ICONSPADU 2021
International Conference on Sustainable Practices, Development and Urbanisation

ASSESSING THE VIABILITY OF ONLINE LEARNING DURING COVID-19 PANDEMIC IN RURAL AREAS

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Abstract

In the first quarter of 2019, the pandemic of Covid-19 struck globally which resulted in the unprecedented lockdown schooling in most affected countries. Unfortunately, online learning is a big challenge in certain localities especially among the rural learners with limited internet access and facilities. This study is assessing the impact and challenges faced by the teachers and students in these areas in this period of online learning during lockdown schooling. An online survey was distributed among rural schools in Selangor, Malaysia and the data was analysed by using descriptive analysis. The results revealed that 82.6% of rural respondents experienced psychological difficulties with 77.4% of respondents agreeing that time management is an issue during online learning. This study observed a high level of gratitude among respondents as they are satisfied with online learning during lockdown schooling mainly with the online materials, student-teacher interaction and online assessment. The main challenges of rural students and teachers include the internet connection and being easily distracted during class whereas lack of support is not an issue. Meanwhile, loneliness and mental health are not considered as main learning issues. This study is important for the respected figures to strategize their priority in facilitating the rural learners and navigate the situation in the future. Such action will be able to reinforce goal 4 in Sustainable Development Goals (SDG) in providing a higher quality education for everyone.

Keywords: Covid-19, lockdown schooling, Malaysia, online learning, rural areas

1. Introduction

The spread of Covid-19 disease has had a range of implications to social, economy and education. Numerous countries, including Malaysia, have implemented lockdown or quarantine provisions concerning all schools and institutes of higher education. The whole educational institution had to be temporarily closed to prevent the spread of the Covid-19 virus. According to UNESCO, the Covid-19 pandemic affects about 300 million school students worldwide (Berita Harian, 2020). It creates a dilemma for the educational system since students will suffer learning delays as a result. As a consequence, online learning has been used in the struggle against the Covid-19 pandemic.

By implementing new standards, the adoption of this online learning offers an opportunity for the whole world of education. In Malaysia, the Ministry of Education Malaysia (MOE) has proposed two ways of Teaching and Learning (PdP): face-to-face instruction and home-based instruction. Home-based Teaching and Learning (PdPR) was implemented following the letter 'Notification of Implementation of Teaching and Learning at Home', which was sent to all Directors of Education on November 8th, 2020. According to the State Education Department, teachers who taught during the Covid-19 pandemic were obliged to remain home. As a result, this PdPR procedure must be conducted in an organised and planned way at home, in a community centre, or any other suitable place at the present moment. The MOE's implementation of PdPR includes three components: online, offline, and off the internet. Teachers may implement PdPR by selecting a different time.

2. Problem Statement

PdPR implementation requires internet connection and screen devices such as PCs, laptops, tablets, or smartphones for a particular time. This method allows students to get information in real-time. Learning portals such as the Digital Educational Learning Initiative Malaysia (DELIMa), CikgoTube, and EduWebTV are also examples of PdPR implementations. Additionally, PdP delivery promotes Google Meet (GM), Zoom, or Microsoft Teams (live streaming). Further, the PdPR process is strengthened via gamification, video, audio clips, eBooks, and recording of online assignments through applications such as Jamboard.

However, online educational practices have led to a number of challenges and obstacles both from the students and teachers perspectives despite its comprehensive implementation. Students in rural areas and villages are among the most strongly affected with the implementation of online learning. The affordability of internet access and stability of internet connection are the barriers faced by students who are learning online, especially those in rural areas (Hastuti et al., 2021). On the other hand, this pandemic has also impacted teachers' self-efficacy in online teaching which is caused by the lack of skills and training, low motivation caused by a variety of problems, stress of balancing teaching duties with household chores, and concern about students' adoption and acceptance of online learning (Rashid et al., 2021).

3. Research Questions

The following questions guide this study:

i. What are the impacts of online learning during lockdown schooling among students and teachers in rural areas?

ii. To what extent are students and teachers satisfied with online learning experience?

iii. What are the challenges faced by students and teachers in online learning during lockdown schooling?

4. Purpose of the Study

This study is assessing the impact and challenges faced by the teachers and students in rural areas. This study is important for the respected figures to strategize their priority in facilitating the rural learners and navigate the situation in the future.

5. Research Methods

5.1. Research Design

This research used a quantitative approach using an online survey to examine three main variables which are the impact of online learning during lockdown schooling for students and teachers, students and teachers satisfaction and challenges faced by them during the period. The study involved primary and secondary schools students and teachers mainly from three districts in Selangor; Kuala Selangor, Hulu Selangor and Sabak Bernam. The selection of these study locations was because these three districts consist of schools from rural areas in Selangor, Malaysia.

