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E-Learning and Sustainability of Pondok Schools: A Case Study on Post-COVID-19 E-Learning Implementation among Students of Pondok Sungai Durian, Kelantan, Malaysia

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Abstract: In almost every corner of the world, the COVID-19 pandemic disrupted daily life and work. During the pandemic, e-learning technologies were critical and were the ideal alternative to the traditional classroom setting. Throughout the COVID-19 pandemic, Malaysia's education system placed heavy emphasis on online learning in connection with new technological advances as a mode of interaction to substitute direct conventional instruction. The aim of this research is to determine student acceptability of e-learning implementation following COVID-19 in a pondok school in Kelantan. This study is intended to ascertain the implications of students' characteristics and technology-acceptance models as well as the moderation effect of familiarity with technology on their future behavioural intentions to use e-learning. This research used a quantitative technique and included 100 students from a pondok school in Kelantan. Self-administered questionnaires were used to gather data. Partial least squares structural equation modelling (PLS-SEM) was used in the data analysis. Outcomes from this study showed that students' characteristics are positively affected by their motivation, mindset, and computer competency. Perceived ease of use and perceived usefulness positively affect technology adoption. On the other hand, economic deprivation negatively affects technology adoption. Furthermore, students' characteristics and technology adoption positively affect the behavioural intent to continuously engage in e-learning in the future. However, familiarity with technology does not moderate the relationship between a student characteristics and intention nor between the technology acceptance model and a student's intention to use e-learning.

Keywords: COVID-19 pandemic; e-learning; acceptance; pondok students

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1. Introduction

E-learning is a subset of online education that relies entirely on the Internet and digital technology to provide instruction to prospective students [1]. Computer and software programmes also facilitate the learning process [2]. E-learning denotes an information system that integrates a variety of educational aspects to provide students with a digital reality in which they can participate in activities, such as discovery and audio-visual involvement in multiple subjects, as well as to encourage interaction with peers and educators [3,4]. It was initially designed for working professionals who were incapable of undertaking formal education on a full-time basis [2]. Nonetheless, e-learning capabilities have expanded to support all categories of learners in tertiary education, such as full-time, part-time, or distance learners [5]. Due to the COVID-19 pandemic, e-learning has recently become a necessary component of all educational institutions around the world, including schools, colleges, and universities.

In general, the COVID-19 outbreak upset human life and work in every part of the globe. In addition to other sectors, education was severely impacted. Nonetheless, education had to resume; therefore, e-learning was the most effective method in lieu of

the conventional classroom environment [6]. Despite the e-learning system being seldom used prior to the pandemic, most students have accepted e-learning, although many felt that it was less attractive compared to the traditional education system [7]. The COVID-19 pandemic forced educational institutions to respond by swiftly transitioning to distance and online learning as a viable option [4,8,9]. E-learning technologies have become more crucial following COVID-19. E-learning systems may aid learning providers in organising, planning, executing, and monitoring their learning and teaching initiatives. They also aim to support instructors as well as schools and universities in promoting student learning during school and university shutdowns. Moreover, the bulk of these programmes are complimentary, thus providing ongoing education throughout the COVID-19 pandemic [8].

Although e-learning is the most appropriate strategy in the current environment, its implementation is fraught with difficulties. Some schools are in a particularly advantageous position to implement online teaching, since studies do not require practical skills, which is one of the obstacles of e-learning on which attention should be focused [10]. E-learning, however, is not recommended for courses that require practical skills [11]. Furthermore, inadequate Internet access, a lack of technical skills, low administrative support, insufficient content design, decreased students' motivation, reluctance to self-study, and low availability of the required services and infrastructure such as high-speed Internet access and computer literacy skills, along with the potential danger of test/examination misconduct and inexperienced educators are just a few of the e-learning hurdles [4,12–14]. The Malaysian government has improved educational services by updating its information and communication technology infrastructure and offering ongoing training for teachers to improve their information technology skills. The benefits, however, are exclusively available to the government and government-aided schools. As a non-governmental school, pondok students face significant e-learning problems because they do not have access to government-provided infrastructure or teacher training. Pondok schools, as private educational institutions controlled by individuals, non-profit organisations, or Islamic foundations with limited financial resources, rely heavily on student fees and donations from stakeholders to operate and flourish. Regardless of the constraints, pondok schools must provide e-learning to their students in order to adapt to the current circumstances.

While the majority of e-learning studies in Malaysia focus on higher learning institutions and teaching colleges [3,5,12,15], only a little research has been carried out to assess the acceptability of e-learning in schools. This research addresses that gap by examining the e-learning system acceptance and adoption by students in pondok schools throughout the COVID-19 crisis.

The general objective of this study is to empirically investigate the contributing factors of the e-learning acceptance among students of pondok school in Kelantan, with the contributing factors forming the main question in this study. Specifically, this study intends to link students' characteristics and the technology acceptance model (TAM) to pondok school students' acceptance and preparation for e-learning in the future. This research intends to measure the students' characteristics (students' motivation, mindset, and computer competency) and the technology acceptance model (perceived usefulness, perceived ease of use, and economic deprivation) to the students' acceptance and readiness (behavioural intention to continue using) of e-learning implementation post COVID-19 in a pondok school in Kelantan.

The research is divided into multiple sections. First, this research presents an overview of e-learning and examines e-learning throughout the COVID-19 crisis. Next, this research discusses e-learning problems, the sustainability of pondok schools, and the implementation of e-learning. This is followed by the research methodology, data collection, data analysis process, and discussion of related theories and previous studies. To conclude the paper, the findings are discussed.

E-Learning and Pondok School Sustainability

Generally, schools in Malaysia comprise national schools, national-type schools, government-aided schools, and private schools. Pondok schools are among the Islamic private schools that are run by individuals, non-profit organisations, or Islamic foundations. Historically, these schools have existed in Malaysia since the early 19th century, and they were the place of choice for most Muslim parents to send their children for schooling. However, over the years, with the existence of government schools and modern Islamic schools (madrasah), pondok schools have faced great competition. Maintaining financial sustainability in the long run is among the biggest challenges faced by private Islamic schools in Malaysia [16]. Sufficient and sustainable financial earning is crucial for these schools to flourish, ensuring that the welfare of teachers and other staff is guaranteed, physical development runs smoothly as planned, a conducive learning environment is created, and so forth. As non-profit organisations, most private Islamic schools in Malaysia experience insufficient funds that prevent them from further development and from providing adequate facilities for their students. The reason for this is that most of these schools depend heavily on students' fees and financial contributions from their stakeholders [17].

In today's highly competitive and resource-scarce environment, pondok schools need to create their own competitive advantage, such as the ability to reduce unnecessary costs, as well as to enhance their reputation and meet stakeholders' expectations to receive donations from the public. Several studies found that the use of e-learning in the education sector enabled these schools to reduce costs, meet stakeholders' needs, increase competition and innovation, preserve raw materials, become faster and less time-consuming, increase job satisfaction, be able to re-skill and retain employees, and reduce energy expenditure and carbon emissions [18–20]. A recent literature review argued that integrating sustainability in e-learning brought similar benefits to both stakeholders—students and lecturers [17]. While government schools and other types of schools in Malaysia implemented e-learning into their education systems, most of the pondok schools still maintained their old education system. Only a few schools had modernised their education system and syllabus in line with current education needs [17]. Furthermore, the COVID-19 pandemic made implementation of e-learning most vital. However, due to the inability to conduct e-learning, some pondok schools had to totally suspend their teaching and learning sessions, as most of these schools only used traditional teaching methods. In order to ensure the existence and sustainability of pondok schools in the future and to adapt to the current changes in technology and stakeholders' expectations, it is vital for pondok schools' management to implement e-learning in their education system. Implementation of e-learning will enable pondok schools to remain competitive in the education sector. Thus, to ensure e-learning success, it is critical for pondok schools' management to gain the acceptance of e-learning in the future among their students.

