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STUDENTS' READINESS AND CHALLENGES ON ONLINE LEARNING DURING COVID-19 PANDEMIC

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Abstract:

The purpose of this paper is to examine the readiness on online learning during COVID-19 pandemic based on the conceptual frameworks adapted from Stauffer (2020), Butnaru et al. (2021), and (John Lemay et al., 2021). It is mainly quantitative in nature alongside some quantitative data. It examines the students' readiness of shifting from the face-to-face teaching and learning to online learning. They are also asked to provide their experience of accessing online learning. The research data was collected at a local university in Malaysia through a survey comprises 71 student respondents and an interview with 10 student interviewees. The results of the research show that i) the students were excelled in computer skills but unfamiliar to the online platform; ii) students were satisfied with the internet network support quality; iii) few students used mono type online device to access online learning; iv) students did not have previous experience on online learning during high school and the students felt anxious before and during accessing online learning. The findings further reveal that the internet network support provided in the country is the factor of some students unable to access the online learning smoothly, they used more than one type of online device to access the online learning and felt anxiety on the disconnection of internet might affect their performance in assessments and presentation evaluation. The telcos are suggested to accelerate the upgrade of their internet network support quality in order to facilitate the success of the National 4IR policy in the country.

Keywords:

Readiness, Online Learning, Internet Network Support, Computer Literacy, Anxiety

Introduction

The COVID-19 catalysed the change of educational practice. All the education institutions on the globe were forced to make rapid changes in delivery methods of educational contents (Watson et al., 2023). The Malaysian Ministry of Higher Education specifically instructed all the higher educational institutions in the country shifted the teaching and learning mode from face-to-face to online because of the emergency closure of campuses in Malaysia. The stakeholders of the institutions were forced to work from home. Using ICT is one of the solutions enable the continuation of the teaching and learning from home (Leli Efriana, 2021). Therefore, the online learning or the teaching and learning using the information and communication technology or the ICT became the prima donna approach used in the education sector to prevent the disruption of academic delivery. This practice has changed the physical teaching and learning classroom into online learning during the COVID-19 pandemic (Mustafa Çevik & Büşra Bakioğlu, 2021)

Ferri et al. (2020) suggested rapid change in the delivery methods is in dire needed to support the continuation and progress of the learners' academic performance during the COVID-19 pandemic. However, the readiness of the stakeholders to change, understand the need to change and achieving the desired change is important (Halilaj, 2023). This study is aimed to investigate how far the higher educational stakeholders specifically the university students being prepared for the alternative learning method i.e. the shifting of face-to-face teaching and learning to online learning, and how did they cope with the changes in the reality during the COVID-19 pandemic.

The findings can help the parties concerned for example, the institution to identify the major limitations in making online learning effective for their students. The findings can also contribute new knowledge to the existing literature relating to online learning among students during COVID-19 pandemic period. In relation to the purposes of the study as explained above, the present study attempts to answer the following research questions:

- 1) Were the students ready with the transition from face-to-face teaching and learning to the online mode during the COVID-19 pandemic period?
- 2) What were the challenges that online learning produced during the COVID-19 pandemic?
- 3) What are the solutions taken by the students to resolve the challenges?

Literature Review

Various researchers have defined online learning differently. Nguyan (2015) proposed that online learning evolved from the distance education, it is also a form of distance learning. The online learning is used to transfer the set educational goal and to deliver the design teaching and learning materials through online in the academic environment (Olszewska, 2020).

In addition, other researcher, Stauffer (2020) added that the internet network support and online device/s are the general necessities required by the instructors and the learners to log in the online learning. This is because Heng and Sol (2021) proposed that using outdated online device or using unsuitable device (Zulaikha Mohd Besar et al., 2021) are the general constraint of the students to access the online learning.

Furthermore, the users' familiarity with the online communication and their computer skills are also essential (Butnaru et al., 2021). These included the teachers' skill and knowledge in developing, using the online tools and their teaching materials in online learning (Prestiadi et al., 2020). Therefore, the online learning is closely related to the computer literacy and computer affordability of both the teachers and the students.

Butnaru et al. (2021) added that the students' 'accessibility and motivation are the important keys to success of online learning. The students' nature or the interest of the students should not be ignored (Indri Eka Pertiwi & Pupung Purnawarman, 2023). The students' engagement in the online learning and their involvement in the self-directed learning (Prestiadi et al., 2020) are also important. Furthermore, the attitude of the teachers and students towards online learning may influence the effectiveness of online learning (Liaw et al., 2007).

