ONLINE LEARNING READINESS AMONG SECONDARY SCHOOL STUDENTS

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Abstract*: Amid the world's pandemic, many students have difficulty having an online class, mainly primary and secondary schools' students in Malaysia. When we talk about online learning to them, did they cope with the situation enough? Did they know how to use the technology in terms of having an excellent online class? Are they motivated to attend online courses rather than face-to-face classes? Therefore, this study aims to determine the online learning readiness among secondary school students in Selangor. This research was carried out based on quantitative methodology using a survey questionnaire on a sample of 202 targeted respondents, which are secondary school students. This study uses SPSS software Version 26 to test hypotheses and create path models. The results revealed that self-efficacy and motivation link significantly to the online learning readiness among secondary school students. Somehow, the attitude has no significant influence on E-learning readiness. The independent variables explain variance of 52.5% of e-learning readiness. This finding may shed light on the readiness of online learning in improving self-motivation among secondary school students. Several important factors that maintain students' motivation while implementing online learning technology need to be considered by the Ministry of education and school management, such as speed of internet connectivity, coverage, and time constraints faced.*

Keywords*: Online learning readiness, Self-efficacy, Motivation, Attitude*

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Introduction

In the middle of the global pandemic, it is affecting a wide range of sectors, including economic sectors, businesses, industries, education, etc. The government has decided to implement a lockdown throughout all of Malaysia's states due to a potentially dangerous virus, COVID-19. The lockdown has forced restaurants, companies, and schools to shut their doors and rely on internet operations to get by daily. Amid the spread of Covid-19, literature shows that governments, organizations, and citizens' rational and long-term functioning will adjust

drastically (Abdullah, Husin, & Haider, 2020). Furthermore, many students find it impossible to attend an online learning class, particularly among secondary students, because of a global pandemic that can bring significant illness and even death. This paper aims to identify how students face and manage their new method of learning all over Selangor.

E-Learning or Online learning is the new approach, a type of learning in which lectures are broadcast over the internet or courses are delivered by the internet, with the learner not having to attend a typical school or college setting (face to face). Many students had no alternative but to employ advanced online Information and Communication Technologies to complete their learning assignments during the COVID-19 phase (Al-Kumaim, Mohammed, Gazem, Fazea, Alhazmi, & Dakkak, 2021). E-learning is a technical-based education and preparation programme that provides educational information using telecommunication technology (Latip, Noh, Tamrin, & Latip, 2020). E-learning is considered a paradigm of digital education, along with the advancement of information and communication technology. Furthermore, e-learning is a form of learning in which students can practice independently at their own pace, rather than in a typical classroom setting. It is a home-based program of classes that can be customized to meet the needs and interests of students.

This research observes the readiness of online learning among secondary school students in Selangor. Therefore, this paper is focused on personal readiness toward online learning due to unexpected situations. The government's sudden demand causes fear and panic, which directly impacts the educational system. All educational institutions, including schools, colleges, and universities, have been instructed to cease operations immediately (Allam, Hassan, Mohideen, Ramlan, & Kamal, 2020). In terms of the educational system, they are free to return home, but all teaching and learning activities will be suspended until the government issues a new order.. This paper is structured based on the following sequences, literature review, methodology, findings, and conclusions.

Literature Review

Online learning readiness

The usage of electronic media and devices is a tool for increasing access for communication and interaction, training, and helping to introduce new approaches to learning. It can be used and accessed through various types of technology without regard to time or other constraints (Latip et al., 2020). Warranty defines e-learning as the delivery of learning content or learning experience (Widodo, Wibowo, & Wagiran, 2020). As a concept, online learning readiness is expressed as mental and physical preparedness in e-learning experience and action. Learners' readiness on this issue is also critical to obtain the desired level of efficiency from online learning environments and tools that are becoming more and more common today (Nayci, 2021). A significant input for the learning-teaching system in readiness, which is extremely important in the educational instruction process. Online readiness is mentally and physically prepared to participate in specific online learning activities and the capacity to follow up the opportunities that facilitate the use of e-resources such as the Internet (Engin, 2017). An important factor in implementing online learning successfully is the level of student readiness. Readiness, which has essential to the education process, is one of the success inputs of the learning-teaching system (Herguner, Son, Herguner Son, & Donmez, 2020). Students' knowledge, technology skills, availability, self-directed learning, computer and internet efficacy, and attitude can all be assessed to determine their readiness (Adams et al., 2018). In

recent years, online learning in higher education has evolved from an instructor-led paradigm to a learner-centered paradigm through the use of technology (Ituma, 2011). The capacity to bypass the temporal and spatial constraints of traditional educational environments is one of the potential benefits of online learning (Bates & Bates, 2005). Students must be prepared to learn online to grasp the benefits of online learning completely.