2. Literature Review and Hypotheses

The creation of survey tools used to measure the intention to use (or the acceptance of) a new technology has been inspired by a number of theoretical views. The technology acceptance model, or TAM, is a frequently used model for assessing e-learning acceptance and utilisation. The technology acceptance model considers perceived usefulness (PU) and perceived ease of use (PEOU) to be essential factors in influencing consumers' attitudes, intentions, and actual behaviour pertaining to using new technology. The main premise is that consumers are inclined to adopt new technology, if they believe it is simple to use and can assist in their work. The technology acceptance model has been utilised in a number of e-learning projects. By means of the technology acceptance model (TAM), Ratna and Mehra [21], for example, examined the reception and attitude of university students in India towards e-learning. From the findings, the researchers discovered that perceived usefulness moderated perceived ease of use and mindset, whereas mindset mediated perceived usefulness, perceived ease of use, and behavioural intent to engage in e-learning.

The unified theory of acceptance and use of technology (UTAUT) is another popular approach. The UTAUT framework uses eight theoretical bases (such as the innovation diffusion theory and the technology acceptance model) to forecast intentions to adopt technology and behaviour, based on four factors. The UTAUT framework has been used to model questionnaires in a variety of research investigations. For instance, Ngampornchai and Adams [14] investigated students' preparation for online learning in Thailand's north-east province. They discovered that performance expectancy and effort expectancy have a substantial positive link and are major markers of technological acceptance.

Several studies have been conducted to investigate students', teachers', and schools' acceptance and preparedness for online teaching and learning. Acceptance and readiness of students are a critical aspect of successfully implementing online learning [12]. Teachers' qualities [22–24], facilitating conditions [14,23–25], self-directed learning [26], and computer competency [6,27] are among the factors contributing to e-learning acceptance.

2.1. Students' Motivation

In educational research and practice, motivation has had a significant impact on learners' attitudes and learning habits [26]. Motivation has been proven to play a key role in technology adoption and e-learning in previous studies [6,27,28]. Since the nature of the online curriculum is mainly automatic, more personalised, and independent, learners must be sufficiently motivated to engage in successful online learning [27]. Self-efficacy is a critical factor in determining students' motivation, which is a significant aspect of their qualities. A motivated student will actively participate in classroom discussions and activities [6]. Students' inclination to register in e-learning classes may be influenced by the convenience and versatility of e-learning [29]. On the other hand, a lack of motivation for online learning has a negative impact on students' mental well-being or characteristics [30]. As a result, with regard to online learning, students' motivation is an imperative feature of students' profiles. Thus, the following hypothesis should be tested:

Hypothesis 1a. *Students' motivation towards e-learning positively influences students' characteristics.*

2.2. Students' Mindset

Dweck [31] defined mindset as how people think about the mutability of intelligence and ability. Two categories of mindsets have been distinguished: fixed and growth. Those with a fixed mindset believe that the majority of their abilities are dictated by their intrinsic abilities. Individuals with a growth mindset believe that their capabilities change as a result of learning and experiences that promote skill development. Mindset refers to how much people believe their ability can be improved via hard work and perseverance vs. how much they believe their ability is fixed and unchangeable regardless of how much effort they put in. Students with a "growth" mindset believe that they may improve their ability via effort, hard work, and perseverance, whereas those with a "fixed" mindset feel that their ability is predetermined and unchangeable regardless of effort or perseverance [32]. Students' mindsets are a reflection of how students perceive and learn from an instructor. Baber's research [6] discovered a significant favourable influence on students' mindsets and characteristics, showing that students' thinking about perceived learning is a critical element of students' characteristics. As a result, the following hypothesis must be confirmed:

Hypothesis 1b. *Students' mindsets about e-learning positively influence students' characteristics.*

2.3. Computer Competency

For effective use of information and communication technology (ICT) in learning, students require experience and some level of skills in ICT systems [33]. According to Alasmari [34], students with insufficient competency or a lack of exposure to educational technology will not make effective use of such resources, since they lack the necessary

skills. As a result, the findings imply that students' computer skills have a beneficial effect on their acceptance of an e-learning system. Additionally, in a study to ascertain the key indicators for accepting e-learning, Selim [35] revealed that computer competency demonstrated high levels of consistency, with students' personal computer experience being the most influential determinant of students' characteristics pertaining to the acceptance of e-learning. Consequently, the following hypotheses has been offered in this study:

Hypothesis 1c. *Students' computer competency positively influences students' characteristics.*

Hypothesis 3. *Students' characteristics in e-learning positively influence e-learning acceptance.*

2.4. Perceived Usefulness

As stated by Davis [36], perceived usefulness is the range in which an individual feels that using a specific system would augment individual work performance. One of the most important indicators of e-learning intention is perceived usefulness, which has been verified as a construct to quantify the success of e-learning systems in several studies [3,21,23]. In research of 377 students at three public institutions in Thailand, Teo [24] revealed that perceived usefulness has a favourable influence on students' desire to utilise a specific system (e.g., e-learning). Students are more inclined to accept e-learning if they feel it will assist them in learning more effectively, being more adaptable, and achieving higher academic performance. For example, Quispe and Alecchi [37] identified several positive aspects of students' experiences with emergency remote learning throughout the COVID-19 pandemic, including the capacity to process classes for future references, the presence of learning management systems to stimulate the growth of electronic databases, the ability to register in online courses rather than conventional classes, and location adaptability. Moliner, Valentin, and Alegre [38] discovered a steady reduction in the number of students who favoured the first choice (online live sessions), with students gradually shifting to prerecorded lectures, since they preferred to see the teacher's explanations numerous times and regarded this technique as superior to online sessions. As a result, the following hypothesis has been developed:

Hypothesis 2a. *Perceived usefulness of the learning management system positively influences e-learning acceptance.*

2.5. Perceived Ease of Use

Davis [36], as cited by Nikou and Maslov [39], characterises perceived ease of use as an individual's confidence that using a specific technology is effortless and simple. The simplicity of using an e-learning system enables students to focus on studying the course materials, rather than making additional efforts to learn the instrument [40]. Furthermore, Ratna and Mehra [21] discovered in their research that perceived ease of use has a substantial positive effect on behavioural intent and practical usage of e-learning. Chang and Tung [41] demonstrated that perceived usefulness and perceived ease of use have a substantial effect on the behavioural intent to employ online learning course webpages. Furthermore, the study discovered that perceived ease of use increases the behavioural intent to utilise websites for online learning courses. As a result, the following hypothesis is proposed in this research:

Hypothesis 2b. *Perceived ease of use of the learning management system positively influences e-learning acceptance.*

