

Impeding Factors Towards the Effectiveness of Online Learning During Covid-19 Pandemic among Social Sciences Students

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Received: October 14, 2020 Accepted: October 30, 2020 Published: November 7, 2020

doi:10.5296/ijld.v10i4.17921 URL: <https://doi.org/10.5296/ijld.v10i4.17921>

Abstract

During the COVID-19 pandemic, higher learning institutions switched from the traditional face-to-face teaching method to online based teaching. Even though the country is facing crisis due to the pandemic, teaching can still be conducted through online platform. It offers flexibility to both students and academicians. However, online learning is believed to reduce the students' motivation, performance and lead to mental health problems. To reduce these issues, this study was conducted to determine the impeding factors towards the effectiveness

of online learning. The respondents consists of 267 social sciences students. Three impeding factors were discussed which are accessibility, social and academician capability factor. The descriptive findings determined that accessibility factor was the main impeding factor towards the effectiveness of online learning. Thus, the roles of government, university and telecommunication firm are important to reduce the issues of internet access, internet data cost and lack of technology devices. Consequently, the students' motivation and performance during online learning can be enhanced.

Keywords: Impeding factors, online learning, internet, COVID-19

1. Introduction

Since December 2019, the world has been attacked by Coronavirus or also known as COVID-19. The COVID-19 affected not only the economy sector but also gave a big impact on the higher education sector. In order to avoid the spread of the COVID-19, in Malaysia, the government introduced Movement Control Order (MCO) to encourage the citizen including students to stay at home. Some guidelines introduced by the Government such as social distancing, avoid public gathering and temporarily close educational institutions. The higher learning institutions also need to revise and shift the learning process to ensure that subjects can be delivered during this crisis. The traditional face-to-face learning was switched to online distance learning mode. Online platforms and applications were used by lecturers to deliver the subjects. As indicated by Rajhans, Memon, Patil and Goyal (2020), live video conference, online application and social media were some of the famous platforms used to conduct the online learning.

The online learning provides some benefits to the academicians and the students. As reported by a study based on academicians' perspective, the online learning is easy, convenient and flexible to conduct. The class can be delivered during the lockdown and the process of learning can be conducted everywhere (Rajhans et al., 2020). It also helps to reduce the education cost such as accommodation and travelling expenses. The lecturers also have the flexibility to manage and schedule the online class to complete the syllabus (Dhawan,2020). In constant, the online learning also leads to negative effects on the students' motivation and performance. Based on Abbasi, Ayoob, Malik and Memon (2020) the students had negative perception towards online learning. Most of the students preferred face-to-face learning compared to the online learning. Aboagye, Yawson and Appiah (2020) also supported that the students were not ready to adapt and lack of motivation during online learning. A study conducted in Malaysia by Allam, Hassan, Mohideen, Ramlan and Kamal (2020) confirmed that the students lack of motivation during online learning. Besides, mental health issue among the learners is one of the serious effects discussed by previous studies. The studies stated that the level of stress increased and some of the students were diagnosed with anxiety and depression due to online learning during COVID-19 pandemic. This was supported by Rajab, Gazal and Alkattan (2020) almost half of the students indicated that mental health issues such as anxiety and stress as challenges for them during online learning. As mentioned by Tanveer, Bhaumik, Hassan and Haq (2020) the level of stress increased due to the students fear of losing marks. The students sometimes did not manage to submit the assignments due to internet coverage issues.

In order to avoid or reduce the negative effects and enhance the students' motivation and performance, this study was conducted to investigate the impeding factors which lead to ineffective online learning during COVID-19 pandemic era. Because COVID-19 pandemic is still new to the world, the study based on students' perspective on the impeding factors towards effective online learning in Malaysia is limited. By understanding the impeding factors faced by the students, it helps the academician and universities to improve the existing teaching method, thus it helps to enhance the student motivation and performance. As pointed out by Andersson (2008), the result will educate the researchers and related institutions on the important factors that should be given more attention to when designing online learning.

