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Are You Ready? An Assessment of Online Learning Readiness among University Students

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Abstract

With the advancement of technology, online learning has changed the landscape of teaching and learning in institutions of higher learning. Students in institutions of higher learning are expected to be ready to do online learning. But are they? The purpose of this paper is to investigate online readiness among students in UiTM Sarawak. The 18-items Online Learning Readiness Scale (OLRS) was administered to a group 91 students from three different study programs. By using SPSS, students' online readiness was analysed with respect to their computer and internet self-efficacy, self-directed learning, learner control, motivation for learning and online communication self-efficacy. This study found that students' readiness were high in computer and internet self-efficacy, moderate for self-directed learning and motivation for learning, and low for learner control. It was also found that gender was not a significant factor that affect student online readiness. However 2nd year students showed significant greater readiness in the area of computer and internet self-efficacy while 3rd years students were significantly more ready in the area of learner control. The study also found that poor internet connectivity was the biggest challenge faced by students. The implications of this study and direction for future studies were also discussed.

Introduction

With the advent of information technology and internet, the landscape of education has undergone tremendous changes in the recent years globally. Online learning has grown beyond smart acronyms and is currently a mainstream education (Coates, Wen and Shi, 2020). According to Bates (2005), online learning is viewed as a subcategory of distance education that uses the Internet and the World Wide Web. It is an increasingly popular method being used by institutions in various countries to provide opportunities and meet the needs of a growing and increasingly diverse student population (Rumble & Latchem, 2004). Institutions of higher learning in Malaysia have also rode the wave of this change, albeit much slower than those in Korea, Taiwan or Singapore. Online learning is currently the hot topic discussed among academics and students

alike. Even more so with the Covid-19 pandemic that has brought most activities, from tourism to education, to a standstill. Online learning has emerged as the hero of the day as the preferred teaching and learning method as it can transcend the boundaries of time, space, medium, and location.

Due to Covid-19 pandemic that has rocked the world, which began in Wuhan, China, it has rapidly spread across the globe. At the time writing, Covid-19 has affected more than 190 countries and regions, infected more than 700,000 people and killed more than 30,000 people globally within a short three months. In Malaysia, the Movement Control Order (MCO) though not unexpected, has caught Malaysians by surprise, and was enforced on 18 March 2020, for two weeks until 31 March 2020, then extended to 14 April, 2020. This effort was to flatten the curve of the spread of Covid-19 and hopefully to break the chain of the rapid spread of the deadly disease. This is an unprecedented phenomenon in Malaysia. For a few days, all institutions of higher learning were in a state of shock as to how to handle this sudden change. Many students have gone back to their own home states and hometowns all over Malaysia on 17 March 2020 before the MCO came into effect. Prior to that announcement made on 16 March 2020, public universities have strongly encouraged lecturers to adopt online teaching and learning method in order to reduce mass gathering of students. Many lecturers had a crash course learning from other colleagues how to use some of the online teaching methods such as Google Classroom, Google Meeting, Zoom, and others. Malaysian Higher Education Ministry has given the approval for all higher education institutions to conduct online teaching or e-learning (Malay Mail, 2020). The Ministry also emphasised that online teaching could only be conducted if all students have access to lecturers and all infrastructure requirements are in place. Subsequent to that, a new academic calendar was issued and lecturers were instructed to conduct all teaching online from 14 April 2020 onwards for the rest of the semester.

In Universiti Teknologi MARA, the online Learning Management System is called i-Learn. It is a one-stop platform for students to download reading materials, to post questions/ comments, and to enable other online learning activities. This platform has been around for a long time. Since its use is not compulsory, and due to its limited functionalities, not all students use this platform. Another factor is in this university, there is no fully online courses. The closest is blended learning. A blended learning course lies between a continuum anchored at opposite ends by entirely face-to-face and fully online learning environments (Rovai & Jordan, 2004). Blended learning is half face-to-face and half online learning. At the same time, they are also other free-of-charge, more attractive, user-friendly online learning platform such as Google Classroom, Google Meet, Zoom, just to name a few. These platforms are more popular among the students. Some lecturers are already using these online learning methods based on their own initiatives.