2.6. Economic Deprivation

Economic deprivation is defined by Bernburg [42] as financial difficulties at home and the difficulty of parents' paying for basic needs. The COVID-19 pandemic, as well as the Malaysian government's movement control order, forced numerous businesses to close or scale back their operations. People's incomes were impacted as a result of the circumstances, with some losing their jobs and others receiving lower pay. This circumstance has exacerbated the financial pressure on some families, who must spend money on the Internet and related devices in order for their children to participate in e-learning. Financial constraints and students' economic positions have been identified in a few studies as impediments to successful e-learning implementation in higher education institutions [43–45]. Research conducted by Lukas and Yunus [46] among Malaysian educators on e-learning difficulties throughout the COVID-19 crisis discovered that students from low-income households with guardians who lacked access to digital devices and had poor networks, as well as those who resided in the suburbs and rural areas, were more prone to failure in the e-learning scenario. This argument is in line with Chola [47], who reported that 83.0% of students said the COVID-19 pandemic had a financial influence on their education. This is due to the high cost of Internet connectivity in Zambia, which is in addition to ordinary tuition rates. Accordingly, their e-learning experience suffered due to this predicament. Thus, the following hypotheses are put forth:

Hypothesis 2c. *Economic deprivation will negatively affect e-learning acceptance.*

Hypothesis 4. *The TAM of e-learning will positively influence e-learning acceptance.*

2.7. Familiarity with Technology

The adaptation and readiness of e-learning purely depends on the degree of familiarity with the technology, level of awareness, and readiness to accept and adopt the e-learning environment [48]. Past research on e-learning within developing countries argued that students' familiarity with computers and technology has a significant influence on the acceptance of e-learning [9]. On the other hand, the positive results contradict with findings from a study among undergraduate students in a public university in northeast Thailand by Ngampornchia and Adam [14]. Thus, the following hypotheses are projected:

Hypothesis 5. *Familiarity with technology moderates the relationship between student characteristics and intention to accept e-learning.*

Hypothesis 6. *Familiarity with technology moderates the relationship between technology acceptance and intention to accept e-learning.*

3. Research Methodology

3.1. Participants

The participants in this study were students from Pondok Sungai Durian in Kelantan, Malaysia, aged between 13–21 years old. This school was chosen because it was one of the few pondok schools to employ e-learning during the school closure due to the COVID-19 pandemic. During the data collecting process, the school had roughly 75 students staying at hostels, while 275 others were staying at home. The survey was disseminated to the whole population: 75 sets of questionnaires were posted to the students at their hostel, while the other students were surveyed through an online platform. As a result, 112 students responded to the questionnaires given, which is equivalent to a response rate of 32%. All 75 sets of printed questionnaires were returned, while only 37 students responded to the link given. Out of 112 responses, 12 questionnaires were identified as having a suspicious pattern. Therefore, only 100 questionnaires were found to be relevant and usable.

Table 1 describes the demographic statistics of the respondents, in which the profile of the respondents is discussed; however, names were not included to protect privacy. Most of

the students were between 16 and 18 years old (52%), followed by those between 13 and 15 years old (25%), and the remaining (23%) were between 19 and 21 years old. For economic background, most of the students came from a low-income group, with 72% of their parents' income being less than RM 2000 a month, And 22% of the parents have an income of RM 2001–4850 a month, while only 5% were from the middle-income and high-income groups. Only 37% of the students shared the devices used during online learning with other family members.

Table 1. Descriptive statistics of the respondents (n = 100).

Item	Option	Frequency	Percent
Age	13–15 years	25	25%
	16–18 years	52	52%
	19–21 years	23	23%
Parents' Income	RM 2000 and below	72	72%
	RM 2001–4850	22	22%
	RM 4851–10,970	1	1%
	RM 10,971 and above	4	4%
Sharing Devices	Yes	37	37%
	No	63	63%

3.2. Instrument and Procedures

The designed questionnaire was divided into five sections (see Appendix A): (1) demographics; (2) behavioural intention to use e-learning constantly; (3) students' characteristics; (4) technology acceptance; and (5) familiarity with technology. The first section asks about demographics, computer device ownership, and Internet access. In section two, five items question the students' behavioural intention to use e-learning via 5-point Likert scale statements. Part three consists of 12 items that assess the characteristics of the students. Five of the elements were adopted from Selim [35], while the remaining seven items were adapted from Baber [6]. Part four has 11 items that assess technology acceptance, adapted from Baber [6] and Bernburg [42]. The final set of questions asks students to rate how often they use technology (from "never" to "every day"), which was adapted from Ngampornchai and Adams [14].

Initially, the questionnaire was developed in English, before being translated into Malay. Three experts from the management of pondok schools as well as a senior lecturer from Universiti Malaysia Kelantan, were consulted for content validity. The school's administration assisted in circulating a paper-based questionnaire for the students staying at the hostel. For the students staying at home, the questionnaire was distributed through WhatsApp. The request to participate was made by the respective teachers. The data was collected over 2 months, between early November 2021 and the end of December 2021.

The partial least squares structural equation modelling (PLS-SEM) technique was applied for data analysis in this research. In the field of behavioural science, partial least squares (PLS), a subset of structural equation modelling (SEM), is an effective technique for understanding predicted behaviour. This method was chosen because it allows for the simultaneous examination of a number of dependent relationships, which is especially useful when the model contains both first-order and second-order latent variables [49].

4. Results

4.1. Measurement Model

In SmartPLS, the analysis can be conducted by using a two-step approach, as suggested by Anderson and Gerbing [50]. Following the guidelines of Hair [51] and Ramayah [52], firstly, the measurement model was tested to examine the validity and reliability of the instruments. Then, the structural model was run to test the developed hypothesis.

For the measurement model, loadings, average variance extracted (AVE), composite reliability (CR), Cronbach alpha, and rho_A were assessed. Hair [53] posited that the values of loadings and AVE must be greater than 0.5, and the CR should be more than 0.7. Next, according to Hair [51], the Cronbach alpha value must be greater than 0.7; however, a value between 0.6 to 0.7 is acceptable in exploratory research. Table 2 and Figure 1 depicted the loadings, composite reliability (CR), average variance extracted (AVE), Cronbach alpha, and rho_A. The loadings, average variance extracted (AVE), composite reliability (CR), and Cronbach alpha of all items were above the threshold value, except for one item in computer competency. Thus, in order to retain an average variance extracted (AVE) of above 0.50, one item in computer competency (item number CC5) has been removed due to weaker loading (below 0.50).

Table 2. Measurement model.

Construct	Item	Loadings	CR	AVE	Cronbach Alpha	Rho_A
Students' Motivation	SM1	0.735	0.875	0.636	0.852	0.857
	SM2	0.853				
	SM3	0.776				
	SM4	0.822				
Students' Mindset	MS1	0.741	0.822	0.606	0.675	0.682
	MS2	0.764				
	MS3	0.827				
Computer Competency	CC1	0.829	0.895	0.634	0.809	0.815
	CC2	0.835				
	CC3	0.850				
	CC4	0.819				
Perceived Usefulness	PU1	0.857	0.926	0.758	0.893	0.895
	PU2	0.902				
	PU3	0.903				
	PU4	0.817				
Perceived Ease of Use	PEOU1	0.860	0.896	0.685	0.845	0.86
	PEOU2	0.853				
	PEOU3	0.882				
	PEOU4	0.703				
Economic Deprivation	ED1	0.873	0.928	0.764	0.897	0.913
	ED2	0.878				
	ED3	0.915				
	ED4	0.828				
Familiarity with Technology	FT1	0.668	0.860	0.671	0.811	0.823
	FT2	0.607				
	FT3	0.820				
	FT4	0.785				
	FT5	0.695				
	FT6	0.534				
	FT7	0.653				
Behavioural Intention	BI1	0.904	0.953	0.836	0.934	0.935
	BI2	0.924				
	BI3	0.932				
	BI4	0.896				