Self-efficacy

Self-efficacy may be defined as a type of self-assurance and self-assurance among all persons participating in learning to ensure that online learning is considered implemented and helpful and can optimize the quality of learning (Putra, Ridwan, Mulyani, Ekajaya & Putra,2019). Since self-efficacy is related to individual belief in one's abilities to plan and execute the courses of action required to achieve a given goal, it creates a bridge of potential connections on the acceptance of online learning (Latip et al., 2020). In three learning modalities, researchers looked at the existing relationships between academic self-efficacy and student performance. There are three types of learning: e-learning, b-learning, and face-to-face. The first two are mediated through digital technology, whereas the third does not seem to (Valencia-Vallejo, López-Vargas, & Sanabria-Rodríguez, 2018). Students' ease with utilizing the Internet had an impact on their happiness with online courses. Students were happier with online courses when they knew how to use online tools and saw online learning as a helpful and flexible way to study, communicate, and share information (Wei & Chou, 2020). In difficult situations, self-efficacy will determine what actions to take, how much effort to invest, how long to persevere, and what strategies to utilize. Siron, Wibowo, and Narmaditya (2020) believe that this issue is not related to individuals' amount of abilities but rather to the learner's conviction in their ability to perform in diverse scenarios or situations. The low self-efficacy experience technology-assisted learning as a burden, which may influence their acceptance of e-learning. This problem occurs because of several factors, including limited knowledge understanding, lack of creativity and lack of management resulting in ineffective self-efficacy (Latip et al., 2020). Self-efficacy is linked to a person's perception of their own ability to manage and conduct all the actions needed to achieve clear objectives. Performance expectation, self-efficacy, social influence, and other variables contribute to the method's ongoing use. Understanding the learning requirements of individuals, setting learning objectives, identifying material resources for learning, selecting and executing suitable learning techniques, and applying the choices in the evaluation of learning output are all parts of self-directed learning (Engin, 2017). Therefore, there is still a gap in self-efficacy that needs further exploration to understand the determinants of online learning adoption. Latip et al. (2020) concurred that self-efficacy appears to correlate and contribute to online learning readiness. Based on this literature, we formulate a hypothesis:

H1: Self-efficacy influences e-learning secondary school students' readiness.

Motivation

Motivation is a notion that influences the direction and magnitude of the action and the efforts that occur as a result of the activity. In educational settings, motivation significantly affects student attitudes and learning habits (Yilmaz, 2017). By engaging in mental and physical activities that result in learning outcomes, one can reduce the demands on his time, money, and commitments. For this learning manufacturing to occur, there must be some form of motivation to ensure that the process is successful (Allam et al., 2020). Ayasrah (2020) postulated that using a learning management system has a favorable influence on behavioral intention, but the

habit is small. This idea might be one of the reasons why students exclusively use the learning management system for academic purposes. Studies on online distance learning environments and motivation have utilized a variety of theoretical frameworks and models. Osman et al. (2018) discovered that intrinsic and extrinsic motivation theories are used in many of these studies to discover the reasons why students engage in online learning environments. In a similar study, Li & Tsai (2017) found that effective self-regulation needs motivation.

It has an impact on the self-regulatory process' cognitive and metacognitive strategies. The students' online engagement was affected and influenced by their motivation, and their participation indirectly influenced the outcomes. Students might experience a better sense of connection to their peers and teachers by synchronizing their online classes. Kamal, Shaipullah, Truna, Sabri, & Junaini (2020) revealed that students would have unlimited power and flexibility to finish their course learning materials whenever and wherever they wanted from any place with an Internet connection. When adopting e-learning, students cannot avoid encountering issues and difficulties. Therefore, providing technology infrastructure such as virtual learning environments, learning management systems, internet access, and digital devices, as well as assessment redesign to performance-based, meaningful assessments such as constructive adaptive approaches, demonstration of learning using multiple measures, and immediate feedback on learning (Bhaumik & Priyadarshini, 2020). The students had to explore the best options to ensure that education activities could continue with as little interaction as possible while maintaining high quality and online learning was the only viable option. Osman et al. (2018) pointed out several important factors that support students' motivation while implementing online learning techniques needed to be considered, such as speed of internet connectivity, coverage, and time constraints. Based on this argument, we design a hypothesis:

H2: Motivation influences e-Learning secondary school students' readiness

Attitude

The third factor that contributes to the effectiveness of online learning readiness among secondary school students is attitude. A combination of feelings, beliefs, and actions toward a specific item, person, thing, or event is an attitude. Attitudes are frequently formed due to personal experience or upbringing, and they may have a significant impact on behavior. Bad experience dealing with online learning platforms in terms of student participation, interactivity, and engagement, inadequate well-designed assessment process to measure online learning outcomes, and lack of experience developing online course content or converting some courses from offline to online (Osman et al., 2018). However, the amount of workload task moderates the strength of the relationship between attitude and behavior (Hapini Awang, Mat Aji, Osman, Abdul Nasir, Mat Deli & Wan Hamat, 2019). Students with high attitudes have more adequate coping skills for events, and instead of viewing the scenario as a danger, they see it as an opportunity. With high attitude helps students choose adaptive methods for decreasing unpleasant emotions and replacing them with good ones. It was shown that students' preparation for online learning enhanced interaction in the learning environment or reduced readiness reduced interaction. Attitude is the response of a person or group to a stimulus. The stimulus may be an action, individual, or anything in the environment. The student can assure the fulfilment of an online attitude by reacting to all stimuli in the electronic world, activating their ideas, energy, and desire, and responding to the effect and converting it into conduct. Herguner et al. (2020) emphasized that the activity's intention is directly related to an individual's attitude toward completing the behavior. The necessity to prepare students for a

rapidly changing and technology-driven world prompted the development of online learning. The majorities of students are aware of the benefits of using digital technology in the educational process and have a good attitude toward it. However, students are usually happy with their academic performance and success (Hussein, Daoud, Alrabaiah, & Badawi, 2020). Students' perceived usefulness, enjoyment, interest, and satisfaction during online learning and their continued intention to learn online are all influenced by their attitudes. It is reasonable to anticipate that students' online learning experiences in a blended course may significantly influence their propensity to engage in online learning in the future (Zhu, Zhang, Au, & Yates, 2020). Shahzad, Hassan, Aremu, Hussain, and Lodhi (2021) further stressed out that more critical than gadget ownership or technological skill is the availability of a fast and stable internet connection. However, despite having digital learning gadgets and an internet connection, some students could not use online resources due to a weak home network (Mseleku, 2020). Students and lecturers encounter few difficulties due to the unanticipated move from face-to-face study to online learning. Furthermore, most nations have significant problems with technical infrastructure in rural regions; as a result, the quality of online education may be a crucial issue that requires immediate attention. Based on this discussion, we conjecture a hypothesis:

H3: Attitude influences e-Learning secondary school students' readiness

Research framework
A research framework between the independent and dependent variables is illustrated in Figure 1.
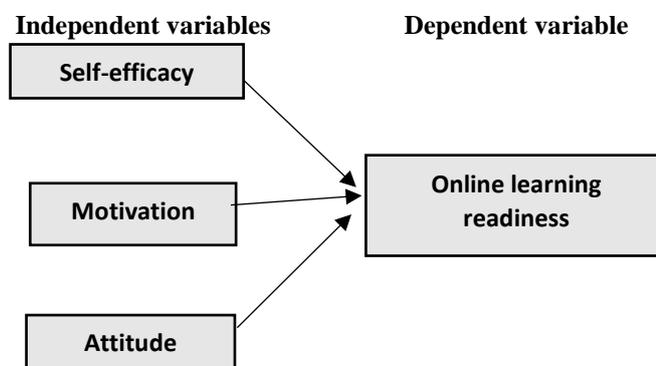
Figure 1: Research framework

Source: (Authors, 2021)

Methodology

Research design
The research used a quantitative approach, with respondent's readiness treated as a variable that could be measured with a questionnaire (Adams et al., 2018). Quantitative study design is an exemplary way of finalizing findings and confirming or disproving a hypothesis, as well as highlighting the statistical or numerical interpretation of data obtained by questionnaires or surveys on neutral measurements. This research demonstrates the essence of the relationship which involves the readiness towards online learning from secondary students with the knowledge of self-efficacy, motivation, and attitude.

