A Quest for Virtual Learning Merits and Demerits During the Covid-19 Pandemic
Manfaat dan Kepincangan Pembelajaran Maya semasa Pandemik Covid-19

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Abstract

The study discusses the merits and demerits of virtual learning among Malaysian secondary school students in the first term of the Covid 19 pandemic. This quantitative research was conducted through a semi-structured online survey using a random sample technique of 100 respondents. It revealed that the respondents of this study preferred face to face learning over virtual learning. Multiple obstacles and hiccups including technical and internet issues, sharing of device, limited data, time management, among others, geared to this affirmation. Virtual learning during the first term of the pandemic offered more demerits than merits as the disadvantages overshadowed the benefits of online learning experienced by these secondary school students. The finding implies that understanding the demerits of virtual learning can assist in reducing the issues raised as well as providing effective solutions in future. This study proposes that education stakeholders to be extra vigilant and proactive during adversity so that students are committed to their continued success even in the virtual learning world.

Keywords virtual learning, students, merits, demerits, pandemic

Abstrak

Kajian ini membincangkan manfaat dan kepincangan pembelajaran maya di kalangan pelajar sekolah menengah di Malaysia sewaktu penggal pertama pandemik Covid 19. Kajian kuantitatif ini dijalankan melalui tinjauan dalam talian separa berstruktur menggunakan teknik sampel rawak seramai 100 orang responden. Kajian ini menunjukkan bahawa pelajar sekolah menengah lebih berminat kepada pembelajaran bersemuka berbanding pembelajaran maya. Ini disebabkan pelajar mengalami pelbagai halangan seperti isu teknikal dan internet, perkongsian peranti, data terhad, dan pengurusan masa. Oleh itu, kesimpulannya adalah pembelajaran maya sewaktu penggal pertama pandemik telah menberi kurang manfaat kepada pelajar sekolah menengah dalam kajian ini. Melalui dapatan ini, isu-isu berbangkit dapat dikurangkan atau diatasi pada masa hadapan. Kajian ini mencadangkan agar pihak terlibat mengambil tindakan proaktif mengatasi kepincangan pembelajaran di alam maya agar pelajar terus cemerlang dalam bidang pendidikan.

Kata kunci pembelajaran maya, pelajar, manfaat, kepincangan, pandemic

INTRODUCTION

COVID-19 shook the world in the year of 2020 as a global outbreak and declared as a pandemic in March 2020. Many countries around the globe declared their lockdown or Movement Control Order (MCO) and their subsequent phases to minimize the infectious effect of COVID-19. The lockdown decision prompted public panic and also affected many businesses, services and organization systems especially the education system. This has greatly resulted in affecting the students' learning process worldwide (Shahrina, Mohammad & Sharifah, 2021). Malaysia, which was also badly hit by the virus, was also in the same boat, announced its first MCO in March and its subsequent phases to beat the COVID-19 effect; and was forced to make shift of its traditional pedagogical approach to virtual environment to tackle and adapt the current situation.

Virtual learning was indeed a quick fix in order provide continued access to education. However, it was an abrupt shift from face-to-face classrooms to e-classrooms, especially in Malaysia (Annamalai, 2021). The sudden switch to using virtual learning has led to sub-optimal results as schools, teachers and students had to adjust to a new situation, unexpectedly. The minimal teaching and learning effect in the digital environment was the resultant of the absence of universal access to the essential hardware and software infrastructure from all involved parties (Kuhfeld & Tarasawa, 2020). This includes inadequate preparations by the institutions, teachers and especially students because they could not adhere to the unique demands that online environment pose. Learners are physically distant from their teachers and they require internet connected digital devices - laptops, smartphones, tablets, and desktop computers which were not available in every household. Given such situation, the involved parties utilized the limited resources and skills at hand.