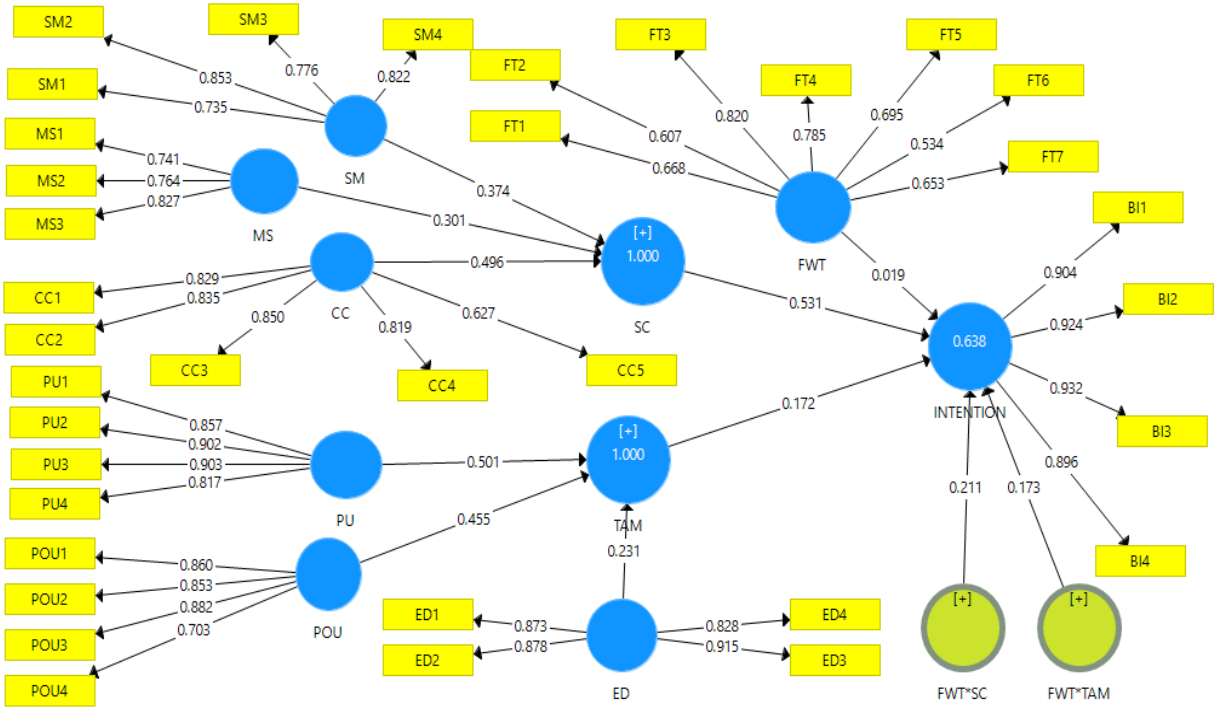

Figure 1. Measurement model.

Secondly, to assess the discriminant validity, this study used the HTMT criterion, as proposed by Henseler [54] and updated by Franke and Sarstedt [55]. The stricter cut-off criterion for the HTMT values is 0.85, and the mode lenient criterion should be less than 0.90. Table 3 demonstrates the discriminant validity, which is established from the HTMT criterion as well, given that all values were established as less than 0.85. Thus, it is concluded that the respondents understood and that the given constructs are distinct. When both of these validity tests are combined, it is clear that the items' measurement in this study is both valid and reliable.

Table 3. Discriminant validity.

	CC	ED	INT	MS	PEOU	PU	SM
CC							
ED	0.219						
INT	0.655	0.169					
MS	0.857	0.173	0.828				
PEOU	0.662	0.359	0.575	0.567			
PU	0.649	0.201	0.579	0.559	0.835		
SM	0.573	0.18	0.634	0.9	0.663	0.696	

Note: CC = computer competency, ED = economic deprivation, INT = behavioural intention, MS = students' mindset, PEOU = perceived ease of use, PU = perceived usefulness, SM = students' motivation.

4.2. Structural Model

The next phase in the data analysis process was to obtain the path coefficients in order to determine the relevance of the research model's hypothesised correlations. There were five steps to conduct a structural model assessment, including assessment of collinearity, path coefficient, coefficient of determination, effect sizes (f2), and predictive relevance (Q2). Assessment of collinearity, coefficient of determination (R2), and effect sizes can be performed by using the PLS algorithm procedure. Assessment of path coefficient and predictive relevance can be obtained through the bootstrapping technique with 5000 resamples and blindfolding with an omission distance of seven, respectively.

The collinearity among latent variables was assessed through a variance inflation factor (VIF). According to Kock [56], the VIF value is a recommended approach to assess the common method bias in PLS-SEM. All the VIF values illustrated in Table 4 were less than 5, thus indicating that no collinearity issue had occurred [57].

Table 4. VIF value.

Construct	SC	TAM	Intention
CC	1.75		
MS	2.48		
SM	1.842		
ED		1.139	
PEOU		3.45	
PU		3.208	
FWT * SC			1.065
FWT * TAM			1.173
FWT			1.365
SC			2.149
TAM			1.775

Note: SC = students' characteristics, TAM = technology acceptance model, CC = computer competency, ED = economic deprivation, FWT = familiarity with technology, MS = students' mindset, PEOU = perceived ease of use, PU = perceived usefulness, SM = students' motivation, * = moderator.

Next, the path coefficient with confidence interval, as shown in Table 5, revealed that students' mindset (β = 0.301, t = 14.119, LL = 0.270, UL = 0.341, $p < 0.01$), students' motivation (β = 0.374, t = 11.750, LL = 0.320, UL = 0.414, $p < 0.01$), and computer competency (β = 0.496, t = 12.561, LL = −0.308, UL = 0.351, $p < 0.01$) have a significant positive correlation with students' characteristics, thus agreeing with Hypotheses H1a, H1b, and H1c. In terms of the technology acceptance model (TAM) of an e-learning system, perceived usefulness (β = 0.501, t = 12.418, LL = 0.434, UL = 0.566, $p < 0.01$) and perceived ease of use (β = 0.455, t = 13.387, LL = 0.335, UL = 0.669, $p < 0.01$) have a significant positive effect, while economic deprivation (β = −0.231, t = 2.894, LL = 0.061, UL = 0.336, $p < 0.05$) has a significant negative effect. Hence, Hypotheses H2a, H2b, and H2c were also supported.

Following that, both latent variables of the second-order construct, namely students' characteristics (β = 0.531, t = 5.249, LL = 0.443, UL = 0.757, $p < 0.01$) and the technology acceptance model (TAM) attributes (β = 0.172, t = 2.119, LL = 0.014, UL = 0.322, $p < 0.05$) were positively associated with the dependent variable of behavioural intention. Thus, Hypotheses H3 and H4 are accepted.

Table 5. Path coefficient assessment.