Due to the outbreak of Covid-19 and the Movement Control Order that has restricted face-to-face learning, and the latest circular issued by the Vice Chancellor (2020), it appears that implementing online learning is inevitable in UiTM Sarawak. However, as much as the lecturers and enablers are ready to implement online teaching using technology, There is no data to suggest

that students are ready to learn online. In order to implement online learning, it is important for enablers to investigate if these students are ready to adopt online learning. The purpose of this study is to investigate students' readiness to adopt online learning and the challenges they face in adopting online learning. This study will explore the following questions:

1. What are the types of Online Learning methods adopted by students in the past?
2. What is the university students' readiness for online learning?
3. Does gender of university students makes any difference in their readiness for online learning?
4. Does the year of study (first year, second year or third year) make any difference in their readiness?
5. What are the challenges faced by the students while learning online?

Literature Review

Online learning Readiness

In recent years, online learning in university education has gone through changes from being instructor-led paradigm to becoming learner-centred via the use of technology (Ituma, 2011). Online learning has a number of potential benefits, among them are the ability to overcome the temporal and spatial restrictions of traditional educational settings (Bates, 2005). In order for students to fully reap the benefits of online learning, students need to be ready to learn online. Online learning readiness is a concept first defined by Warner, Christie, and Choy (1998) in the Australian technical vocational education and training (TVET) sector. Since then, many researchers (eg. Evans, 2000; Hung et al, 2010; McVay, 2000, 2001; Smith, Murphy & Mahoney, 2003; Smith, 2005) have studied this concept and various dimensions of this online learning readiness have been identified and validated. The following section discusses computer & internet self-efficacy, learner control, online communication self-efficacy, motivation for learning, and self-directed learning.

Computer & Internet Self-efficacy

Since online lessons are delivered via technology-enhanced devices, therefore it is crucial for students to be ready and competent in dealing with computer and the internet. Computer and internet self-efficacy are a concept proposed by Hung et al. (2010), by combining computer self-efficacy (Compeau & Higgins, 1995) and internet self-efficacy (Eastin & LaRose, 2000). This concept relates to students' technology-related knowledge, skills, attitudes, and competencies in utilising technologies to meet educational aims and expectations in higher education (Hong & Kim, 2018).

Learner Control

Online learning differs greatly from traditional face to face learning. Online learning requires students to direct their own learning without face to face session with the lecturers. Although learner control has been studied for more than half a century, no clear definition and theory has been established due to its multidimensionality (DeRouin, Fritzsche, & Salas, 2005). In general, learner control encompasses the extent to which learners can choose what, where, when, and how to learn (Kraiger & Jerden, 2007). Although DeRouin et al. (2005) have identified learner to

include “sequence, pacing, content, context, method of presentation, optional content, task difficulty, and incentives” (p. 185), in this study, the concept of learner control includes directing own learning progress, able to maintain learning without being distracted by the other online activities, and repeating online material based on their learning needs.

Online Communication Self-efficacy

Kim & Glassman (2013) and Paul & Glassman (2017) in their studies of internet self-efficacy and anxiety, posited that online communication self-efficacy is part of wider concept of internet self-efficacy, together with search self-efficacy, organisation efficacy, differentiation self-efficacy and reactive/generative self-efficacy. In online learning, due to the absence of face to face interaction between lecturer and student, the only way for students to communicate with the lecturer and other classmates is through online communication. It is crucial for online communication to happen (McVay, 2000) for students to reflect and internalise what they have learn by posting questions, express their emotions and thoughts. In this study, online communication self-efficacy is considered to be crucial to be included as part of students’ assessment for online learning readiness (Hung et al, 2010).

Self-directed Learning

Self-directed learning is a learning strategy which allows learners to take control of their own learning process through the diagnosis of learning needs, learning goals, learning strategies and evaluate learning performance and outcomes (Knowles, 1975). In the online learning setting, self-directed learning is crucial to ensure students are ready for this learning method. Self-directed learners are usually more active in participating in learning tasks such as reading online learning material, completing classroom tasks, planning and evaluating milestones of learning. In this study, five items to gauge learners self-directed learning were posed. They included ability to carry our own study plan, seeking assistance when faced with problems, time management, set up learning goals and having expectations for learning performance.