Data collection

Data collection plays a crucial role in statistical analysis. In research, there are different methods used to gather information, all of which comprise two categories, which are primary and secondary data. Data collection relies on information gathered by researchers who collect data from respondents through the questionnaire method. Latip et al. (2020) stated that the questionnaire's link was spread through social media from the participating members in the group. This questionnaire provides questions where respondents must answer, and throughout the method, all data were analyzed to get the outcome of this study.

Primary data

Primary data is information gathered for the first time by the researcher and is considered factual and original. For this study, the researcher decided to do a questionnaire method. It is because it requires respondents all over Selangor, and this also happens to be the most effective way to have results as soon as possible. Not to forget, researchers can easily understand the readiness towards online learning from secondary students in Selangor. Other than that, researchers can understand the factors of readiness towards online learning, such as how this affects the student academically, how students can manage their online learning accordingly, how satisfied are they with online learning system or by the environment, and lastly, how readiness towards online learning from the secondary students in Selangor. There are about 367,834 secondary school students in Selangor (CEIC, December 2021). They are randomly selected from all the secondary schools. Due to COVID-19 social distance rules and restrictions, a self-administrated questionnaire was created using Google Form to collect data (Al-Kumaim et al., 2021). The questionnaire managed to get 202 respondents throughout Selangor.

Secondary data

Secondary data refers to information that has already been collected or produced by others and the interpretation of primary data. Secondary data collection is primarily used to create references so that researchers can gain a clearer and a better understanding of the study, facts, and results to be achieved. Aside from that, secondary data are used in articles and journal-related information, information obtained through the internet, and journals that can be used as references from senior students. This study uses articles to find extra information on the readiness towards online learning from secondary students in Selangor and uses them as a reference to support it.

Data Analysis and Findings

Table 1 shows about demographic profile where the respondent's district living in the Selangor area. The least respondent was 2 from Sabak Bernam's students with (1.0%), following next which not a more significant number compared to Sabak Bernam's, three students from Hulu Selangor with (1.5%) percentage, and Kuala Selangor's respondent with seven students and (3.5%). Sepang's students add to 15 respondents (7.4%), and Gombak's student 16 respondents (7.9%). Respondents from Kuala Langat add 22 students (10.9%), and Petaling 34 students (16.8%). The highest respondents who contribute (48%), 97 students, are all from Klang.

Table 1: Demographic Profile

No. of Question	Demographic Details	Frequency (Numbers)	Percentage (%)
Gender	Male	82	40.6
	Female	120	59.4
Age	13 Years Old/Form 1	15	7.4
	14 Years Old/Form 2	28	13.9
	15 Years Old/ Form 3	23	11.4
	16 Years Old/Form 4	44	21.8
	17 Years Old/Form 5	92	45.5
Race	Malay	156	77.2
	Chinese	21	10.4
	Indian	25	12.4
Religion	Buddha	13	6.4
	Hindu	24	11.9
	Islam	155	76.7
	Christian	20	5.0
District living in Selangor	Gombak	16	7.9
	Hulu Langat	6	3.0
	Hulu Selangor	3	1.5
	Klang	97	48.0
	Kuala Langat	22	10.9
	Kuala Selangor	7	3.5
	Petaling	34	16.8
	Sabak Bernam	2	1.0
	Sepang	15	7.4

Source: (Authors, 2021)

Reliability test

All the values of Cronbach's Alpha are higher than 0.70, as depicted in the Table 2 below. There are two items had to be excluded in this report - item B2 and item B4. The scale of Cronbach's Alpha test should be more than 0.7 as it was standardized initially. The Cronbach's Alpha for the online learning readiness is 0.705, 0.904 for self- efficacy, 0.765 for motivation, and 0.832 for attitude, confirming that all the variables are reliable.

Table 2: Reliability Test

Variable	Cronbach's Alpha	No. of Items
Online learning readiness	0.705	3
Self-Efficacy	0.904	5
Motivation	0.765	5
Attitude	0.832	5

Source: (Computed from *SPSS software Version 26* output, (2021)

Regression analysis

Multiple regression is used to predict the value of a variable based on the value of two or more other variables.