The Ministry of Education Malaysia (MOE) or Kementerian Pendidikan Malaysia (KPM) in May 2020, made an announcement that pre-schools, primary, secondary schools and also higher education institutions to carry out teaching and learning activities virtually during the period of the pandemic. All institutions were compelled to transition entirely to virtual learning and had to utilize whatever available skills and sources available at their ends to ensure the continuation of teaching and learning.

Nevertheless, MOE did take numerous measures in many areas to make a smooth transition from traditional teaching to this new paradigm of virtual learning. On top of the list, according to Shahrina, Mohammad and Sharifah (2021), the Ministry of Education Malaysia outlined the education stakeholders, which include administrators, educators, parents as well as learners' roles and responsibilities to ensure a smooth teaching and learning environment during the pandemic. Next, the Ministry of Education Malaysia defined a guideline for teaching and learning so that the educators, students, and parents have an access to communication technology to proceed with the teaching and learning. Shahrina, Mohammad and Sharifah (2021) explained that educators were advised to plan as well execute instructions and assignments using online platforms that deem appropriate to cater for their learners' situation and condition. Above all, MOE has tailored a learning platform called MoEDL where educators can have the access for numerous links to diverse online platforms like EduwebTV, digital textbooks, Quizizz, Kahoot, Edpuzzle and other leading online applications. Ministry of Education Malaysia also supported Malaysian parents to assist their children's education by creating EduwebTV and CikgooTube (Shahrina, Mohammad & Sharifah, 2021). Annamalai (2021) explained that the virtual learning transition was rapid and thoroughly conducted online applications in variety of media like Google Classroom, Google Meet, Zoom, WhatsApp, telegram, Discord, Cisco, Webex, Microsoft Teams, etc.

However, it was not easy for not only for Malaysians to accommodate to an overnight change to virtual learning as the education system includes complex elements, i.e. educators, learners, facilities, resources and syllabi. It was quite calamitous for Malaysian educators and learners in the cities, outskirts and rural areas alike, as they encountered numerous difficulties. This includes limited availability of resources, technical defect, location and time inflexibility, learners and teachers' readiness, attitude as well as parental and environment support that slow-downed the virtual teaching and learning process. These glitches have hampered a supposedly fruitful pedagogical outcome is drastic and unprepared shift of virtual learning even though MOE has taken significant measures for the smooth transition process from traditional classrooms to online teaching.

This research, therefore, investigates the effect of virtual learning during the first term of MCO, its merits and demerits, novelty to the affected students in a secondary school despite all those measures taken by the Malaysian government for the smooth transition. The current study highlights the benefits and challenges experienced by the students in the pedagogical, technological and social essence. In depth, the study discusses how students cope with the virtual world learning method, technology and equipment barrier as well as family support, understanding and self-responsibilities needed for a meaningful learning experience.

Thus, these research questions are examined:

1. What are the benefits of virtual learning on the Malaysian secondary school students during Covid 19 pandemic?
2. What are the virtual learning challenges faced by the Malaysian secondary school students during Covid 19   pandemic?
3. Did the students manage to overcome the challenges during the virtual learning?

LITERATURE REVIEW

This research framework was based on The community of Inquiry (CoI) which refers to technology, pedagogy and learners' needs. The framework, primarily worked by Dewey (1938), then Garrison, Anderson and Archer (2000) proposed it for the optimal use of virtual learning environment that supports discourse among educators and learners by addressing 3 presences i.e. teaching presence, social presence and cognitive presence (Annamalai, 2021). The community of Inquiry demonstrates that these three presences can produce positive learning outcomes as well as learners' satisfaction as it creates an inquiry learning community.

Virtual learning took the center stage in every educational institution worldwide during Covid-19 pandemic. Education institutions had to cease their on-site activities in order to prevent the spread of the virus. This in return forced the institutions to conduct teaching and learning practices via online channels i.e. virtual learning. Das, Espinoza, Che Ming, Kok, Gim, Jagdale, Nair, Yashaswini, Singh and Malik (2021) explained that virtual learning is a mechanism using the internet, social media as well as other online learning platforms for online teaching and learning activities. It also enables learners acquire knowledge or information at all times and at any venues though the medium of internet. Virtual learning can be utilized in two ways: asynchronously and synchronously. Synchronous learning is real time interaction with the educators via the internet meanwhile asynchronous learning involves scheduled learning without the involvement of the educators (Das et al., 2021).