2. Literature review

Based on reviews from previous studies, this study divides the impeding factors into three important variables which are social (Gilbert, 2015; Aboagye et al., 2020), accessibility (Sarvestani, Mohammadi, Afshin, & Raeisy, 2019; Gilbert, 2015, Mathew & Iloanya, 2016, Aboagye et al., 2020) and academician capability (Aboagye et al., 2020) faced by the students during online learning.

Social factor refers to the limit of interaction among the students. Normally, the students have strong interaction or communication with their classmates to discuss on any matters and complete their group discussion. During online learning, they are physically separate, have no face-to-face communication and lack of interaction between the students and lecturers (Sarvestani et al., 2019). This was supported by Gilbert (2015) whereby he stated that the students mentioned they did not meet and talk with the lecturer, and also lack of communication among the classmates. Dhawan (2020) indicated this as a personal intention issue, where in online learning it is difficult to conduct a two-way communication as wished by the students. However, a study based on academicians' perspective also believed that communication is a challenge in online learning. Lack of face-to-face communication leads to difficulty for the academicians to acknowledge the students' understanding and performance due to no eye contact and also having difficulty to read their body language (Rajhans et al., 2020). Mukhtar, Javed, Arooj, and Seth (2020) highlighted on the lack of students' feedback which lead to difficulty for the academicians to determine the students' understanding on the subjects. Two-way interaction between the academicians and students was important for an effective learning process. Communication as a challenge faced by the students during online learning was supported by a study conducted by Rajab et al. (2020). The study determined that more than half of the medical students in Arab Saudi agreed that communication as one of the challenges of online learning during COVID-19 pandemic. Gilbert (2015) indicated that in online learning the respondents need to be more independent, less interaction and feel isolated. The respondents need to study with minimum guidance from the lecturer compared to the face to face learning. More than 80 percent of students believed that they have lack of interaction with the lecturer and feel isolated during online learning (Abbasi et al., 2020).

Meanwhile, the accessibility factor is one of impeding factors due to limitation to internet access (Dube. 2020; Tanveer et al., 2020; Dhawan, 2020; Sarvestani et al., 2019), lack of technology devices (Dube, 2020) and the internet data is expensive (Dube, 2020). As

mentioned by Adedoyin and Soykan (2020) online learning depends on the technology devices and internet accessibility, without both elements it is difficult for the students and lecturers to implement this teaching method. As confirmed by Rapanta, Botturi, Goodyear, Guardia and Koole (2020) the accessibility towards the internet, software and devices were the important factors for establishing an effective online learning.

A study conducted by Dube (2020), in South Africa, the students and lecturers in the rural areas faced problem with the internet coverage, lack of devices, gadgets and the cost of internet data is high. Normally, students in rural area depend on cyber cafe to access the internet. However, due to lockdown all internet cafes were closed, thus it is difficult for them to attend the online class. In addition, COVID-19 also affects the family income. Some of their parents lost their job and monthly income. This made it more difficult for them to buy the internet data due to shortage of money. In addition, some students did not have the technology devices such as computer, laptop or smart phone, thus shifted to online learning is a challenge for them (Dube, 2020; Tanveer et al., 2020). A study by Andersson (2008) conducting in developing country supported that students located in rural area faced the issue of infrastructure and internet accessibility. The respondents did not have problem on devices, all have their own personal computer but in the rural area the internet speed is the critical issue. In Malaysia, the same scenario was recorded where the population in rural area still have issues on computer illiterate (Anuwar, 2004). It affects the introduction and implementation of online learning among students in rural area.

Dhawan (2020) explained that the technology difficulty is normally related to a few issues faced by the academicians or students such as error in installation, download, login, password, problem regarding audio and video that leads to ineffective learning process. Sarvestani et al. (2019) pointed out that instead of infrastructure and technology, students also faced the limitation on software and hardware which is the main requirement for online learning. Analysis conducted among students by Aboagye et al. (2020) in Ghana determined that accessibility is the main challenge faced by them during online learning. Apart from that, other issues were also discussed by them such as lack of technology and devices, browsers issues, internet coverage and high cost of internet data. The result indicated the high cost of internet data as the biggest challenge among the students with the highest mean score.

