

The Readiness of Online Distance Learning During COVID-19 Pandemic among Students

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ABSTRACT

Recently, the whole world has been struck with an infectious disease called Coronavirus (COVID-19) that gave major impact to every sector as well as education sector. Most of the education systems in the world shifted to a fully online learning method, either conducted in a synchronous or asynchronous method including Malaysian education system. In reality, the academic session in the Higher Learning Institution continued with the new norm and online learning has been implemented to ensure smooth process of teaching and learning throughout the pandemic. This paper is conducted to examine the readiness of students for emergency online distance learning due to the COVID-19 pandemic. Data collected from 2,917 students showed that generally the level of computer and internet literacy, self-dependent learning and motivation towards online distance learning is at a high level. Moreover, these three dimensions are significantly influenced with respect to their readiness of online distance learning in terms of computer and internet literacy, self-dependent learning and motivation. Findings indicated that students were moderate to strongly ready for their distance online learning. This study highly contributes to future research by looking at the needs and demands for the upcoming year for the whole world to shift to another phase of society development by implementing technology in daily life in facing a new norm.

Keywords: Computer internet literacy, motivation, online distance learning, self-dependent learning, pandemic

1.0 INTRODUCTION

The sudden outbreak of a deadly disease called COVID-19 caused by a Corona Virus (SARS-CoV-2) shook the entire world, and the World Health Organization declared it as a pandemic. The COVID-19 has been spreading rapidly across the global. In Malaysia, the COVID-19 outbreak in early 2020. Like many countries around the world, the Movement Control Order (MCO) was enforced to flatten the curve from the virus spreading fast.

The MCO affects higher learning institutions' students who are just starting a new semester to stay at home but teaching and learning activities continue using online distance learning method. The Ministry of Higher Education announced that all public and private universities in Malaysia are to conduct teaching and learning activities via online learning until the end of December 2020 (Malaysian Ministry of Higher Education, 2020). This is the way to ensure the continuity of education. It is a fact that this approach is relatively new for the society and it will take some time and effort to get used to it before it

becomes a norm. Students and lecturers were critically hit by the unprecedented changes as a result of the pandemic (Chung et al., 2020).

Politeknik Tuanku Syed Sirajuddin, one of the higher learning institutions in Malaysia started online distance learning during June 2020 academic session from home. Prior to the implementation of full online learning, blended learning was used. The concept of blended learning was implemented by combining the traditional face-to-face teaching and online communications using learning management system known as CIDOS e-learning portal. Due to the spread of this disease and the closure of physical classes, fully online learning in synchronous and asynchronous environments become the alternative learning methods. Students were started their learning activities from home with no physical social interaction with the lecturers and group members or peers to complete the project assignments and other assessments. These are the challenges expected occur while polytechnic have shifted from face-to-face learning environments to online distance learning in response to the COVID-19 pandemic outbreak. It is undeniable that the COVID-19 crisis of 2020 brought about an emergency shift to remote delivery of higher education. In such critical and urgent situation, there were no option unless the classes conducted using online platforms. The question of whether polytechnic students are ready for online learning remains.

Thus, the objective of this study is to investigate students' readiness for online distance learning during the COVID-19 pandemic and specifically assesses whether the computer internet literacy, self-dependent learning and motivation affected the online distance learning environment.

2.0 LITERATURE REVIEW

Online learning became entrenched in higher education worldwide since the beginning of the 21st century (Falvo and Johnson, 2007; Kasim and Khalid, 2016 and Zawacki-Richter et al., 2015). The COVID-19 has seriously

slammed Malaysian higher education sector as well. For the academic session to continue with the new norm of social distancing and MCO, the online distance learning has been implemented to ensure smooth process of teaching and learning. According to Allam et al. (2020), online distance learning also known as online distance education which the key practice includes physical separation of lecturers and students and the use of various of online applications in order to facilitate interactive communication between lecturers and students. Basically, online learning practice various of flexible learning activities. It can be related to learning experiences in synchronous or asynchronous environments using different devices (e.g., mobile phones, laptops, etc.) with internet access. In these environments, students can be anywhere (independent) to learn and interact with instructors and other students (Singh and Thurman, 2019).