Motivation for Learning

Schunk, Pintrich, and Meece (2008) define motivation as “the process whereby goal-directed activity is instigated and sustained” (p. 4). Motivation can influence what we learn, how we learn, and when we choose to learn (Schunk, 1995). Past research also shows that motivated learners are more likely to adopt a deep approach to learning, undertake challenging activities, to be actively engaged, to enjoy and, and to exhibit enhanced performance, persistence, and creativity (Schunk et al., 2008). Studies that explore motivation to learn in online contexts are relatively limited both in number and scope (Artino, 2008; Bekele, 2010). Yang Tsia, Kim, Cho and Laffey (2000) found evidence that motivation is positively related to how learner perceive each other’s presence in online courses. Saadé, He, and Kira (2007) found evidence that intrinsic and extrinsic motivation played an important role in the success or failure of online learning. In this study, motivation to for online learning focused on finding out if students are open to new ideas, motivated to learn, improve from past mistakes and sharing ideas with others.

In conclusion, in order to shed light on university students’ readiness to adopt online learning, this study adopts the five dimensions proposed by Hung et al. (2010). These five dimensions,

computer and internet self-efficacy was built on previous research by Compeau & Higgins (1995), Eastin & LaRose (2000); learner control (Shyu & Brown, 1992); self-directed learning by Garrison (1997) and Mcvay (2000, 2001); motivation for online learning (Tran & Deci, 2000), and online communication self-efficacy by McVay (2000) and Roper (2007). The researchers aim to understand university students' readiness for online learning and whether gender and year of study are significant factors that determined students' readiness.

Methodology

Instrument

In this study, the Online Learning Readiness Scale (OLRS) by Hung, Chou, Chen and Own (2010) was adopted and used with permission from the main author. OLRS has 18 items in five different dimensions, namely computer/internet self-efficacy (3 items), self-directed learning (5 items), learner control (3 items), motivation for learning (4 items) and online communication self-efficacy (3 items). These 18 items survey was put in a Google Form, together with other questions on respondents demographic, study program enrolled, methods of online learning used before and currently, challenges faced and learning preferences. This Google Form was then sent out to via Instant Messenger WhatsApp in March 2020 to three different groups of students enrolled in a common course taught by the researchers.

Participants

The participants in this study were university students who have enrolled in at least one blended learning courses in UiTM Sarawak. There are in total 97 students. A sample of usable 91 responses were returned, with a response rate of 93.8%. The students were asked to rate themselves in reference to a 6-point Likert Scale, with anchors ranging from 1 (Strongly disagree) to 6 (Strongly agree). There is no middle scale or neutral scale to avoid the effects central tendency. The demographic variables included gender, student age, student grade (first, second or third year) and course name. There were more female respondents (73, 80.2%) than male respondents (18, 19.8%). As for year of study, 29 (31.9%) participants were in their first year, 56(46.2%) were in second year (46.2%), while 20 (22%) were in third year of their studies. The same compositions above are also representative of the study programmes they have enrolled themselves. Chemistry 22%, Accounting 46%, and Office System Management 31.9%.

Results

Reliability

Although the research instrument, the OLRS was a validated instrument with a composite reliability of between 0.727 to 0.871 (Hung et al., 2010), it is essential for the researchers in this study to test its reliability within the Malaysian context. To do this, data collected in Google Form was screened, cleaned and transferred to Statistical Package for Social Science (SPSS) version 24 for analysis. The composite reliability for OLRS was measured first before subsequent analyses were conducted. Studies have suggested that 0.7 is an acceptable value for a reliable construct (Fornel & Larcker, 1981). The values of composite reliability for the five dimensions between .841 to .911 are given in Table 1. Table 2 also showed the correlations among the different dimensions. All the five dimensions were positively, and significantly correlated to each other, with p value <

0.01. All constructs had strong correlations of above .70 with each other except for learner control. This dimension recorded a positive but moderate correlations strength of between .484 to .508 with the other four dimensions.