5.2. Data Description

A total of 1578 sample size respondents over various primary and secondary schools including students and teachers from both primary and secondary schools from rural districts in Selangor completed questionnaires. The demographic distribution is shown in Table 1.

5.3. Data Collection

The open-ended and multiple choice questions were used in the questionnaires to figure out the impacts, satisfaction and challenges faced among students and teachers toward online learning during lockdown. The questionnaire was adapted from a previous study (Maqableh & Alia, 2021) and divided into four sections. Section A collects the necessary respondents' demographic information. Section B elicits responses concerning the impact of online learning, while section C involves questions to obtain information on students and teachers' satisfaction. Lastly, section D obtains information about online learning challenges faced by students and teachers.

Table 1. Demographics of the study participants

	Characteristics	**Frequency**	**Percentage (%)**
Gender	Male	1069	67.7
	Female	509	32.3
Category	Primary school students	317	20.1
	Secondary school students	818	51.8
	Primary school teachers	240	15.2
	Secondary school teachers	203	12.9
District	Kuala Selangor	932	59.1
	Hulu Selangor	552	35
	Sabak Bernam	66	4.2
	Others	28	1.8

5.4. Data Analysis

Data were analyzed using descriptive analysis to gather evaluation feedback from students and teachers to answer the research questions. The analysis is divided into three categories to examine the impact of Covid-19 on education, satisfaction with online learning, and challenges faced by teachers and students during the PdPR.

6. Findings

The results are portrayed in Tables 2, 3 and 4. Through Table 2, a high percentage of teachers and students have average online learning experience (55.4%) while 36.5% of the respondents have below average experience. It is interesting as only the minority (9.1%) found the experience very good. Such distribution indicates there is a challenge in online learning that should be discussed and addressed.

Even though 81.2% agreed that there is a good interaction inside class, previous study suggested that despite the fact that they enjoyed the online learning process, most of the participants had psychological difficulties during PdPR (Thandevaraj et al., 2021). This is consistent with the present study as psychological factors are the major obstacle (82.6%) for online learning during lockdown schooling as compared to the financial, food and health factors, each score 26.6%, 7.0% and 22.2% respectively. It has been reported that adapting to the new normal is not easy as not many students would have good access to internet connection, especially in rural areas (Ahmad et al., 2020). 77.4% of the participants stated that they had time management issues when it comes to online learning. Students had to focus on setting up their internet connection and finding a good and reliable spot which caused them to attend class late and sometimes miss the class entirely (Ahmad et al., 2020).

Table 2. Impact of online learning during lockdown schooling

	Characteristics	Frequency	Percentage (%)
Describe your online learning experience	Very good	144	9.1
	Average	858	54.4
	Below average	576	36.5
Good interaction with students/teachers	Yes	1282	81.2
	No	296	18.8
Difficulties	Financial	420	26.6
	Food	110	7.0
	Health	351	22.2
	Psychological	1303	82.6
Learning issues	Mental health	414	26.2
	Managing time	1222	77.4
	Loneliness	344	21.8
	Learn-life balance	784	49.7

It is also interesting to note that approximately only a fifth of respondents considered mental health (26.2%) and loneliness (21.8%) as learning issues for online learning. This finding is inconsistent with a similar study which reported that 60% of respondents counted mental health as a learning issue (Liu et al., 2021). This discrepancy could be due to the environment and lifestyle of rural communities which are family-oriented. A recent study reported that lockdown and social distancing has a significant impact on the urban community as compared to the rural community due to the substantial change to their lifestyle which involves social and outdoor activities (Maqableh & Alia, 2021).

This study has also assessed the students and teachers' satisfactions towards online learning during lockdown schooling as revealed in Table 3.