During the COVID-19 pandemic, the use of different online technology platforms such as the WhatsApp, Google Meet enabled the instructors to conduct the technology mediated virtual "face-to-face" interaction during synchronous e-learning. It is very challenging for the teachers and students to adapt to the rapid change and creation of the new learning technologies (Halilaj, 2023). The students encountered a higher incidence of stress or anxious emotions and even they are excited at the prospect of moving to online learning should be taken note (John Lemay et al., 2021).

Methodology

The present study applied the mixed methods approach i.e. both the qualitative and quantitative. In the quantitative research approach, a survey was used while in the qualitative research approach, unstructured interviews which generate qualitative data through the use of open questions was carried out. However, the study is mainly quantitative in nature.

Quantitative Data

Prior to the interview, the university students are asked to indicate their readiness to join online learning before and after entering the university on the Google form. The student respondents' computer literacy, the quality of internet connection service provided by the telcos (telecommunication companies) at their hometown, the device the student respondents used to log in the online learning and the stress emotions on online learning are asked. Frequency and percentage of the survey are analysed and tabulated.

Qualitative Data

The present study opts for qualitative research method alongside the quantitative one. To obtain the qualitative data, an interview was carried out to obtain insight into the university students' experience on the online learning. The question was formulated to suit to the respondents' context and the objective of the study.

In the interview, students are asked to provide their response to the following questions:

- (i) What were the challenges that online learning produced during the COVID-19 pandemic?
- (ii) Are the problems resolved? How?

Participants And Recruitment

The undergraduate students at a local university in Malaysia were recruited for a survey from a purposive sample. The purposive sample comprises firstly, students study language courses and who are in their first semester and first year of study (so that they have at least some online

learning experiences in the campus through the university's learning management system prior to the unprecedented COVID-19 pandemic). The purposive sample consists of 71 respondents who have volunteered to answer a questionnaire relating to their readiness to online learning. In addition, the interview data contributed by the 10 interviewees (n=10) who have been randomly selected from these 71 student respondents provided the challenges they encountered during their online learning during the COVID-19 pandemic in Malaysia.

The researcher carried out the interview via Google Meet. Using Google Meet platform, the researcher conducted and recorded the interview with the interviewees' consent. In order to maintain confidentiality of the participants, the present study does not reveal the student respondents' names. The data was transcribed, analysed and coded.

As noted earlier, prior to the interview, the 71 student participants were asked to examine their computer literacy, the internet connection service quality provided by the telcos in their hometown and their experience of attending the online learning during their high school level i.e. before they join the university study to reflect their readiness for the online learning. Based on the respondents' answers on the forms, the quantitative data consisting of number/frequencies and percentages of participants reflecting their readiness towards online learning before joining the university and their experience when attending the online learning in the university.

Considering the respondents' online learning experience includes both live and self-pace learning, the present study defines online learning as learning that uses online platforms in the form of both synchronous (live interaction) and asynchronous (self- pace learning).

Conceptual Frameworks

The conceptual framework for this research is adapted Stauffer's (2020) importance of internet network support and online device, the students' familiarity with the online communication and their computer skills (Butnaru et al., 2021) and the feeling of anxiety of the students (John Lemay et al., 2021) to reflect Halilaj's (2023) students' readiness to change during the COVID-19 pandemic.

Results

Student Respondents' Familiarity With Online Communication And Computer Skills

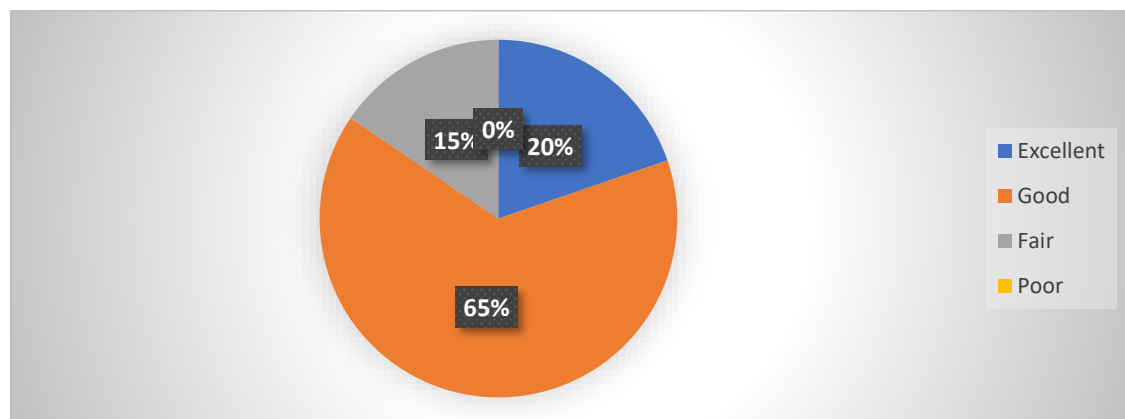


Figure 1: Student Respondent's Computer Literacy

The student respondents were requested to self-assess their computer literacy whether is “excellent”, “good”, “fair” or “poor” in the survey. The result shows none of the student respondents rated their computer literacy as “poor”. 85 percent of the student respondents rated themselves as good to excel in computer skills and are familiar with the online communication. In addition, there are 15 percent of them possess “fair” computer literacy (Figure 1).