A study among postgraduate students in Saudi Arabia revealed that students were absent during online class due to internet coverage issue. Poor internet access leads to difficulty for the students to attend the class and sometimes they missed the class discussion. Moreover, most of the students explained that they preferred the face-to-face teaching because it easier for them to ask questions and get the answers on the spot (Tanveer et al., 2020). Due to poor internet accessibility, the students take longer time to download the teaching materials which eventually leads to emotional effects on the students such as boredom and frustration (Anuwar, 2004).

To conduct an effective online learning, the academicians' capability is one of the crucial factors. The academicians should be well prepared to adapt to the new teaching method. Previous studies showed that low quality of online materials, lack of clear learning expectation from lecturer, lecturer not well trained and lack of assistance by the lecturer in

lesson deliveries as some of impeding factors for effective online learning. Aboagye et al. (2020) acknowledged academicians' capability as one of the challenges in online learning however this factor was not important if compared to accessibility and social factors. Nevertheless, the students indicated that they frequently faced the issue of lack of clear learning expectation and instruction by the lecturer. Thus, it is difficult for them to understand and perform the task or instruction given by the lecturer.

A study by Rapanta et al. (2020) indicated that lecturers should have good communication skill. It helps to increase the students understanding on the lecturers' instruction. Therefore, the students can easily understanding the reason why they need to perform a task and do it correctly. Besides, lecturers also need to be a good listener to the students in order to create an effective online learning. Instead of personal skills, the lecturer also should comply with technical or technology skills to handle the online learning. According to Dube (2020), lecturer in the rural area lack of skill in using the technology or online learning application which affects on the students during the learning process. Bao (2020) mentioned that the faculty is not well trained to handle the online learning during COVID-19. Thus, the role of teaching assistant is important to provide support and consultation for effective learning. In constant, the result showed that lecturers have capabilities in conducting online learning. Most of the students mentioned that the lecturers were well prepared, helpful and friendly during the online class however, the respondents acknowledged internet coverage as the main factor impeding the effectiveness of online learning. To conduct the online learning, the internet data should be large and the connectivity should be stable, thus the process of learning can be implemented smoothly (Gohiya & Gohiya, 2020).

3. Research Methodology

This study was conducted among social sciences students at one public university located in Johor, Malaysia. The number of respondents involved in this study was 267 respondents. This is a cross-sectional study, where the survey questionnaires were distributed through online survey in September 2020. The questionnaire was divided into two sections, which were demographics and impeding factor section. For impeding factor section, the questions were adapted from Aboagye et al. (2020). The SPSS was used to analyze the data and the descriptive analysis (frequency and mean analysis) were conducted to answer the research objective. The level of acceptance based on the range mean discussed by Allam et al. (2020).

Table 1. Mean range score

Acceptance level	Mean score
Low	1.00 - 2.33
Medium	2.34 - 3.67
High	3.68 - 5.00

4. Result

Table 2 showed the demographic details of respondents involved in this study. The respondents consist of 72.70% female students and 27.30% male students. Most of them aged between 17-22 years old (97.80%), only 6 students (2.20%) aged between 23-28 years old. All of the respondents were diploma level students from Faculty of Business and Management (86.90%), Faculty of Accountancy (6.4%) and Faculty of Information Management (6.70%). More than half of the respondents came from B40 background (58.40%), followed by M40 (34.10%) and T20 (7.50%). 174 students were town residence which represent 65.20% of total respondents, 58 (21.70%) respondents from sub urban and 35 (13.10%) of students from rural area.