Table 1. Reliability

Measures	Items	Composite reliability
Computer/internet self-efficacy	3	.876
Self-directed learning	5	.887
Learner control	3	.841
Motivation for learning	4	.911
Online communication self-efficacy	3	.891

Table 2.
Correlation among constructs

	Computer/internet self-efficacy	Self-directed learning	Learner control	Motivation for learning	Online communication self-efficacy
Computer/internet self-efficacy	1				
Self-directed learning	.760**	1			
Learner control	.484**	.638**	1		
Motivation for learning	.785**	.730**	.508**	1	
Online communication self-efficacy	.741**	.695**	.496**	.781**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Type of Online Learning Methods used by Respondents

The first research question of this study asked about the types of online learning methods used by the 91 respondents. Six choices were given to the respondents and the responses are shown in Table 3.

Table 3
Type of online learning adopted based on different study programs

Study programs	Office Management	System	Accounting	Chemistry	Total	%
i-Learn	25		41	15	81	89.0
WhatsApp	25		41	15	81	89.0
YouTube	7		18	12	37	40.7
Google Classroom	22		1	11	34	37.4
Zoom	9		3	19	31	34.1
Google Meet	0		2	3	5	5.5
TED Talk/TED-Ed	0		0	0	0	0.0

The most common online methods used by these 91 respondents are i-Learn and WhatsApp. I-Learn is the Learning Management System used by the university. These two learning methods are most frequently (89%) used by respondents. All respondents in this study have Course WhatsApp Groups for the respective courses that they enrolled in. This effort is normally initiated by the course lecturer to enable dissemination of information, to facilitate discussion, question and answer, comments as well as feedbacks. YouTube is another commonly used online learning methods used by respondents (40.7%). It is easy to use, ubiquitous and allows learner to access it multiple times. As for Google Classroom, only 37.4% of respondents used it, followed by Zoom (34.1%) and Google Meeting (5.5%). None of the respondents have used TED-Talk or TED-Ed as a form of online learning method. The researchers believe that the adoption of the online learning methods above are directly correlated to the course lecturers' preference and personal initiatives. Although blended learning- partial online learning and partial face to face learning- is no longer a novel thing, many lecturers are not properly trained in delivering lessons via online learning methods. Therefore, the use of the online learning methods above is very much a sporadic and personal effort among the lecturers.

Respondents' Readiness for Online Learning in the Five Dimensions

Table 4 presented respondents' means scores and standard deviations on the five dimensions and their respective items. The means scores for each dimension was calculated by identifying the sums of scores for all the items in that dimension, and then divided by the number of items in that dimension. As can be seen in Table 4, the composite mean score for each dimension was between 3.49 and 4.23 on a 6-point Likert scale. This indicates on average, these students expressed slight disagreement to moderate agreement that they are ready for online learning. The highest composite mean score was for computer/internet self-efficacy (4.23) and the lowest being learner control (3.49). The above results revealed that while respondents generally agreed that they are confident in using the internet to find information (4.46, highest mean score), they generally disagreed that they are not distracted by other online activities while learning online (2.63, lowest mean score).

Online Learning Readiness between Gender

One of the research objectives of this paper was to investigate if there were any differences between gender in their readiness for online learning. A Multivariate Analysis of Variance (MANOVA) was conducted and the results revealed there was no significant difference between male and female respondents. This was depicted in Table 5.

Table 4
Item statistics and composite statistics for five dimensions

	Mean	SD
Dimension: Computer/internet self-efficacy	4.23	1.11
I feel confident in performing basic functions of Microsoft Office programs (MSWord, MS Excel, MS Power Point)	4.27	1.38
I feel confident in my knowledge and skills of how to manage software for online learning	3.97	1.24
I feel confident in using the Internet to find information	4.46	1.38
Dimension: Self-directed learning	3.80	1.02
I carry out my own study plan while learning online	3.69	1.21
I seek assistance when facing learning problems	4.31	1.23
I manage my time well while learning online	3.59	1.18
I set up my online learning goals	3.43	1.14
I have a high expectation for my learning performance	3.97	1.37
Dimension: Learner control	3.49	1.02
I can direct my own learning progress while learning online	3.48	1.28
I am not distracted by other online activities (WhatsApp, Insta, FB) while learning online	2.63	1.47
I repeated the online learning materials based on my needs	4.35	1.27
Dimension: Motivation for learning	3.79	1.14
I am open to new ideas when learning online	4.15	1.34
I have motivation to do online learning	3.71	1.27
While learning online, I improve from my previous mistakes	3.59	1.35
I like to share my ideas with ideas others while learning online	3.71	1.24
Dimension: Online communication self-efficacy	3.69	1.15
I feel confident in using online tools to communicate with others	3.92	1.30
I express my thoughts through online text messages/ posting comments	3.71	1.29
I post questions in online discussion	3.42	1.17