Quality Of Internet Network Support Provided By The Telcos



Figure 2: The Internet Network Support Quality Provided By The Telcos

The student respondents are satisfied with the internet network support quality provided by the telcos. About 75 percent of them rated the internet connection quality at their hometown was “good” to “excellent”. In addition, none of them rated the quality as “poor”. The other 25 percent of the student respondents agreed that the telcos provided “fair” quality of internet connection to support their online learning (Figure 2).

The Online Device Used By Student Respondents To Access The Online Learning

In the survey, the university respondents were given three options to indicate the online device they used for their online learning. The options were the desktop, the laptop (included the tablet) and the smartphone. Furthermore, the student respondents were allowed to choose multiple answers.

As shown in Figure 3, all the three options of online device were practised by the student respondents. They used the laptop, the smartphone and the desktop to access the online learning. The laptop is the most used online device followed by the smartphone. The desktop is the least used online device by the student respondents. There are 66 student respondents used the laptop and 57 of them used the smartphone while three of them used the desktop.

There are 17 student respondents who used mono type of online device to access the online learning or the other 54 of them used minimum two types of online device to access the online learning. There are only two student respondents used the desktop only, three of them used the smartphone only and twelve of them used the laptop only. However, there is one of the 71 student respondents used all the three types of online device to access their online learning. Furthermore, 53 of them use two types of online device which are the laptop and the smartphone at the same time when accessing their online learning.