As the pandemic was expected to continue for some time in Malaysia, MOE in accordance with the enactment of MCO (the Movement Control Order) made a decision that teaching and learning to be held online. According to Annamalai, (2021) this involved almost 6.2 million primary, secondary and tertiary institution students. Therefore, Whatsapp, Facebook, Telegram, live video conferences- Google meet, Zoom, Microsoft Teams and also pre-recorded lecture videos- Youtube, social media, the online based platforms and teaching and learning modes were utilized to the maximum (Kamal, Shaipullah, Truna, Sabri & Junaini, 2020).

With the government effort, a daily free data of 1GB or monthly 30GB was provided to not only students but also to teachers for home-based teaching and learning throughout the day without time restrictions. Malaysian telecommunication services such as Maxis, Digi, Celcom, etc. took this initiative to assist in making virtual teaching and learning a success. However, this free data privilege was not given for social media browsing, video streaming, gaming as well as music streaming and thoroughly for educational purposes only. On top of that, as reported in New Straits Times (2021), special packages of mobile learning such as smartphones, laptops and tablets as well as a free SIM card with 40GB of data were provided by the Malaysian government to students of B40 group i.e. low income group.

A qualitative study was carried out from May 2020 to June 2020, during the first term of Covid 19 pandemic peak, by Al-Kumaim, Alhazmi, Mohammed, Gazem, Shabbir and Fazea (2021) in Malaysia. The respondents were 486 university students from all over the country. The findings showed that these tertiary learners experienced many challenges while learning online. This includes unfamiliarity and adjustment to the online learning environment and ICT tools, information overload from their instructors and most of all psychological challenges rooting from stress and anxiety from online

learning. Thus, they recommended a system or conceptual model to promote not only a healthy online learning environment but also a sustainable one.

In 2021, Das et al. conducted a comparative research between India and Malaysia on the effectiveness of online learning during the unprecedented pandemic. The study showed that virtual learning catered for students' education despite any geographical location though the effectiveness varied in terms of quality. There was also improvement in the degree of education and knowledge achieved in both countries. However, the researchers stressed that some adjustments need to be made to increase the effectiveness of virtual learning as in the materials, interaction among the educators and learners, internet service, incentives, etc. The study also indicated that Malaysia has scored better efficacy rate of virtual learning compared to India and students are looking forward virtual learning as a method of learning in the future.

METHODOLOGY

This quantitative research utilized a sample survey and convenience sampling method. The study was conducted in a selected government secondary school in a city in Malaysia during the first term of Covid-19 pandemic. Therefore, adhering to the restrictions of the movement, only one secondary school was approached for data collection purposes. The participants were 100 upper secondary school students of Form 5, aged 17. These students were to sit for the Malaysian public examination (SPM/ Sijil Pelajaran Malaysia) in the year of 2021.

Likert scale of two-point was used to collect participants' perception on the merits and demerits of virtual learning and data was analyzed using descriptive analysis SPSS version 25. In order to collect data, a structured questionnaire was utilized. It was adapted from online questionnaire by Almahasees, Mohsen and Amin (2021). There were two sections in the questionnaire namely, Section A which relates to the demographic information and Section B relates to the merits and challenges learning online in the time of Covid-19 pandemic.

Prior to the commencement of the data compilation, the consent to perform the research was obtained from the Principal and the class teacher of the respective secondary school. The participants were also informed of the research purpose and their identity confidentiality and findings were assured. Then, the participants' consent was obtained.

FINDINGS

Table 1 shows the merits of learning in the virtual environment experienced by the respondents during the first term of the pandemic. The participants expressed that they experienced some advantages during virtual learning in the times of Covid-19 pandemic.