Table 2. Demographic Statistics (N=267)

	Demographic	Frequency	Percentage
Gender	Male	73	27.30
	Female	194	72.70
Age group	17-22 years	261	97.80
	23-28 years	6	2.20
Program level	Diploma	267	100
Faculty	Faculty of Business and Management	232	86.90
	Faculty of Accountancy	17	6.40
	Faculty of Information Management	18	6.70
Family income range	B40 (< RM4849)	156	58.40
	M40 (RM4850 - RM10959)	91	34.10
	T20 (RM10961 and above)	20	7.50
Current area residence	Town	174	65.20
	Sub urban	58	21.70
	Rural area	35	13.10

In this study, internal consistency reliability of the variable was assessed using Cronbach's

coefficient alpha. Table 3 presented the Cronbach coefficient alpha result for different impeding factors that affected the effectiveness of online learning during COVID-19 pandemic. The result showed that all factors received the Cronbach coefficient alpha more than 0.60. Besides, the Cronbach coefficient alpha for the overall factors was 0.886, it was considered as good. It explained that the research instrument is reliable to the context of study.

Table 3. Cronbach's coefficient alpha of the impeding factors towards the effectiveness of online learning

Impeding Factors	No of items	Cronbach's Alpha
Social factor	3 items	0.696
Academician capability factor	4 items	0.851
Accessibility factor	3 items	0.830
Impeding factors (total)	10 items	0.886

Table 4 presented the mean analysis on different demographics towards three types of impeding factors. Based on the result, female students believed that accessibility factor as the main impeding factors meanwhile male students score more on social factors (Mean, 3.539). Besides, B40 also indicated accessibility as the biggest factors (Mean, 3.429). For M40 and T20 category, they had the same perception which indicated the social factor as the most important impeding factors with the mean score of 3.619 and 3.767 respectively. If referred to different current residential area, the students from rural (Mean, 3.905) and sub urban (Mean: 3.707) residence, they believed that accessibility factor is the main factor compared to students from town area indicated social factor as the important impeding factors for them. Based on the demographics, most of the result revealed that academicians' capability as least important factor that impeding the effectiveness of online learning during COVID-19 pandemic era.

Table 4. Result of Mean Analysis – Impeding Factors by demographics

Demographics		Impeding Factors		
		Social factor	Academician capability factor	Accessibility factor
		Mean score	Mean score	Mean score
Gender	Male	3.539	3.291	3.498
	Female	3.536	3.376	3.558
Family income range	B40 (< RM4849)	3.459	3.319	3.645
	M40 (RM4850 - RM10959)	3.619	3.412	3.429
	T20 (RM10961 and above)	3.767	3.350	3.250
Current residential area	Town	3.500	3.274	3.414
	Sub urban	3.500	3.384	3.707
	Rural area	3.781	3.693	3.905

The descriptive analysis on the overall respondents involved in this study was explained in Table 5 as below. The respondents believed that the most important impeding factors was the accessibility factor (Mean, 3.542), followed by social factor (Mean, 3.537) and academicians' capability factor (Mean, 3.353). However, all factors received moderate acceptance level. Analysis on the items determined that only one item received high mean score such as *lack of communication among students during online learning* (65.90%, Mean: 3.888). In addition, *lecturers are not well trained to teach online* received the lowest percentage agreement on that statement, 31.90% of the total students. Thus it means, lecturers are capable enough to teach the subjects online during COVID-19 pandemic.

Table 5. Result of Descriptive Statistics – Impeding Factors Overall sample

Items	Percentage of agreement (%)	Mean
Lack of communication among students during online learning	65.90	3.888
Lack of group discussion in completing online assignments	42.30	3.120
Online learning makes students feel isolated	49.40	3.603
Social factor (total mean)		3.537
Lecturers are not well trained to teach online	31.90	3.157
Lack of clear learning expectations from lecturer	50.20	3.539
Lower quality materials of online learning	41.60	3.341
Lack of assistance by lecturers in lesson deliveries	42.70	3.375
Academician capability factor (total mean)		3.353
Some devices are not compatible (telephone or laptop)	47.20	3.412
Lack of internet access	54.70	3.558
Cost of internet data is too high	56.20	3.655
Accessibility factor (total mean)		3.542

5. Discussion

Based on the students' perspective, accessibility factor is the main impeding factor towards the effectiveness of online learning during COVID-19 pandemic. The students believed that the internet data is expensive, limitation on internet access and devices lead to difficulties for them to participate in online learning. This is in line with previous studies conducted by Adedoyin and Soykan (2020), Hawati and Jarud (2020) and Aboagye et al. (2020). Internet and devices are important for students and academicians during online learning. Without both elements it is difficult for them to conduct or attend the online class (Adedoyin & Soykan,