Hypotheses	Relationship	Std. Beta	Std. Error	t-Value	*p*-Value	LL	UP	Decision
H1a	SM → SC	0.374	0.032	11.750	0.00	0.320	0.414	Supported
H1b	MS → SC	0.301	0.021	14.119	0.00	0.270	0.341	Supported
H1c	CC → SC	0.496	0.039	12.561	0.00	−0.308	0.351	Supported
H2a	PU → TAM	0.501	0.04	12.418	0.00	0.434	0.566	Supported
H2b	PEOU → TAM	0.455	0.034	13.387	0.00	0.335	0.669	Supported
H2c	ED → TAM	−0.231	0.08	2.894	0.002	0.061	0.336	Supported
H3	SC → INT	0.531	0.101	5.249	0.000	0.443	0.757	Supported
H4	TAM → INT	0.172	0.081	2.119	0.018	0.014	0.322	Supported

Note: SC = students' characteristics, TAM = technology acceptance model, CC = computer competency, ED = economic deprivation, FWT = familiarity with technology, MS = students' mindset, PEOU = perceived ease of use, PU = perceived usefulness, SM = students' motivation.

4.3. Evaluating the Effect Size

The effects of coefficient of determination (R2), effect size (f2), predictive relevance (Q2) of students' characteristics (SC), technology acceptance model (TAM), and familiarity

with technology (FWT) on behavioural intention are all shown in Table 6. The coefficient of determination (R2) value is the proportion of variation in the behavioural intention that is explained by all the exogenous constructs (SC = students' characteristics, TAM = technology acceptance model, FWT = familiarity with technology, FWT * SC and FWT * TAM) in the research model. The study's R2 value is 0.636, describing moderate level of predictive accuracy [51]. This indicates that the students' characteristics, technology acceptance model, and familiarity with technology account for 63.6% of the variation in intention. Hair [51] stated that Q2 is a metric of the ability of the model's and its parameter estimations' to recreate observed values accurately. If Q2 > 0, the model is predictively relevant. The Q2 value for this model is 0.460, greater than Hair et al.'s cut-off value [51]. The findings indicated that the students' characteristics (SC), technology acceptance model (TAM), familiarity with technology (FWT), FWT * SC, and FWT * TAM constructs have predictive relevance for the intention. Cross-validation of the redundancy metrics demonstrates that the structural model used in this work is predictive in nature. The effect size (f2) allowed the researchers to observe the effect of each exogenous construct on the endogenous constructs. Based on this study, the effects of students' characteristics (SC), technology acceptance model (TAM), familiarity with technology (FWT), FWT * SC, and FWT * TAM on intention were examined. Cohen [58] proposed that the f2 coefficients value of higher than 0.02, 0.15 and 0.35 are indicated as small, medium, and large effects, respectively. Table 6 showed that SC, FWT * SC, and TAM have a large, medium, and small influence on behavioural intention, respectively. On the other hand, FWT and FWT * TAM had no effect towards behavioural intention. This finding was consistent with the path coefficient assessment obtained in Table 5.

Table 6. Coefficient of determination, effect size, and predictive relevance.

Construct	f^2	Decision	R^2	Q^2
SC	0.362	Large effect	0.636	0.460
TAM	0.046	Small effect		
FWT	0.001	No effect		
FWT * SC	0.198	Medium		
FWT * TAM	0.099	No effect		

Note: SC = students' characteristics, TAM = technology acceptance model, FWT = familiarity with technology, * = moderator.

4.4. Moderator Analysis

The interaction between FWT*SC and FWT*TAM, as shown in Table 7, was positive. The positive relationship between FWT and SC and FWT and TAM was weaker when SC or TAM decreased. However, both of these interactions were not significant, as the t-values obtained for Hypotheses H5 and H6 were less than 2.33 and 1.645, respectively. Hence, there were no moderating effects found for this tested PLS-SEM model, indicating that H5 and H6 were not supported. Based on [52], there were no further procedures, such as interaction plots, as the moderating effect is not significant.

Table 7. Result of moderator analysis.

Hypothesis	*Relationship*	Std Beta	*Std. Error*	*t-Value*	*Decision*
H5	FWT * SC → Intention	0.211	0.121	0.964	Not supported
H6	FWT * TAM → Intention	0.173	0.049	0.855	Not supported

Note: SC = students' characteristics, TAM = technology acceptance model, FWT = familiarity with technology, * = moderator.

5. Discussion

The results from this study discovered that students' characteristics had a significant positive impact on their desire to continuously use e-learning in the future, and the standardised path coefficient is 0.531 ($p < 0.05$). Thus, this study proposed that students' characteristics are critical to success and play a critical role in online education, as shown by this research, which is consistent with the findings of past research by Callo [9] and Baber [6]. Additionally, a key finding of this study indicated that students' characteristics are positively influenced by motivation, mindset, and computer proficiency. Indeed, the study found that student motivation is the key indicator that sufficiently managed to promote awareness of the importance of continuing studies using e-learning among the students under study.

In addition, the study found that efficiency in the use of computers also had a positive effect on the implementation of e-learning among the students involved. Thus, the finding of this study is in line with the studies by Ibrahim [59] and Lee [60], which indicate the importance of computer self-efficacy on the user's behavioural intention to use technology. In fact, the COVID-19 pandemic produced a very significant impact on the use of e-learning among pondok school students. Undeniably, this particular finding of the study is relevant to the current situation, which demands that learning be implemented virtually and should focus not only on students in the national stream schools but also on those students in the religious stream schools.

The outcomes of this research also demonstrate that the technology acceptance model (TAM) represented by perceived ease of use (PEOU), perceived usefulness (PU) and economic deprivation appear to have a positive impact on the acceptance model for e-learning with the standardised path coefficient of 0.172 ($p < 0.05$). In detail, it is demonstrated that both PEOU and PU appear to have a significant positive impact on the acceptance model for e-learning, as other studies have revealed [6,61,62]. Interestingly, amid the myriad challenges faced by many during the COVID-19 pandemic, this study managed to reveal findings that are linked to the financial struggles commonly faced by students in their efforts to implement e-learning more effectively. The poor economic situation that struck many people, thanks to the closure of several business sectors and the fact that not all of the participating students come from high-income families, has also affected the ability of parents to provide information technology devices to their children, resulting in the ineffective implementation of e-learning. This indirectly reduces the motivation of students to continue their studies as they would in a normal situation. In fact, the study found that 72% of the students are from low-income families.

In addition, this study also found that familiarity with technology does not simplify the relationship between students' characteristics and intentions or the technology acceptance model and intentions to pursue e-learning.

Therefore, this study presents several suggestions and approaches that can be adopted by various parties, to ensure that e-learning among students in the pondok schools runs well despite the constraints generated by the dynamics of the COVID-19 pandemic. These parties include the schools, parents, and families of the students as well as the government.

One of the approaches that can be embraced by the schools is to ensure that the information technology infrastructure and facilities are in good condition and that they can be used perfectly for teaching and learning purposes. Furthermore, strong cooperation from the providers and suppliers of telecommunication equipment should also be encouraged, so as to provide the best possible infrastructure available, to the benefit of all.

As far as cooperation is concerned, bilateral cooperation can be established between the school and telecommunication facility providers in the context of the corporate social responsibility (CSR) programme of the telecommunication companies. In addition, there are multiple initiatives that a school can introduce such as awareness campaigns, which can attract the local community to contribute to the endowment fund intended for the provision of telecommunications infrastructure such as computer devices to students. The approach of introducing Islamic elements such as sadaqah and waqaf in this effort is both

relevant and most appropriate, especially in the context of providing benefits to students in pondok schools. This approach can certainly alleviate the economic burden borne by many of the students' families, who struggle to provide basic information technology equipment and facilities for the effective implementation of e-learning for their children.