Table 5

Descriptive statistics and F test of gender on OLRs dimensions

	Gender				F	P	Partial eta squared
	Male		Female				
	M	SD	M	SD			
Computer/internet self-efficacy	3.92	1.21	4.17	1.09	.710	.402	.008
Self-directed learning	3.72	1.04	3.81	1.02	.122	.727	.001
Learner control	3.46	0.57	3.49	0.63	.034	.854	.000
Motivation for learning	3.83	1.13	3.49	0.63	.026	.873	.000
Online communication self-efficacy	3.70	1.15	3.78	1.17	.006	.939	.000

Online learning Readiness and year of Study

Another MANOVA was done to investigate if there were any difference among students of various year of study and their readiness for online learning. The students were divided into (i) 1st Year, (ii) 2nd Year, (iii) 3rd Year. The analysis, shown in Table 6 revealed that year of study made significant differences in the OLRs ($F = 3.225, p < 0.005$; Wilks' Lambda = 0.743, partial eta squared = 0.161). As depicted in Table 6, a follow up analysis revealed that year of study made significant differences in mean scores for computer & internet self-efficacy ($F=3.64, p < 0.05$), and learner control ($F = 2.47, p < 0.05$). A multiple-comparison analysis showed that 2nd year students rated computer & internet self-efficacy (Scheffe's post hoc analysis, $p < 0.05$) significantly higher compared 1st year and 3rd year students. Third year students however rated learner control (Scheffe's post hoc analysis, $p < 0.05$) significantly higher than 2nd year and 1st year students.

Challenges Faced by Respondents when Learning Online

Apart from investigating respondent's readiness for online learning, another research question asked about the challenges they encountered when learning online. Six choices were given with provision of additional answers to be added by respondents. The results are shown in Table 6. More than 80% of the respondents mentioned the biggest challenge they face when learning online is poor connectivity, be it in campus or at their hostels. This is followed by close to 70% of them who said the next challenge is limited broadband data. Different online learning methods used by respective lecturers is also another major challenge for more than half of the respondents. The other challenges included slow personal computer (42.9%), no personal computer (4.4%) and lack of technical skills in conducting online learning (5.5%). From these findings, it is attested that connectivity and limited broadband data are the two major challenges faced by respondents.

Table 6
Descriptive statistics and F test of year of study on OLRs dimensions

	Year of study 1 st year (1)		2 nd year (2)		3 rd year (3)		F	Partial eta squared	Post hoc analysis
	M	SD	M	SD	M	SD			
Computer/internet self-efficacy	3.74	1.05	4.43	1.03	4.02	1.24	3.64*	.077	(2)>(3)>(1)
Self-directed learning	3.71	1.08	3.74	.89	4.05	1.19	0.78	.018	
Learner control for learning	3.45	.56	3.39	.57	3.75	.76	2.47*	.053	(3)>(2)>(1)
Motivation for learning	3.60	1.10	4.01	1.08	3.63	1.34	1.40	.031	
Online communication self-efficacy	3.54	1.05	3.83	1.22	3.58	1.11	0.66	.015	

Table 6
Challenges faced by respondents while adopting online learning

Challenges	1 st year	2 nd Year	3 rd year	Total	%
Poor connectivity	20	31	22	73	80.2
Limited broadband data	21	23	19	63	69.2
Too many different online learning methods	12	29	11	53	58.2
Slow personal computer	12	16	11	39	42.9
No personal computer	3	1	0	4	4.4
Lack of online learning technical skills and knowledge	4	0	1	5	5.5

When asked about their learning preference, more than 52% of the respondents said they preferred face to face learning, only 3.3% preferred online learning, while the remaining 44.2% preferred a combination of both online and face to face learning. When asked if they would attend online learning training, 83.5% of them said they would. When asked if they would recommend others to do online learning, 68.1% of them said they would.