2020). The accessibility factor normally affects the students in the rural and sub urban residential area. As a result, in those areas, especially rural area received high acceptance mean. In rural area they have difficulty to access on the internet. The limitation leads to difficulty for them to download the teaching materials, to attend the class and miss some part of discussions during the online class. It affects the process of learning and they are left behind compared to other students. This was supported by Gong (2020), whereby he indicated that students especially in the ones rural area faced difficulty on limitation of internet access and devices to participate in online learning.

The result was also supported by the students under B40 category, where the accessibility is the main factor. It was difficult for them to purchase the internet packages due to the expensive internet data cost. As mentioned by previous studies, during COVID-19, some parents lost their job or monthly income. Thus, to spend the money for buying the internet data for online learning purpose is a burden for that family, especially those under B40 category. As indicated by Hawati and Jarud (2020) instead of purchasing the internet data or technology devices, it is better for the low income family with financial limitation during COVID-19 to save the money for daily food. In order to help these communities to survive, the Government of Malaysia introduced some initiatives for B40, M40 category and the higher learning institution students. The government launched the PRIHATIN Rakyat Economic Stimulus Package which allocated RM10 billion for B40 and M40 category. Besides the higher learning institution students also received RM200 each during the COVID-19 pandemic. In term of internet accessibility, effort from the telecommunication companies provided free internet data during MCO and the government allocate RM400 million in order to upgrade the broadband network (Ain Umaira et al., 2020). The additional financial provided by the government can help to reduce the students burden in order to participate in online learning. However, the free 1GB daily data provided was not enough for students to engage in online learning class, suggested the telecommunication companies should provide more free unlimited data in order to help the students and academicians during the MCO (Gong, 2020).

The initiatives provided by the government to reduce the accessibility factor were supported by some previous studies. Mukhta (2020) pointed out that the role of government is important, and the telecommunication companies should invest in high speed internet. By enhancing the speed or internet data plan it helps to solve the online learning issues. Moreover, Adedoyin and Soykan (2020) also suggested providing subsidy on the internet data or the telecommunication companies can provide free data for the academician and students to engage in online learning. The university also plays an important role to ensure that all students can access the required resources needed during online learning. This type of suggestion has been implemented by the government in Malaysia in order to reduce the difficulty faced by the citizen.

In addition, the result also acknowledged that the academician capability is the least important factor. Even though it is a sudden shift to online learning, the academicians are well prepared to teach online. They have spent their time to develop interactive and quality teaching materials in order to ensure the subjects can be delivered to students effectively.

Besides, the students also received a good assistant from the lecturers in order to clearly understand on the instruction and subjects. In Rajhans et al. (2020), more than 80 percent of lecturers helped to solve any students' queries or problems by phone call or messages during COVID-19 pandemic. As supported by Dhawan (2020) during online learning, the lecturers should provide more personal attention and enhance the communication through media social to ensure the students adapt this new method of learning easily. As confirmed by the students from T20 family income range, instead of accessibility and academician, they believed that the social factor is the most important impeding factor for them.

6. Conclusion

Online learning provides some benefits to the students, in term of flexibility and cost reduction in education. However, accessibility issue should be concerned by all parties in order to ensure the process of learning can be implemented smoothly. The limitations on the internet connection, the data package price and lack of devices were among serious issues especially for students from rural area residence. All institutions, including the government, university and telecommunication companies should provide some initiatives during this crisis in order to ensure all students have the opportunity to study online. Reducing the accessibility issue will enhance the students' motivation, performance and at the same time lead to avoid from serious mental health issues which affect some students recently. Besides, students and academicians should be mentally and physically ready to adapt this new method of learning.

In this study, there have a few limitations. First, the scope of research focused only on the field of social sciences. Secondly, the population of the study consisted of students from one public university in Malaysia. In the future research, students from private universities and public universities can be studied as comparison. By conducting these comparison, it will help in narrowing down the gaps between these types of students.

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