Table 3: Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.729ᵃ	.532	.525	.58245

a. Predictors: (Constant), Mean_Attitude, Mean_Motivation, Mean_Self_Efficacy

Source: (Computed from *SPSS software Version 26* output, (2021)

The "R" column shows the value of R, the multiple correlation coefficient. R can be considered to be one measure of the quality of the prediction of the dependent variable, which is the online learning readiness. A value of 0.729 in the table above indicates a good level of prophecy. The "R Square" column represents the R^2 value, also called the coefficient of determination, which is the proportion of variance in the online learning readiness that the independent variables can explain; self-efficacy, motivation, and attitude. From the table, the values 0.525 of independent variables define 52.5% of the variability of dependent variable.

ANOVAᵃ

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	76.313	3	25.438	74.983	.000ᵇ
Residual	67.170	198	.339		
Total	143.483	201			

a. Dependent Variable: Mean_Readiness
b. Predictors: (Constant), Mean_Attitude, Mean_Motivation, Mean_Self_Efficacy

Source: (Computed from *SPSS software Version 26* output, (2021)

The F ratio in the ANOVA table above tests whether the overall regression model fits the data. Table 4.11 shows that independent variables statistically significantly predict the dependant variable, F (3, 198) = 74.983, p < 0.05. Thus, the regression model is a good fit for the data.

Coefficientsᵃ

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.318	.186		7.100	.000
Mean_Self-efficacy	.192	.078	.221	2.470	.014
Mean_Motivation	.426	.077	.422	5.497	.000
Mean_Attitude	.125	.072	.149	1.732	.085

a. Dependent Variable: Mean_Readiness
Source: (Computed from *SPSS software Version 26* output, (2021)

The table shows the statistical significance of each independent variable. Two independent variables have a significant value of less than 0.05, which are self-efficacy and motivation. This result also indicates that motivation has the highest beta value, 0.422. It shows that motivation is the most influential variable towards online learning readiness among all the

independent variables. However, for attitude, the significant value is .085. It is more than 0.05. Thus, it indicates that there is no relationship between attitude and online learning readiness.

Discussion and Conclusions

From the findings, we conclude that several factors can affect the readiness of online learning. Based on the results, the factors are self-efficacy, motivation, and attitude. These independent variables are found to be significant to the Online Learning Readiness among secondary students in Selangor. Self-efficacy is the first factor contributing to the effectiveness of online learning readiness among secondary school students in Selangor. As a result, to provide the learner with a decent online learning, it is a need to form basis for online learning readiness by creating a positive online learning attitude. Motivation has the most important role in online learning to make sure the online learning is being more effective. From the results, it shows that motivation is the key for students to feel prepared in online learning. Paris and Turner (2012) describe motivation as the 'engine' of learning. Motivation can influence what we learn, how we learn and when we choose to learn (Schunk & Usher, 2012). Research shows that motivated learners are more likely to undertake challenging activities, be actively engaged, enjoy and adopt a deep approach to learning and exhibit enhanced performance, crucial, and creativity (Ryan &Deci, 2000). Given the critical show between motivation and learning (Brophy, 2010), it is not surprising that motivation has been actively researched across a wide range of traditional educational settings (Schunk, Meece, & Pintrich, 2014), somehow, attitude showed no significant to e-learning readiness. Perhaps during this pandemic, the students' attitude of being confident to ask questions and submit their work online does not impact their readiness in online learning. This study helps secondary schools' critical Selangor to understand better the factors that lead to online learning readiness among secondary school students in Selangor.

Future research may study similar fields, which can be conducted in other regions and countries to support significant findings. In the future, researchers can research more widely at different states besides Selangor. This will lead to an increase of respondents to researchers in the future in need of more accurate data and information. The research should also focus on obtaining more respondents from other places, such as rural and urban areas, or comparing these two. Several measurements should be included in future studies. Other than that, the larger sample size also should be tested in future research. To obtain relevant results, new researchers need to collect more than 300 responses for their research papers. To avoid bias during this study, a multi-language questionnaire is much recommended. It should provide in English, Chinese, and Tamil versions of the questionnaire. By inserting multi-languages in the questionnaire, it can help extend the amount of understanding for the respondents who do not seem to be ready to understand the total version language of the questionnaire. Additionally, the respondents can choose their preferred language to answer. Thus, they were able to understand the research questions, which resulted in the accuracy of the result.

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