video-based learning approach and explore possible solutions to the identified problems. To develop their knowledge and confidence in utilizing technology for online learning, all classroom instructors should be taught about the features, usability, and technical difficulties of the platform used for video conferencing beforehand. For example, the video resolution should be optimal to ensure that all students from different backgrounds can view the ongoing class, which can slow down their internet speeds (Nassr et al., 2020). In addition, the university should provide preparatory sessions and technical assistance as guidance for their online learning.

6. Limitations and Future Research

The result of the study revealed significant insights into the foundation students' acceptance and intention to use VCTs for online learning during the COVID-19 pandemic. Furthermore, the model is useful in explaining the students' perceptions of using technology for their learning process. It is learned that introducing new constructs and variables is nonetheless subject to limitations and modifications. This study proposes two external constructs: facilitating conditions and computer self-efficacy. First and foremost, it is learned that most variables have significant relationships except for computer self-efficacy. Hence, future researchers should consider additional factors influencing the students' acceptance of new technology, such as motivational and economic factors. Second, future studies suggest incorporating many respondents from multi-state and multi-level institutions to include data and information in the findings, as the current results cannot be generalized to other contexts. Lastly, a broad country-level study might be undertaken to identify the research gaps in adopting online learning platforms, particularly in developing countries.

7. Co-Author Contributions

The authors affirmed that there is no conflict of interest in this article. Author 1 carried out the fieldwork, prepared the literature review and overlook the write-up of the whole article. Author 2 wrote the research methodology, did the data entry and statistical analysis. Author 3 was in charge of fine-tuning the instruments employed as well as overseeing and revising the overall paper's write-up.

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