Social relations and interactions are most important in experiencing the learning satisfaction in the online learning environments and students' relationship with lecturers and learning content is highly relevant for learning (Richardson et al., 2017). In this case, students need technical equipment, relevant skills and tools for using hardware and software and for interacting virtually with their lecturers and peers. Previous study from Butz et al. (2015) showed that students enrolled in online courses show a significantly higher level of technology-related fear, anger, and helplessness compared to face-to-face learning. According to Miller (2020), technology can be a tool, but it cannot replace face-to-face interaction. In fact, the absence of social interaction and the inability to form study groups previously enjoyed by students are also some of the challenges they now have to contend with (Chung et al., 2020).

Students anxiety to join online distance learning activities must take into consideration as this method of learning become vital during pandemic disease outbreak. The successful of online distance learning can be achieved by

understanding students' readiness environments such as their competency of using computer and their internet literacy or to reach internet access Allam et al. (2020). Many previous researches reported the readiness of online learning significantly influenced by computer internet literacy (Hung et al., 2010 and Suprabha et al., 2017) and must complement with a high competency of computer internet literacy (Allam et al., 2020).

Furthermore, lack of self-discipline (can be referred to self-directed learning) also influence student's readiness of online distance learning due to the environmental interruption, such as massive home environment, friend's interruption, online chatting or online shopping. Garrison (1987) reported enormous studies reveal self-directed learning enhances the need for learning responsibilities to be an independent learner, enjoyable than face-to-face learning, and embedded with a sense of personal autonomy. Self-directed learning is a vital in ensuring the readiness of students towards the online learning implementation. This is because student who has self-directed learning element are possessed high self-disciplined, self-independent study and high self-confident to complete the task in online distance learning (Zainudin, 2019).

Students' motivation considered as a potential factor that may significantly affect student's online learning readiness (Hung et al., 2010) because of the fuel of human learning is motivation (Allam et al., 2020). Motivation for learning is essential to ensure students engaging with the online distance learning, moreover during the pandemic outbreak. This will urge the needs to be some kind of motivation to make the online distance learning successful. The lecturers need to understand their students' motivation while the students must adapt from face-to-face learning into online learning and students need to be strongly high motivated for higher academic achievement (Samir, 2016). To motivate students, the lecturers should keep in mind that motivation must be natured in students, such as explaining how the online

environment may be used and encourage interaction and collaboration among students may strengthening learning motivation. This will make students no longer feeling of isolation with no physical social interaction to their lecturers and peers (Allam et al., 2010).

This study will measure the students' online distance learning readiness that predicted applicable to the dimension of computer and internet literacy, self-dependent learning and motivation of learning during pandemic outbreak has led to global disruption that affecting all aspects of life socially, economically and as well as educationally.

3.0 METHODOLOGY

The group of population in this study were active students in Politeknik Tuanku Syed Sirajuddin (PTSS), Perlis. The study aimed to examine the students' readiness of online distance learning during Covid-19 pandemic. Therefore, the researchers used survey technique in this study. A survey was conducted using a questionnaire as an instrument. Questionnaires are often used to gather background information and measure concepts related to attitudes, perceptions and views (Laila and Azizee, 2014). In addition, a survey was conducted using questionnaires which adapted from Allam et al. (2020). Questionnaires item provided in the method of rating scales, the Likert method. Thus, respondents are required to mark their answers on a statement items based on a scale from one extreme to the other extreme.

The respondents of this study were 2,197 students from six main academic departments of PTSS comprising of thirteen programs of studies. Student selection was based on random sampling. Based on the number of respondents, the sample size is considered large enough as population of active PTSS students were 3,187 during the June 2020's academic session. A total of 2,197 usable responses were received from respondents, giving a response rate of 92%. The response rate of over than 70% is considered very well (Hair et al. 2010).

Pilot study was conducted for a reliability testing purposes before proceeding to the final data collection. Overall, the Cronbach’s Alpha value for each item in the questionnaire was high and exceeded .7, that was .958 and it shows a good internal consistency (Hair et al. 2010). The data obtained from the questionnaire were analysed using SPSS 26.0 for Windows. The data collected from this study is in the form of quantitative data interval. To explain further, the data were presented in descriptive analysis tables. For the purpose of this study, the mean score is used to evaluate the level of students’ readiness of online distance learning. To determine the level of readiness towards the online distance learning, the researchers categorise and interpret the scores into three levels in a range between mean higher score and lower mean score.