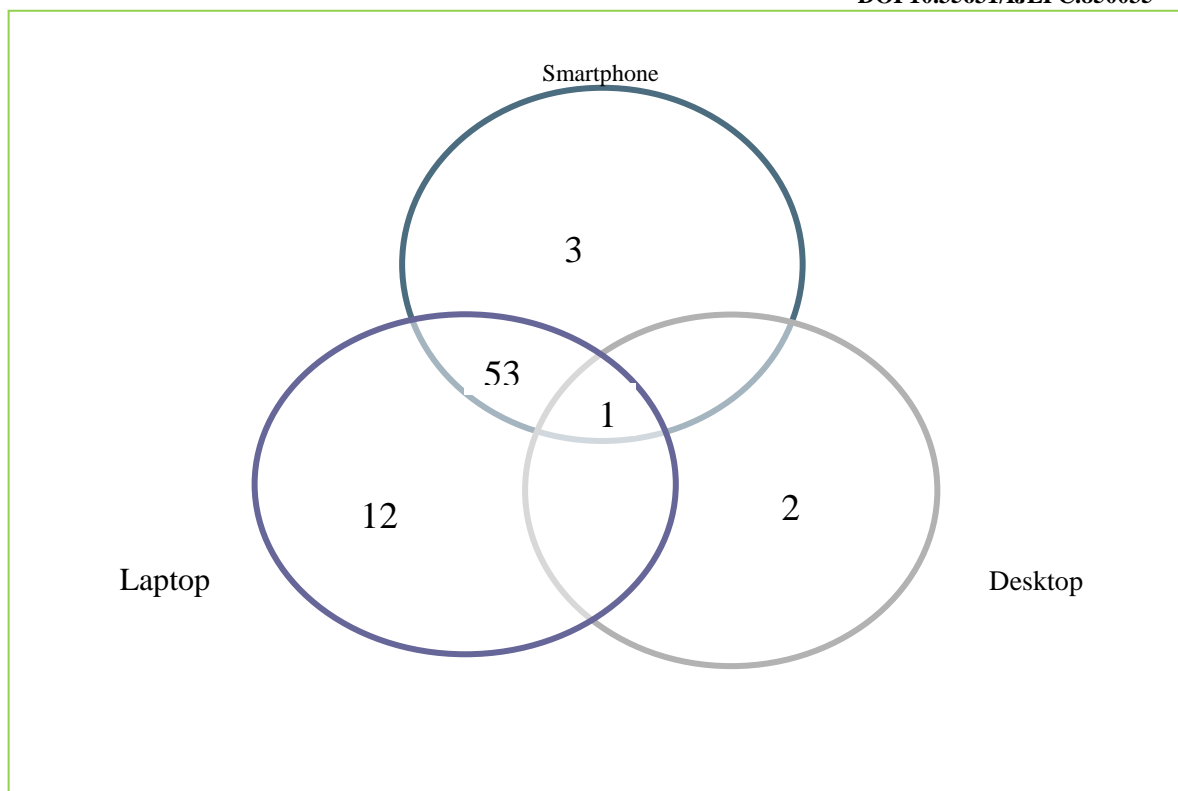


Figure 3: The Device Used By The Respondent For Online Learning

Previous Experience In Online Learning

The study shows most of the student respondents did not have any previous experience in accessing on online learning prior to the tertiary education. Table 1 shows the statistics of the student respondents' previous experience in online learning specifically during their high school level.

Table 1: The Student Respondents' Online Learning Experience

	Frequency	Percentage
Strongly Disagree	36	50.70
Disagree	29	40.85
Neutral	1	1.41
Agree	4	5.63
Strongly Agree	1	1.41
Total:	71	100.00

There is more than 90 percent of the student respondents have no previous experience on attending the online learning before recruited in the university study. On the other hand, there is less than 10 percent or six student respondents accessed the online mode during their secondary or high school study. In addition, there is one out of the six student respondents who have previous experience in online mode opted to be neutral about his/her previous experience in online learning.

Feeling Of Anxiety Towards Online Learning

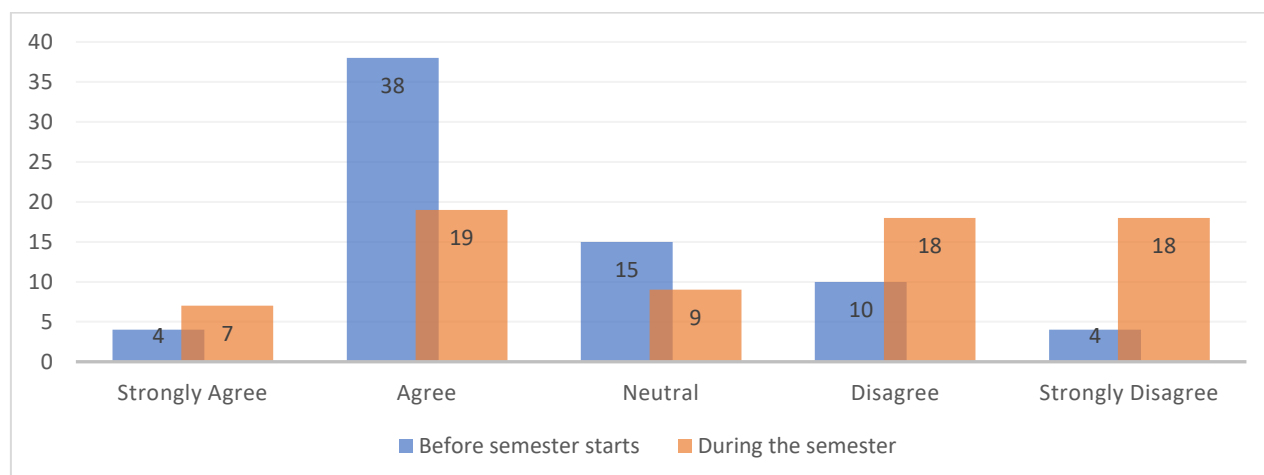


Figure 4: Student Respondents' Anxiety On Online Learning

The student respondents reflected their feeling of anxious towards online learning in the survey. The student respondents were asked how far they agree with they felt anxious to the online learning before the academic semester started and during the academic semester in the study (Figure 4).

For before the academic semester started, more than half of the student respondents agreed to strongly agreed that they felt anxious to have online learning. Thirty-eight and four of them are “agree” and “strongly agree” respectively. There is about twenty percent of the student respondents had the confident that they were competent to access the online learning. They are “disagree” to “strongly disagree” that they have the feeling of worry to join the online learning. However, there is about a quarter of the student respondents preferred to be neutral about their feeling towards the online learning.

The feeling of anxiety of the student respondents towards online learning during the academic semester was also investigated. The finding shows there is a change of the level of agreement about the feeling of anxiety towards online learning during the academic semester. The figure above shows there is a decrease of student respondents who were anxious for the online learning. That is, lesser number of student respondents who were “agree” and “neutral”. In addition, there are more student respondents who were “disagree” and “strongly disagree” that they had anxious emotion on online learning during the academic semester.

However, there is an exceptional situation. The number of student respondents who “strongly agree” that they were anxious for online learning increased from four before the academic semester started to seven during the academic semester.