Table 1 Participants' response on the merits of virtual learning

Question	Mean	Std
I get a chance to explore new things online	3.712	0.986
I get to learn in comfort	3.718	0.996
I get to gain new online learning skills	3.634	1.515
I get to have time flexibility to learn online	3.601	1.421
I get to spend less on my expenditures	3.813	0.991

Most important merit gained was the cost, the participants expressed that during virtual learning they have less expenses and saved much, with the mean showing 3.813 and the standard deviation 0.991. The reduced expenses include the travels to school, pocket money, and books among others. The second highest merit was that the participants able to learn in comfort with the mean of 3.718 and SD of 0.986. The participants also claimed that they were able to explore new things online, with a mean of 3.712 and standard deviation of 0.986, provided that they have the convenience of device and internet connection, at the third rank. Nevertheless, the respondents mentioned that they were really excited that

they were exposed to many online learning skills on numerous virtual platforms and they could produce their assignments in multiple ways using ICT (mean 3.634; SD 1.515). This in return, helped them acquire new skills and experiences. Next, in fifth rank, was the time of flexibility with mean of 3.601 and SD of 1.421. The respondents agree that when the classes were conducted asynchronously so they were able to learn and revise lessons according to their flexible time.

Table 2 Participants' response on the demerits of virtual learning

Question	Mean	Std
I struggled to adapt to virtual learning	3.123	1.329
I faced technical and internet issues	3.881	0.988
I had limited data to go online	3.772	1.118
I had to share my device	3.790	1.089
I hardly interacted during online	3.681	1.071
I had time management problems	3.671	1.135
I had less support from my family	3.635	1.141
I faced difficulties learning new tools going online	3.552	1.241

Table 2 shows the demerits of learning in the virtual environment experienced by the respondents during the first term of the pandemic. The ultimate challenge was the technical and internet issues where the mean showed 3.881 and the standard deviation was 0.988. Most participants claimed that at certain times they were not able to access the internet steadfastly because of the network and connection problems and it took time for them to download and go to the specific online platforms. The next issue ranked the second top challenge in this study with a mean of 3.790, SD 1.089 is the sharing of the device. The participants also reported that they had to deal with the limited device at home and had to share with their family members especially their siblings. Most of the time, theirs and their siblings' online lessons are conducted at the same time especially in the mornings and they have to take turns using the device, be it laptop or phone.

On top of that, most homes did not have laptops as the parents not able to afford to buy them, particularly the B40 groups (Malaysians with lower household income). The third ranked issue was the limited data to go online with a mean of 3.772 and SD 1.118. Most students rely on their parents' and their own limited data to go online. They had to exit early or choose to opt out from certain classes just to save data for more important subjects. Moreover their phone data found to be less stable compared to a secured and steady fibre network. Nevertheless, other related issues include less interaction (M: 3.681; SD 1.071), time management (M: 3.671; SD 1.1135), less family support (M: 3.635; SD 1.141) and adapting to the online learning and its tools (M: 3.552; SD 1.241).

In order to answer research question 3, whether the learners managed to overcome the issues during the online learning, the participants claimed that as the main challenges were the technical, internet issues, limited device and data, they could not manage to overcome them and caused frequent disruption in the learning flow. Their participation during virtual learning was highly depended on internet and when the internet caused problems they could barely make learning to the maximum. They survived with mere connection, low coverage and device capacity.

DISCUSSION

The research highlighted that virtual learning not only served as a flexible source but also a useful learning medium during unprecedented crisis like Covid-19 for the secondary school students in this particular study. However, it also posed numerous limitations that prevented the students from gaining a maximum learning outcome through digital platform which represents the essence of this study.