Table I below shows the mean score interpretation adapted from Landell (1997) and Pallant (2010) to analyse the data obtained for the computer internet literacy, self-dependent learning and the motivation towards the readiness of online distance learning.

TABLE I
Interpretation of Descriptive Mean Score

Mean score	Mean score
1.00 – 2.33	Low
2.34 – 3.67	Moderate
3.68 – 5.00	High

Source: Adapted from Landell (1997) and Pallant (2010)

This study also used inferential statistical analysis to measure the relationship between each of the variables. Pearson correlation analysis was used to determine the relationship between variables. This analysis has addressed the extent of computer internet literacy, self-dependent learning and the motivation towards the readiness of online distance learning among students in PTSS. Table II shows the interpretation according to Pearson's correlation coefficient that determines whether the correlation is strong or weak.

TABLE II
Interpretation of Descriptive Mean Score

Correlation coefficient (R)	Interpretation
< 0.20	Very weak
0.20 – 0.40	Weak
0.41 – 0.71	Moderate
0.72 – 0.90	Strong
> 0.90	Very strong

Source: Guilford and Franchter (1978)

4.0 RESULTS AND DISCUSSION

Respondents’ demographic background shown as in Table III below:

TABLE III
Respondents’ Demographic Background

Demographic background	Percentage (%)	
Gender	Male	38.8
	Female	61.2
Department	Engineering	30.2
	Non-engineering	69.8
Computer/Phone Use	Smartphone	89.1
	Desktop	6.5
	Laptop	69.3
	Others	4.3
Internet Stability	Connected but unstable	15.9
	Stable	34.3
	Excellent	36.1
Synchronous Method	Big Blue Button (CIDOS)	35.5
	Zoom Meeting	64.7
	Google Meet	66.8
	Microsoft Teams	79.3
	Skype	1.3
	Cisco Webex	9.3
	Facebook Live	3.4
	Jitsi Meet	26.4
	WhatsApp	54.1
	Telegram	23.9
Asynchronous Method	LMS CIDOS	67.1
	Google Classroom	46.0
	Repository Video	23.9
	Screen Recording	19.3
	Forum	7.2
	Instant Messages application	52.7

Mobile apps	16.7
Online quizzes	42.1
Email	23.0
Cloud	14.1

Table IV, Table V and Table VI below show the mean score for computer internet literacy, self-dependent learning and the motivation level towards the readiness of online distance learning among students of PTSS during Covid-19 pandemic.

TABLE IV
Findings on The Level of Computer and Internet Literacy

Item	Mean score	Interpretation
I feel confident using computer for the purpose of online learning	3.91	High
I feel confident in using internet to find or gather information for online learning	4.03	High
I feel confident to search, download and upload document by using internet	4.10	High
I feel confident to use any applications or software for online learning	3.92	High
Overall mean score	3.99	High

Based on the findings in the Table IV, the overall mean score on the computer internet literacy level of readiness among students of PTSS was 3.99. This result shows that the computer internet literacy level of readiness towards online distance learning during Covid-19 pandemic is high. Table V below shows the mean score level of self-dependent learning among students of PTSS during Covid-19 pandemic is high. The result shows the mean score is 3.86.

TABLE V
Findings on The Level of Self-Dependent Learning

Item	Mean score	Interpretation
I carry out my own study plan	3.59	Moderate
I seek assistance from lecturer or friends when facing learning problems	4.12	High
I manage time well	3.78	High
I set up my learning goals clearly	3.97	High
I have higher expectations for my learning performance	3.85	High
Overall mean score	3.86	High

According to the Table VI below shows the mean score level of motivation towards online distance learning among students of PTSS during Covid-19 pandemic. Based on the analysis obtained, the results show that the overall mean score on the level of motivation among students is 3.88. This situation shows that the level of motivation towards online distance learning among students of PTSS during Covid-19 pandemic is high.

TABLE VI
Findings on The Level of Motivation

Item	Mean score	Interpretation
I am able to complete my work even when there are distractions in my home (television, children, assisting family members, etc)	3.87	High
I am able to complete my work even when there are online distractions (online shopping, online chatting, online game, etc)	3.92	High
I am certain I can learn the material presented in online learning even facing the technical difficulties	3.82	High

I have motivation to learn for best academic achievement and performance	3.91	High
Overall mean score	3.88	High

Based on the findings in the Table VII, the overall mean score on the level of readiness towards online distance learning during Covid-19 pandemic among students of PTSS was 3.61. This result shows that overall the level of readiness towards online distance learning during Covid-19 pandemic is moderate.