The qualitative data collected through the interview sessions in the study will be presented in next section as the supportive information in the discussion section.

Discussion

This paper attempts to investigate the readiness of the university students to face the change of teaching and learning mode shifting from face-to-face teaching and learning to online learning, based on their experience during the COVID-19 pandemic in Malaysia. In this paper, the

findings therefore attempt to answer research questions as stated earlier in the introduction section.

In this regard, the research shows that student respondents demonstrated they have self-confident of being competent in using computer to access the online learning. 85 percent of them were having good and excellent computer competency. Furthermore, for the group of student respondents who rated themselves having fair computer literacy, they were fair because of not competent in operating the online technology platforms to access the online learning which is proposed by Butnaru et al (2021) that the students' familiarity with the online communication is important to make the teaching and learning effective. As mentioned by the interviewees, "I am a bit confused with how to use the Zoom by the beginning because I am new to it but, it was not really a problem.", "I am a bit confused with the Google meet and Webex system.", "I do not know certain functions in the Zoom which is the platform that was used for online learning." and more. This shows the students need special training and supportive knowledge in operating the online technology platforms before joining the online learning.

The research finding is indicative that Malaysian telecommunication companies have provided satisfactory internet network support to equip the students to join the online learning. Three quarter of the student respondents rated the internet network support quality as "good" to "excellent". However, the interviewees who rated the internet network support quality as "fair" shared their experience about during online learning as "the unstable internet connection caused the audio and video lagging.", "when in a heavy rain, the internet connection will slow down.", "sometimes, the connection suddenly cut off during raining day.", "limited line/signal at my area". These indirectly reflected the variant of internet network support quality provided by the telcos in the country. The disconnection of internet network would interrupt the continuation of the online learning. However, the interviewees added that "I tried my best to find the best spot which was closed to my place.", "I went to my cousin's house.", "I went to the mosque to get better internet connection.". This challenge catalysed the mobility of the students to look for a better internet connection spot for their online learning. Furthermore, there is student who had to accept the fact negatively as "nothing can be done, just let it be because it is the line problem.". This disrupted the ongoing of online learning during the COVID-19 pandemic.

Another challenge which caused by the internet network support quality is different types of online device required by the students to access on online learning. One of the reasons why the 53 students had to use two types of online device named the laptop and the smartphone was the internet network provided unable to support them to access the online learning smoothly. "I have to connect by using the cellular.", "I will connect to my mobile network.", "If my Unifi (an internet service provider which offer internet access) created problem, I'll use the Celcom or Maxis data (names of mobile data).". These showed the internet network support quality disrupted the continuation of the online learning and the students had to look for other ways such as using additional online device for the purpose accessing their online learning.

Some of the students felt anxious on online learning before the academic semester started. The anxiety which was caused by the students' computer competency and had no experience of online learning during their high school time could be solved by "learned how to use the Zoom meeting by myself or through Youtube." or "asked my friend how to present the slides.".

Furthermore, the internet network support was also one of the causes of anxiety among the students. They felt anxious because “I was very worried about my internet communication that sometimes has problem.”, “My internet connection is unstable.”, “I felt scared that I will lose my internet connection during the online class especially during test or presentation.”, “Worry about internet connect problems.”, “I am okay with online class but my poor internet connection made it hard.”. However, the challenge could not be solved by some students who were less affordable. On the other hand, the main objective of shifting from face-to-face teaching to online learning was not achieve.

Conclusion

This paper attempts to investigate the university students’ readiness and challenges on online learning during the COVID-19 pandemic period. The measures taken by the students to solve the challenges during their access on online learning also explored. The main finding of this paper is that the weak internet network support provided by the telcos in the country caused challenges of students unable to access the online learning smoothly, students had to use more than one types of online device to ensure the continuation of access on online learning and feeling anxiety by the students when accessing the online learning might disrupted.

This research further shows that the students had taken the initiative to upgrade their competent to operate the online technology platform through learning from friends, Youtube and other resources. They were also mobile to different spots which provide strong internet connection to access on online learning. In addition, they also shift between the home internet access and the mobile data to enable the online learning was accessible. The present findings also show the upgrade of the internet network support quality provided by the telcos is in dire need to be accelerated not only during COVID-19 pandemic, post COVID-19 for online learning. It is important for facilitating the success of National 4IR policy in the country. Future studies that include a bigger sample size are suggested in order to obtain more comprehensive findings. In addition, future studies can extend the present study by looking into the different factors that influence university students’ readiness to learn online learning.

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Conflict of Interests

The authors reported no conflicts of interest for this work and declare that there is no potential conflict of interest with respect to the research, authorship, or publication of this article.

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