Discussion and Conclusion

The main aim of this study is to investigate university students' readiness to adopt online learning and the challenges they face in adopting online learning. The findings above have answered the five questions set out to steer the direction of this study.

Type of Online Learning Methods used by Students

The first research question aimed at finding out the different types of online methods used by students. The finding revealed that most of the respondents used i-Learn as the online learning method. This is due to the fact that for some subjects in this university is taught using blended learning method. Students access i-Learn to download notes, learning material, take quizzes, take part in discussion and so on. Other than i-Learn, most of the respondents use WhatsApp as a form of online learning method as well. YouTube, Google Classroom and Zoom are other online learning methods used by respondents. The use of online learning methods is not uniform among the students. This could be due to the fact that the i-Learn platform is not appealing and user-friendly compare to other platforms such as Google Classroom. Also the use of WhatsApp is way more convenient. Above all, the choice of online methods are determined by the lecturers preference and their own personal initiatives.

Student' Readiness Scores based on the Five Dimensions of OLRS

The students' mean score for the five dimensions on OLRS are between 3.49 and 4.23, this falls between slightly disagree and moderately agree. They are within, and higher than the theoretical mean of 3.5 The finding shows that the students in this university has the highest level of readiness in the dimension of computer & internet self-efficacy, followed by self-directed learning and motivation for learning, and the lowest are online communication self-efficacy and leaner control.

From this result, it can be interpreted that students in this study are relatively confident in their skills in using computer & internet in order to learn online. In other words, university students these days are generally proficient in using technology due to their exposure to technology-rich environments (Jones, 2012). These skills include searching for information online, performing basic functions on MS Excel, MS PowerPoint and MS Word, as well as managing online learning software. These are important skills to be had to enhance students' readiness for online learning (Hung et al., 2010).

For the dimension of self-directed learning, which is a crucial part of online learning, respondents in this study revealed that they seek assistance when facing problems while learning online. They also have high expectation for their learning performance. While they carry out their own study plan while learning online, they could manage their time we well. However, they don't seem to be able to set up online learning goals.

As for motivation for learning, respondents generally agreed that they are open to new ideas when learning online. They are also motivated to do online learning, they like to share ideas with others while learning online and they improve from previous mistakes when learning online. This finding is supported by Schunk & Usher (2012), that learner motivation is not only important, it can also influence what we learn, how we learn and when we choose to learn.

Respondents in this study have shown lower means scores for online communication self-efficacy compare to the other three dimensions. Although they are confident in using online tools to

communicate with others and express their thoughts online, they don't usually post questions in online discussion. This is supported by findings by Hung et al. (2010), McVay, (2000, 2001), Salaberry (2000), Roper (2007) that suggested that students who have better online communication self-efficacy are generally comfortable in expressing themselves in writing. The lower mean score for online communication self-efficacy in this study suggested that the respondents are not exactly ready for online learning. The lack of questioning is a common phenomenon even in face to face learning in this university. Students in this university rarely ask questions during lectures even when they do not understand the content of the lesson. Perhaps this is due to their apprehension of being a laughing stock or be seen as not intelligent by their peers. They tend to sit around waiting for answers to be given or fed to them, a typical spoon-feeding culture.

Finally, for learners' control dimension, the mean score is the lowest among the five dimensions. Respondents agreed they repeated online learning material based on their needs, however they cannot direct their own learning progress while learning online. Most importantly, they are often distracted by other online activities while learning online. This perhaps is the biggest challenge of online learning among learner. This finding is similar to Hung et al (2010). There is no doubt that students will have to figure out an effective way to avoid themselves from being distracted by other online activities while learning online (Coates, 2006).

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, persistence and creativity (Ryan & Deci, 2000b). Given the important reciprocal relationship 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). Despite this, studies that explore motivation to learn in online contexts are limited in both number and scope, as others have noted (Bekele, 2010)

Gender and year of Study Differences in Students' Readiness

The results in this study show no significant differences in gender when it comes to online learning readiness. To put in plainly, whether it is computer & internet self-efficacy, self-directed learning, learner control, motivation for learning or online communication self-efficacy, both male and female exhibited no significant difference in terms of attitudes and behaviours in these dimensions. These findings are similar to those found by Atkinson & Blankenship (2009), and Hung et al. (2010). This finding is, however, contradicts those of Caspi, Chajuta and Saportaa (2008) where it is posited that male prefer less of written communication compared to female.