TABLE VII
Findings on The Level of Readiness Towards Distance Online Learning During Covid-19 Pandemic

Item	Mean score	Interpretation
Using online learning sets me to have higher expectations for my learning achievement and performance	3.74	High
Using the online learning improves my performance in my studies	3.55	Moderate
Using online learning will increase my learning productivity	3.58	Moderate
Using online learning enhances my effectiveness in my studies	3.57	Moderate
Overall mean score	3.61	Moderate

Finally, Pearson correlation analysis is used to examine the relationship between computer internet literacy, self-dependent learning and the motivation level towards the readiness of online distance learning among students of PTSS during Covid-19 pandemic. Table VIII below shows the findings on the variables' relationship.

Based on Table VIII above, the result shows that there is a significant relationship between computer internet literacy ($p=0.000$), self-dependent learning ($p=0.000$) and the

motivation ($p=0.000$) towards the readiness of online distance learning. In this study, it shown that there is significant correlation found between computer internet literacy, self-dependent learning and the motivation in influencing the readiness towards online distance learning at moderate to strong correlation. This study indicates that computer internet literacy among students moderately influences the readiness towards online distance learning, but self-dependent learning and the motivation are highly influence the students' readiness towards online distance learning.

TABLE VIII
Correlation Matrix Between Computer Internet and Literacy (CIL), Self-Dependent Learning (SDL) and The Motivation (MTV) Level Towards the Readiness (RDS) of Online Distance Learning

Variables	CIL	SDL	MTV	RDS
CIL	1.00	0.824**	0.754**	0.683**
SDL	0.824**	1.00	0.815**	0.749**
MTV	0.754**	0.815**	1.00	0.733**
RDS	0.683**	0.749**	0.733**	1.00

*Correlation is significance at the 0.01 level

The result is in line with the study carried out by Hung et al. (2010), which indicated the three factors (computer internet literacy, self-dependent learning and the motivation) influence the readiness level of students. The findings also in line with the study conducted by Suprabha et al. (2017) indicated that the readiness of online learning significantly influenced by computer internet literacy.

Based on the findings, the result also shows that students were moderate ready for their computer internet literacy but strongly ready in self-dependent learning and high motivate in facing the online distance learning during Covid-19 pandemic. The result was slightly contrary with the research done by Allam et al. (2020) which reported the student's online distance learning readiness at premium level which found the computer internet literacy

were at high level while self-dependent learning and the motivation were reported at the low level. The result from this study supported Zainuddin (2019) which self-directed learning is very important in ensuring the readiness of students towards the online learning implementation. Besides, the study reveals students have a high motivation of online distance learning and also supported Samir (2016) which students need to be strongly high motivated for higher academic achievement.

It can be summarised that this study found the readiness of online distance learning among students at moderate level while dimension of computer and internet literacy, self-dependent learning and motivation of learning during pandemic outbreak reported at high level. This study suggests the readiness of online distance learning moderately influenced by the dimension of computer and internet literacy while strongly influenced by dimension of self-dependent learning and the dimension of motivation.

5.0 CONCLUSION

The COVID-19 pandemic has changed the educational landscape in the world and moved the utilization of online learning. Findings reported from this study found that the respondents in this study generally indicated that they were between moderate to strongly ready for the online distance learning. Based on the findings in this study, students' moderately ready in the element of computer and internet literacy. It is a different environment in joining online learning as nature of the academic program mode compared to forcing students to join online learning due to pandemic outbreak with no good plan, students have to equipped themselves with computer and internet literacy, highly urge for self-dependent learning and develop self-motivation learning for their academic achievement and performance. Much online learning platform (such as Zoom Meeting, Google Meet, Microsoft Teams Skype, Jitsi Meet, etc.) demand the students' computer literacy on

engaging devices such as camera and microphone for successful online conversation.

This study is not without its limitations. Future research should look into broader perspective or need further investigation into any area regarding with students' readiness and their performance from online distance learning. Findings from this study hopefully could bring an input to polytechnic in improving online teaching and learning in order to embrace and moves towards the Industrial Revolution 4.0 (IR4.0).

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