Table 3. Satisfaction with online learning experience

	Characteristics	Frequency	Percentage (%)
Online experience	Satisfied	489	30.0
	Neutral	631	40.0
	Dissatisfied	489	30.0
Online materials	Satisfied	833	52.8
	Neutral	495	31.4
	Dissatisfied	250	15.8
Interaction with students/teachers	Satisfied	804	51.0
	Neutral	437	27.7
	Dissatisfied	337	21.4
Online exams and quizzes	Satisfied	831	52.7
	Neutral	400	25.3
	Dissatisfied	347	22.0

Based on Table 3, 30% of respondents were satisfied with the 40% majority who were neutral on their satisfaction with the online learning experience. Despite 30% of respondents being dissatisfied with the online learning experience, most of the participants were satisfied (52.8%) with the online materials that were provided during PdPR. In Malaysia, it was recommended that all learning materials should be recorded and uploaded through the school system (Chung et al., 2020) hence students have access to the recorded lessons whenever and wherever they are. Aside from that, half of the participants (51%) were satisfied with the interaction between students and teachers during the online learning. This shows that even during the Covid-19 period, interactive learning could still be conducted during lockdown with students and teachers could still interact well with each other. However, the other half of the participants (49%) were either neutral or dissatisfied with the interaction. Recent studies conducted with rural students demonstrated that highly-interactive programs involving school and university students resulted in the boost of scientific enquiry skills among them (Azman et al., 2021; Fauzai et al., 2021; Hassan et al., 2021). These results and present survey suggested that some students may prefer physical interaction.

In terms of online exams and quizzes, 52.7% participants were visibly satisfied by how the online exams were conducted and despite the challenges that they faced during PdPR, most participants were satisfied with how online learning was conducted. This is consistent with another study which exhibited nearly 80% of students were satisfied with the online exams (Ahmed et al., 2021). A different study also supported these findings where students prefer recorded classes with quizzes at the end of the session to enhance learning effectiveness due to flexibility (Muthuprasad et al., 2021). Overall, it is interesting that most respondents are in favour with the online materials, student-teacher interaction and online assessment during the online learning which is in contrast with a similar study that showed dissatisfaction with these factors (Maqableh & Alia, 2021). This trend could be translated as rural residents generally demonstrate a high level of gratefulness. This could be due to their better understanding of parents' hardship together with their pragmatic consumption psychology and behaviour (Li & Yin, 2018).

Table 4. Challenges of online learning during lockdown schooling (PdPR)

	Characteristics	Frequency	Percentage (%)
Poor internet connectivity	Yes	979	62.0
	No	599	38.0
Inadequate devices or technology literacy	Yes	873	55.3
	No	705	44.7
More homework was given	Yes	915	58.0
	No	663	42.0
Easily distracted during online classes	Yes	1127	71.4
	No	451	28.6
		347	22.0
Lack of support (peers, teachers and family)	Yes	515	32.6
	No	1063	67.4

The result of this study provides an insightful understanding on the challenges faced by rural learners especially during the pandemic period. Based on Table 4, the majority of respondents agreed that there are several factors leading to the challenges during online learning. The factors are poor internet connectivity, inadequate devices or technology literacy, amount of homework given and distraction. Distraction during learning is seen as the biggest challenge with 71.4% of respondents agreeing with the statement. It is also interesting to note that 67.4% of the respondents who are from schools located in the rural areas do not feel the lack of support by peers, teachers and family during the lockdown schooling period. This result is consistent with the earlier result on Table 2 which indicates only 21.8% respondents felt loneliness during online learning. This is in line with the recent study which stated that urban residents are more likely to feel lonely during lockdown as compared to the rurals (Bu et al., 2020).

With the majority of the respondents agreeing that poor internet connectivity (62%) and inadequate devices or technology literacy (55.3%) are the challenges of PdPR, this result is also observed in rural areas of other countries, namely Indonesia (Putri, 2021) and South Africa (Dube, 2020). A stable internet network and compatible devices are important in order to have a good online learning experience as the lack of them could cause technical issues including failure in completing online assessment. The finding shows 58% respondents agreed that more homework was given is also observed in other similar study (Xhaferi & Xhaferi, 2020). Though the benefit of online homework has been reported before (Magalhães et al., 2020), the amount of it should be reassessed in order to not burden the students.

7. Conclusion

In conclusion, the Covid-19 global pandemic has affected the education sector, especially the students as well as the teachers. Majority of rural respondents agreed that they experienced psychological difficulties and problems with time management during online learning. However, they still found online learning enjoyable, and were able to maintain good student-teacher interaction. This study observed a high level of gratitude among respondents as they are satisfied with online learning during lockdown schooling mainly with the online materials, student-teacher interaction and online assessment. The main challenges of rural students and teachers include the internet connection and being easily distracted during class whereas lack of support is not an issue with loneliness and mental health not considered as main learning issues as seen in various studies. These findings would be helpful to the teachers, parents and respected authority in strategizing towards a smooth-running online learning session. Scaling up the survey at the national level could help responsible authorities in understanding the seriousness of the situation. Such action will be able to reinforce goal 4 in Sustainable Development Goals (SDG) in providing a higher quality education for everyone.

Acknowledgments

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