In addition, the school can also put in place an initiative of actively applying for funds or financial contributions from the state's zakat manager, using the context of *asnaf fisabillilah* for the financially struggling students. This initiative can directly establish a strong financial ecosystem for the benefit of the school, students, and families, as e-learning can be effectively implemented without the typical financial constraints facing the community. Indeed, support in the form of financial assistance in the context of Islamic social finance will certainly provide the most optimal benefits to every stakeholder as well as the ability to produce students who can be characterised as *Al-falah* (success and salvation).

The study also suggests that in order to increase the feasibility of e-learning among students in pondok schools, the government should give equal focus to the much broader learning ecosystem in Malaysia. It is important that students in the religious stream, studying in pondok schools, are not left behind regarding online learning, especially in the current context of the COVID-19 pandemic that has unfortunately hit these students the hardest. In general, it is observed that the government nowadays seems more focused on issues beleaguering national stream schools when compared to alternative stream education such as the pondok schools.

Therefore, a specific mechanism needs to be devised by the government to ensure that students in pondok schools also have equal access to the same quality education as those in the national stream, especially in terms of information technology infrastructure, teaching and learning equipment, and having more qualified teachers. This mechanism can directly increase the motivation of pondok school students, allowing them to have a more positive mindset to continue their studies and enjoy the larger benefits of education. This will be beneficial not only for the students' futures, but it can also be translated into the country's goal, as spelt out in the Vision of Shared Prosperity 2030.

On top of that, this study recommends that the empowerment of pondok schools be implemented holistically, not only in the form of the syllabus but also in the context of the teaching and learning methods, in order to keep pace with the Fifth Industrial Revolution (5IR). In addition, the empowerment of pondok schools is expected to improve the quality of human capital, in line with the United Nations Sustainable Development Goals (SDGs), especially in achieving the goals of SDG1 (no poverty) and SDG4 (quality education).

In order to give deeper meaning to this study in the future, the adoption of qualitative methods of research is suggested. This is helpful in providing a more detailed picture of the student acceptance level towards the implementation of e-learning following the COVID-19 pandemic in pondok schools. At the same time, focus group discussion (FGD) techniques and the nominal group technique (NGT) can also be adopted for future studies with varied findings.

6. Conclusions

The rising use of web-based technology and the Internet in education is a worldwide trend that affects all educational institutions, not just those providing postsecondary education. The COVID-19 crisis pushed the government to transition from school-based teaching and learning activities to home-based remote instruction (e.g., web-based learning, e-learning, m-learning). Due to the state of COVID-19 statistics in Malaysia, the Ministry of Education (MOE) Malaysia had mandated all types of schools, including private schools, to suspend physical operations and conduct teaching and learning sessions virtually from home. In addition, the MOE extended the home teaching and learning session (PdPR) from 1 September to 31 October 2021, resulting in the PdPR sessions lasting almost 5 months. Despite the fact that e-learning is the most appropriate strategy in the current environment, its implementation is fraught with challenges and difficulties.

Considering this, the purpose of this study was to determine the factors influencing behavioural intention to use e-learning post COVID-19 among students of a pondok school in Kelantan, Malaysia. The study was conducted in a focused environment in a pondok school involving a total of 100 students. The partial least squares structural equation modelling (PLS-SEM) technique was utilised with 35 indicators among different levels. The students' characteristics (students' motivation, students' mindset, and computer competency) as well as the technology acceptance model (perceived ease of use, perceived ease of use and economic deprivation) were the variables considered and were all found to be significant. Based on the findings, it can be concluded that the students' characteristics were positively influenced by motivation, mindset, and competence in the use of computer equipment, leading to a positive influence on the students' acceptance level towards e-learning implementation. Next, the students' intention to use e-learning in the future was positively affect by technology acceptance, with perceived ease of use and perceived usefulness positively impacting the technology acceptance model. However, technology acceptance was negatively affected by economic deprivation. Additionally, familiarity with technology was tested to see the moderating effect between students' characteristics and the technology acceptance model with the behavioural intention to use e-learning post COVID-19. However, the results for both moderating effects were not significant.

There are several limitations of this study. Firstly, the main limitation for this study is time, as this study was conducted over a short period of time. The limited time spent resulted in insufficient time being used for data collection. As a result, the response rate was less than 40%. Secondly, the findings and implications of this study were obtained only from a single institution: Pondok Sungai Durian, Kelantan, Malaysia. Thus, this limitation needs to be considered when generalizing the findings of this study to other user groups or organisations. Despite its limitations, the findings of this study provide several implications for educational institutions, especially pondok schools, and the results from the study as well as the suggestions presented can be used as a benchmark and guide for other pondok schools to follow suit.

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Appendix A

Table A1. The construct and measurement items.

Construct	Item	Measurement	References
Student Motivation	SM1	In an online class, I prefer assignments and questions that challenge me so that I can learn new things.	[6]
	SM2	When I have the opportunity in the online class to choose class assignments, I choose the assignments that I can learn from even if they don't guarantee any grades.	
	SM3	I want to do well in the online class because it is important to show my ability to my family and friends.	
	SM4	I like to be one of the most recognised students in the online class.	
Student Mindset	MS1	I learn best by absorption (i.e., "sit still and absorb").	[6]
	MS2	I learn best by construction (i.e., by participation and contribution).	
	MS3	I learn better by construction than absorption.	
Computer Competency	CC1	I enjoy using personal computers.	[35]
	CC2	I use personal computers for work and play	
	CC3	I was comfortable with using a PC and software applications before I took up the e-learning-based courses.	
	CC4	My previous experience in using a PC and software applications helped me in the e-learning-based courses.	
	C5	I am not intimidated by using the e-learning-based courses.	
Perceived Usefulness	PU1	E-learning improves my ability to accomplish academic tasks.	[6]
	PU2	E-learning increases my productivity in accomplishing academic tasks.	
	PU3	E-learning enhances my effectiveness in accomplishing academic tasks.	
	PU4	I find e-learning useful for completing my studies.	
Perceived Ease of Use	PEOU1	I find it easy to use e-learning to do what I want it to do.	[6]
	PEOU2	I find e-learning is clear and understandable for me.	
	PEOU3	It is easy for me to become skillful at using e-learning.	
	PEOU4	I find e-learning easy to use.	
Economic Deprivation	ED1	My parents' financial status is bad.	[42]
	ED2	My parents cannot afford to own and operate a car.	
	ED3	My parents hardly have enough money to pay for basic necessities (e.g., food, housing, phone).	
	ED4	My parents cannot afford the type of leisure activity that you would most prefer to practice (e.g., music or sports).	
Familiarity with Technology	FT1	Word processing (e.g., Microsoft Word)	[14]
	FT2	Spreadsheet (e.g., Microsoft Excel)	
	FT3	Email	
	FT4	Search engine (e.g., Yahoo, Google)	
	FT5	Forum	
	FT6	Text chat (e.g., Whatsapp)	
	FT7	Video chat (e.g., Google Meet, Skype, Zoom)	
Behavioural Intention	BI1	I intend to use e-learning (Zoom and LMS) in the near future.	[6]
	BI2	I predict I will use e-learning (Zoom and LMS) in the near future.	
	BI3	I plan to use e-learning in the near future.	
	BI4	I intend to use e-learning for learning as often as needed.	