Most of the participants agreed that one most positive outcome of virtual learning was that it has reduced their expenses as virtual learning provided a chance for them to continue their education with a minimum cost by not having to travel and other related expenses which was a major issue among low income families. This finding agrees to the results of Khan, Kamal, Illiyan and Asif (2021) in which

their study showed that virtual learning offered a comfortable alternative to learning as it served learning flexibility despite of geographical space and saved transportation cost. The participants' second highest positive response was that they were able to learn and revise lessons in comfort and they were able to explore new things, skills and knowledge such as producing their assignments in multiple ways using ICT. This result correlates with the findings of Almahasees, Mohsen and Amin (2021) where their study highlighted that their participants found virtual learning was useful as they were introduced and provided with effective online platforms by their educators which helped them to contribute their learning outcome efficiently through multiple online media.

Yet, the study revealed that the participants of the study experienced more challenges than positive outcomes as the participants were still adapting to the new paradigm of virtual learning. Moreover, this study was conducted when it was still a new experience of all education stakeholders in Malaysia in the implementation of digital world or virtual learning. According to Annamalai (2021), Malaysian schools are to drastically shift to virtual learning environment even though teachers and students are not or quite adept to the technology tools and virtual. It was a responsibility that educators in Malaysia upheld to ensure there were no interruptions in the teaching and learning despite the pandemic.

The top three hurdles the participants faced were that they faced technical and internet issues together with limited data and limited device. Therefore, they were not able to access the internet steadfastly as they did not have a secured and steady fibre network and they totally depended on their mobile data to go online. Even though a daily free data of 1GB or monthly 30GB was provided to students by the Malaysian government, it was not suffice. This finding was similar to Annamalai's in 2021 where her research proved that the technology glitches and internet downtime prohibited effective virtual learning many a times. It is also important to note that limited device in the homes contributed largely to the hindrance of full potential development of the learners. This has caused the learners to fall behind others in the academic pursuit.

The study also found that some participants hardly interacted during virtual learning sessions unless forced by their teachers and they also faced difficulties learning new online tools such as google classroom. This finding is similar to the Khan et al.'s (2021) study where 45% of their respondents had low motivation so that they did not communicate, give responses and become isolated during online classes. The study also revealed that time management was also a challenge among the participants. They were found to be more interested and spend more time on other online related activities such as browsing social media, watching and making videos, linked to their Instagram and playing online games. Similarly, the study of Khan et al. (2021) revealed that 35% of their respondents did not adhere to the study schedule as they had time management issues as they were more involved in the social media and faced a lot distraction at their homes.

The research analysis also revealed the participants merely managed to overcome the challenges especially when it revolved around the technical and internet issues. Even though with a daily free data of 1GB was provided throughout the day without time restrictions it was not suffice and participants claimed that they were not able to manage technical issues as not only them but also their family members lacked the IT competence. Furthermore, with the strict movement control, getting assistance from the more knowledgeable person or going to the experts was indeed a hindrance. This finding was supported by Khan et al. (2021) that they found that their respondents' were incompetent solving technical issues during virtual learning and their in-affordability having proper access to internet via fibre networks making their online experience quite disastrous.

IMPLICATIONS, LIMITATIONS, FUTURE STUDIES AND CONCLUSIONS

In terms of policy implication, the study highlights that educational institutes and policy makers should manage online learning environment in a more systematic method adopting to the most applicable technology tools and to continue giving training so that the teachers and students are well-equipped with the knowledge and skills. This study has its limitations, too. Firstly, it has only focused on secondary school students in one part of a city in Malaysia. Furthermore, it used limited number of variables and methodology.

The research points out that future studies should replicate and establish the results of the current study with a larger and diverse respondents in the education system. As Pike (2011) acknowledged,

once a larger sample size is assessed, a reliability analysis is completed.

This research highlights that even though there were positive elements experienced by the secondary school students but the challenges overrode them. Therefore, this list of challenges need to be considered and taken action by the main stakeholders of education so that these issues can be remedied for future use. Much effort is a must to address these challenges, concerns and issues that have emerged with regards to virtual learning environment. As Shahrina et al. (2021) mentioned, the quality of education should not be neglected even in the time of any crisis such as pandemic Covid-19.

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