In terms of differences displayed by students of different year of study, it was found that year of study among the respondents showed some significant differences in their readiness for online learning. The post hoc test revealed that 2nd year students exhibited significantly greater readiness in the dimension of computer & internet self-efficacy compare to the other two cohorts of students. This means that 2nd year students are more confident in using technology to

complete their online learning. This finding is different compare to the findings by Hung et al.(2010) where there were no significant differences among the three groups at all. As for the learner control dimension, 3rd year students have shown significantly greater readiness compare to students from 2nd year and 1st year. This finding is supported by Hung et al., (2010) and implies that students' age or maturity plays a significant role in determining learners' control. As for the other three dimensions, namely self-directed learning, motivation for learning, and online communication self-efficacy, year of study does not show any significant difference in these dimensions. This shows that they have the same level of readiness for self-directed learning, motivation for online learning and online communication self-efficacy regardless of their age.

Challenges Faced by Students while Engaged in Online Learning

This study found that most of the respondents faced internet infrastructure problems when it comes to online learning. These problems revolve around poor and unstable connectivity, as well as limited broadband mobile data beyond what students can afford. Various reports (eg. The Rakyat Post, 2020; The Sunday Daily, 2020) have highlighted significant latency or speed issue that affects internet users. This internet connectivity problem would continue to be a major obstacle in online learning for years to come until and unless more investment is poured into improving this infrastructure. Other challenges faced by students are too many variation of online teaching method used by different lecturers and slow personal computer that makes online learning less than favourable.

Implications and Suggestions

From the findings and discussions above, in order to help students to be more ready for online learning, online communication self-efficacy and learner control needs to be given attention. Firstly, online communication self-efficacy, lecturers need to encourage students to express their thoughts and post questions more frequently in online discussion. As students in this university and in public university in generally are passive learners even in face to face learning, lecturers may need to provide some sort of rewards system or positive reinforcements for students to communicate during online learning. It can be done in such a way that part of the ongoing assessment to include expressing their opinions and posting questions online. This will also allow other students to respond to the questions thus online discussions can be built on from there. The more students are exposed and open to online communication, the more confident they will become. Lecturers' also need to be committed to spend time to respond, commend and comments on students' post.

As for learner control, in order to assist 1st year students who seemed to be distracted by other online activities while learning online, it is recommended that lecturers use distributed learning by breaking down long lectures to several online sessions, with short breaks in between. Another method is to incorporate short quiz at the end of each online learning session. This quiz needs to be made known to the students at the beginning of an online learning lesson. This will ensure students are more disciplined an focussed while learning online.

Apart from identifying online learning readiness among the respondents, this study has also identified the challenges they face. It was found that the major challenge is related to connectivity. Being the biggest state in Malaysia, internet connectivity is an infrastructural problem, especially to those who live in rural areas. This digital divide means more and more students in the rural areas will be left out from the mainstream education and development. Although the MCO will come to an end late April 2020 (at the time of writing), this university will commence full online learning starting 14 April 2020. To what extent will the rural students who have gone home to their hometown at the start of the MCO be able to cope with full online learning remain a question mark. Therefore, this responsibility falls heavily on the lecturers' shoulder to identify students who have internet connectivity issues, and provide suggestions and guidance to assist them as much as possible. Another initiative telecommunication companies can provide is free and unlimited mobile internet data to all students during this period of MCO.

Limitations and Recommendations for Future Research

This study has several limitations which could be explored further in future research. Firstly, this study involves only less than 100 students from three different program studies at one branch of a university in Malaysia. Future research could look into seeking more respondents so that the findings and results can be generalised to the wider community in this branch campus. Future studies could also look into the possibility of collecting data from the whole university and all public universities in Malaysia. Secondly, this study has identified student readiness for online learning and the challenges they faced. Future studies could look into similar topics among the lecturers as well as the institutions of higher learning in terms of infrastructure and facilities. It is also recommended that future studies look into students' academic achievement while using online learning compared to the traditional face to face learning. Finally, a follow up study could also be carried out after three or four weeks of full online learning have commenced to investigate if there are any changes to the student's readiness for online learning.

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