References

1. Al-Busaidi, K.A. An empirical investigation linking learners adoption of blended learning to their intention of full e-learning. *Behav. Inf. Technol.* **2013**, *32*, 1168–1176. [CrossRef]
2. Moore, J.L.; Dickson-Deane, C.; Galyen, K. E-Learning, online learning, and distance learning environments: Are they the same? *Internet High. Educ.* **2011**, *14*, 129–135. [CrossRef]
3. Al-Rahmi, W.M.; Alias, N.; Othman, M.S.; Alzahrani, A.I.; Alfarraj, O.; Saged, A.A.; Rahman, N.S.A. Use of E-Learning by University Students in Malaysian Higher Educational Institutions: A Case in Universiti Teknologi Malaysia. *IEEE Access* **2018**, *6*, 14268–14276. [CrossRef]
4. Siron, Y.; Wibowo, A.; Narmaditya, B.S. Factors Affecting the Adoption of E-Learning in Indonesia: Lesson From COVID-19. *J. Technol. Sci. Educ.* **2020**, *10*, 282–295. [CrossRef]
5. Azhari, F.A.; Ming, L.C. Review of e-learning Practice at the Tertiary Education level in Malaysia. *Indian J. Pharm. Educ. Res.* **2015**, *49*, 248–257. [CrossRef]
6. Baber, H. Modelling the acceptance of e-learning during the pandemic of COVID-19-A study of South Korea. *Int. J. Manag. Educ.* **2021**, *19*, 100503. [CrossRef]
7. Ionescu, C.A.; Paschia, L.; Nicolau, N.G.; Stanescu, S.; Stancescu, V.N.; Coman, M.; Uzlau, M. Sustainability analysis of the e-learning education system during pandemic period—COVID-19 in Romania. *Sustainability* **2020**, *12*, 9030. [CrossRef]
8. Almaiah, M.A.; Al-Khasawneh, A.; Althunibat, A. Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic. *Educ. Inf. Technol.* **2020**, *25*, 5261–5280. [CrossRef]
9. Callo, E.C.; Yazon, A.D. Exploring the factors influencing the readiness of faculty and students on online teaching and learning as an alternative delivery mode for the new normal. *Univers. J. Educ. Res.* **2020**, *8*, 3509–3518. [CrossRef]
10. Szopiński, T.; Bachnik, K. Student evaluation of online learning during the COVID-19 pandemic. *Technol. Forecast. Soc. Change* **2022**, *174*, 121203. [CrossRef]
11. Bianchi, S.; Gatto, R.; Fabiani, L. Effects of the SARS-CoV-2 pandemic on medical education in Italy: Considerations and tips. *EuroMediterranean Biomed. J.* **2020**, *15*, 100–101. [CrossRef]
12. Adams, D.; Sumintono, B.; Mohamed, A.; Noor, N.S.M. E-learning Readiness Among Students of Diverse Backgrounds in a Leading Malaysian Higher Education Institution. *Malays. J. Learn. Instr.* **2018**, *15*, 227. [CrossRef]
13. Aina, A.Y.; Ogegbo, A.A. Teaching and Assessment through Online Platforms during the COVID-19 Pandemic: Benefits and Challenges. *J. Educ. E-Learn.* **2021**, *8*, 408–415. [CrossRef]
14. Ngampornchai, A.; Adams, J. Students' acceptance and readiness for E-learning in Northeastern Thailand. *Int. J. Educ. Technol. High. Educ.* **2016**, *13*, 4. [CrossRef]
15. Shakir, N.S.B.A.; Adnan, N.H.B. Kebolehgunaan Massive Open Online Course (MOOC) Sebagai E-Pembelajaran dalam Pengajaran Pengaturcaraan di Sekolah Menengah. *Malays. J. Soc. Sci. Humanit.* **2020**, *5*, 33–41. [CrossRef]
16. Shamsuri, N.A. *Pengurusan Kewangan Sekolah Agama Persendirian (SAP): Kajian Kes Di Daerah Baling*; Universiti Tun Hussein Onn: Johor, Malaysia, 2018.
17. Ab Rahman, A.H.; Yahya, S. Sufficiency of Donation Received Among Private Islamic School in Malaysia: Does Reputation Matters? *Int. J. Acad. Res. Bus. Soc. Sci.* **2020**, *10*, 839–847. [CrossRef]
18. Gunn, C. Sustainability Factors for E-Learning Initatives. *ALT-J Res. Learn. Technol.* **2010**, *18*, 89–103. [CrossRef]
19. Rosen, A. Technology Trends: E-learning 2.0. *E-Learn. Guilds Learn. Solut. E-Mag.* [Online]. 2006. Available online: http://www.readygo-br.com/ficheiros/e-learning-2.0.pdf (accessed on 10 June 2022).
20. Varlamis, I.; Apostolakis, I. The Present and Future of Standards for E-Learning Technologies. *Interdiscip. J. E-Learn. Learn. Objects* **2006**, *2*, 59–76. [CrossRef]
21. Ratna, P.A.; Mehra, S. Exploring the acceptance for e-learning using technology acceptance model among university students in India. *Int. J. Process Manag. Benchmarking* **2015**, *5*, 194. [CrossRef]
22. So, T.; Swatman, P.M.C. *e-Learning Readiness of Hong Kong Teachers*; University of South Australia: Adelaide, Australia, 2006.
23. Taat, M.S.; Francis, A. Factors influencing the students' acceptance of e-learning at teacher education institute: An exploratory study in Malaysia. *Int. J. High. Educ.* **2020**, *9*, 133. [CrossRef]
24. Teo, T.; Luan, W.S.; Thammetar, T.; Chattiwat, W. Assessing e-learning acceptance by university students in Thailand. *Australas. J. Educ. Technol.* **2011**, *27*, 1356–1368. [CrossRef]
25. Pham, Q.T.; Tran, T.P. The acceptance of e-learning systems and the learning outcome of students at universities in Vietnam. *Knowl. Manag. E-Learn. Int. J.* **2020**, *12*, 63–84. [CrossRef]
26. Hung, M.-L.; Chou, C.; Chen, C.-H.; Own, Z.-Y. Learner readiness for online learning: Scale development and student perceptions. *Comput. Educ.* **2010**, *55*, 1080–1090. [CrossRef]
27. Rafiee, M.; Abbasian-Naghneh, S. E-learning: Development of a model to assess the acceptance and readiness of technology among language learners. *Comput. Assist. Lang. Learn.* **2021**, *34*, 730–750. [CrossRef]
28. Tarhini, A.; Masa'Deh, R.; Al-Busaidi, K.A.; Mohammed, A.B.; Maqableh, M. Factors influencing students' adoption of e-learning: A structural equation modeling approach. *J. Int. Educ. Bus.* **2017**, *10*, 164–182. [CrossRef]
29. Baber, H. Determinants of students' perceived learning outcome and satisfaction in online learning during the pandemic of COVID19. *J. Educ. E-Learn. Res.* **2020**, *7*, 285–292. [CrossRef]

30. Lai, C.-S.; Au, K.-M.; Low, C.-S. Beyond conventional Classroom Learning: Linking Emotions and Self-efficacy to Academic Achievement and Satisfaction with Online Learning during the COVID-19 Pandemic. *J. Educ. E-Learn. Res.* **2021**, *8*, 367–374. [CrossRef]
31. Dweck, C.S. *Mindsets and Math/Science Achievement*; Carnegie Corporation of New York-Institute for Advanced Study Commission on Mathematics and Science Education: New York, NY, USA, 2008; Available online: https://www.growthmindsetmaths.com/uploads/2/3/7/7/23776169/mindset_and_math_science_achievement_-_nov_2013.pdf (accessed on 21 September 2021).
32. Gutshall, C.A. Student Perceptions of Teachers' Mindset Beliefs in the Classroom Setting. *J. Educ. Dev. Psychol.* **2016**, *6*, 135. [CrossRef]
33. Ouma, G.; Awuor, F.; Kyambo, B. E-Learning Readiness in Public Secondary Schools in Kenya. *Eur. J. Open Distance E-Learn.* **2013**, *16*, 97–110. Available online: http://www.eurodl.org/materials/contrib/2013/Ouma_et_al.pdf (accessed on 10 June 2022).
34. Alasmari, N. Is internet reciprocal teaching the remedy for Saudi EFL Learners' reading difficulties during the COVID-19 pandemic? *J. Educ. E-Learn. Res.* **2021**, *8*, 324–332. [CrossRef]
35. Selim, H.M. Critical success factors for e-learning acceptance: Confirmatory factor models. *Comput. Educ.* **2007**, *49*, 396–413. [CrossRef]
36. Davis, F.D. Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology. *MIS Q.* **1989**, *13*, 319–340. [CrossRef]
37. Quispe, M.D.C.A.; Alecchi, B.A. Business School Student Satisfaction towards Emergency Remote Teaching. *J. Educ. E-Learn. Res.* **2021**, *84*, 375–384. [CrossRef]
38. Moliner, L.; Lorenzo-Valentin, G.; Alegre, F. E-Learning during the COVID-19 Pandemic in Spain: A Case Study with High School Mathematics Students. *J. Educ. E-Learn. Res.* **2021**, *8*, 179–184. [CrossRef]
39. Nikou, S.; Maslov, I. An analysis of students' perspectives on e-learning participation–the case of COVID-19 pandemic. *Int. J. Inf. Learn. Technol.* **2021**, *38*, 299–315. [CrossRef]
40. Sun, P.-C.; Tsai, R.J.; Finger, G.; Chen, Y.-Y.; Yeh, D. What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Comput. Educ.* **2008**, *50*, 1183–1202. [CrossRef]
41. Chang, S.-C.; Tung, F.-C. An empirical investigation of students' behavioural intentions to use the online learning course websites. *Br. J. Educ. Technol.* **2008**, *39*, 71–83. [CrossRef]
42. Bernburg, J.G.; Thorlindsson, T.; Sigfusdottir, I.D. Relative deprivation and adolescent outcomes in Iceland: A multilevel test. *Soc. Forces* **2009**, *87*, 1223–1250. [CrossRef]
43. Aini, Q.; Budiarto, M.; Putra, P.O.H.; Rahardja, U. Exploring E-learning Challenges During the Global COVID-19 Pandemic: A Review. *J. Sist. Inf.* **2020**, *16*, 57–65. [CrossRef]
44. Kibuku, R.N.; Ochieng, D.O.; Wausi, A.N. E-learning challenges faced by universities in Kenya: A literature review. *Electron. J. E-Learn.* **2020**, *18*, 150–161. [CrossRef]
45. Kisanga, D.; Ireson, G. Barriers and strategies on adoption of e-learning in Tanzanian higher learning institutions: Lessons for adopters. *Int. J. Educ. Dev. Using ICT* **2015**, *11*, 126–137.
46. Lukas, B.A.; Yunus, M. ESL teachers' challenges in implementing e-learning during COVID-19. *Int. J. Learn. Teach. Educ. Res.* **2021**, *20*, 330–348. [CrossRef]
47. Chola, R.; Kasimba, P.; George, R.; Rajan, R. COVID-19 and E-learning: Perception of Freshmen Level Physics Students at Lusaka Apex Medical University. *Age* **2020**, *15*, 63.
48. Naresh, B.; Reddy, D.B.S.; Pricilda, U. A Study on the Relationship between Demographic Factor and e-Learning Readiness among Students in Higher Education. *Glob. Manag. Rev.* **2016**, *10*. Available online: https://www.researchgate.net/profile/Naresh-Babu-5/publication/316829152_A_Study_on_the_Relationship_Between_Demographic_Factor_and_e-Learning_Readiness_among_Students_in_Higher_Education/links/5912e039aca27200fe4ae19c/A-Study-on-the-Relationship-Between- (accessed on 10 June 2022).
49. Hair, J.F.; Hult, G.T.M.; Ringle, C.M.; Sarstedt, M. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*; SAGE Publication Inc.: Los Angeles, CA, USA, 2014.
50. Anderson, J.C.; Gerbing, D.W. Structural equation modelling in practice: A review and recommended two-step approach. *Psychol. Bull.* **1988**, *103*, 411–423. [CrossRef]
51. Hair, J.F.; Risher, J.J.; Sarstedt, M.; Ringle, C.M. When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.* **2019**, *31*, 2–24. [CrossRef]
52. Ramayah, T.; Chuah, F.; Hwa, C.J.; Ting, H. *Partial Least Square Equation Modelling (PLS-SEM) Using SmartPLS 3.0: An Updated and Practical Guide to Statistical Analysis*, 2nd ed.; Pearson: Kuala Lumpur, Malaysia, 2018.
53. Hair, J.F.; Hult, G.T.M.; Ringle, C.M.; Sarstedt, M. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed.; No. 9.; SAGE Publications Inc.: Los Angeles, CA, USA, 2017; Volume 53, pp. 1689–1699.
54. Henseler, J.; Ringle, C.M.; Sarstedt, M. A new criterion for assessing discriminant validity in variance-based structural equation modelling. *J. Acad. Mark. Sci.* **2015**, *43*, 115–135. [CrossRef]
55. Franke, G.; Sarstedt, M. Heuristics versus statistics in discriminant validity testing: A comparison of four procedures. *Internet Res.* **2019**, *29*, 430–447. [CrossRef]
56. Kock, N. Common method bias in PLS-SEM: A Full Collinearity Assessment Approach. *Int. J. e-Collaboration* **2015**, *11*, 1–10. [CrossRef]

57. Hair, J.F.; Ringle, C.M.; Sarstedt, M. PLS-SEM: Indeed a Silver Bullet. *J. Mark. Theory Pract.* **2015**, *19*, 139–152. [CrossRef]
58. Cohen, J. *Statistical Power Analysis for the Behavioral Sciences*; Lawrence Erlbaum Associates: Hillsdale, NJ, USA, 1988.
59. Ibrahim, R.; Leng, N.S.; Yusoff, R.C.M.; Samy, G.N.; Masrom, S.; Rizman, Z.I. E-learning acceptance based on technology acceptance model (TAM). *J. Fundam. Appl. Sci.* **2018**, *9*, 871. [CrossRef]
60. Lee, Y.-H.; Hsieh, Y.-C.; Ma, C.-Y. A model of organizational employees' e-learning systems acceptance. *Knowl.-Based Syst.* **2011**, *24*, 355–366. [CrossRef]
61. Farahat, T. Applying the Technology Acceptance Model to Online Learning in the Egyptian Universities. *Procedia-Soc. Behav. Sci.* **2012**, *64*, 95–104. [CrossRef]
62. Teo, T.; Luan, W.S.; Sing, C.C. A cross-cultural examination of the intention to use technology between Singaporean and Malaysian pre-service teachers: An application of the Technology Acceptance Model (TAM). *Educ. Technol. Soc.* **2008**, *11*, 265–280.