

Perceptions of parents toward online learning among secondary school students during the COVID-19 pandemic in Malaysia

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ABSTRACT

The COVID-19 pandemic significantly impacted education systems worldwide, including in Malaysia, leading to the widespread closure of school facilities to control the situation. This development heightened parents' awareness and concern about the quality of their children's education. This study aimed to determine the parents' perceptions towards their children online learning during the pandemic. This was a cross-sectional study conducted among the parents of secondary school children. The study based on online survey via Google Form. The questionnaire was mainly focused on parents' perceptions on benefits, challenges, and involvement on their children's online activities. Parents who were having secondary students were recruited using snowball technique which was a type of convenient sampling technique. Data were analyzed using IBM SPSS (version 27). A total of 275 respondents participated in this study with the majority of parents agreeing that online learning could help their children develop technological competence (43.3%), followed by the ability to understand online learning materials (34.2%), despite the learning process being conducted through e-learning. However, parents claimed that their children could not maintain their concentration (31.3%) as well as their improvement in communication skill (30.5%). Most of the parents (62.5%) had limited time to accompany children's learning activities. As a result, online learning emerged as a new and demanding task, compelling parents to adapt to the evolving educational norm. Overall, this study highlighted the positive impacts on the education sector during the pandemic.

Keywords: COVID-19; perception; online learning; secondary school students and education

INTRODUCTION

The Coronavirus disease (COVID-19) pandemic has caused an unexpected crisis in all fields of human life. In the area of education, this emergency has led to the massive closure of face-to-face activities in more than 190 countries in order to prevent the spread of the virus and mitigate its impact (ECLAC-UNESCO, 2020). In Malaysia, the COVID-19 pandemic was announced twice, first in January 2020, and later in March 2020, when a nationwide "Movement Control Order" (MCO) was declared (Ahad et al., 2020). In response to the MCO and the intensifying concerns surrounding pandemic, all levels of institutions were replaced with virtual and online platforms, thus ensuring the continuation of education procedure (Kamaludin & Sundarasan, 2023).

Online learning as well as online education is the delivery of educational contents and instruction by means of internet or other digital technologies (Anh, 2022; Phanse, 2021). It makes the students more accessible, flexible and convenient. In addition, it provides the students to become independent as they can search for materials by browsing educational applications available online (Odhaib, 2018).

Previous research findings indicated that students generally preferred face-to-face learning in class rather than online learning because it was easier to understand the materials when the teacher explained it directly (Soliman et al., 2022). Moreover, they can interact and learn together (Lase et al., 2021). Besides, some teachers experienced increase

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spending on the internet quota, tired of staying too long at home and difficult to monitor students remotely. Also, the teachers need to take extra time to prepare online learning materials and collect feedback (Lase et al., 2021).

As the time spent for learning was mostly at home, parental participation became a crucial role to support the teaching and learning process (Johanisa et al, 2021). Parents needed to acquire certain skills and knowledge in handling their children's online learning. For some parents, this can be a challenge especially for parents who do not know how to handle technology (Johanisa et al, 2021). Given a sudden notice of school closure during the COVID-19 pandemic, it became an unexpected, new and burdensome for parents to adjust and adapt to the new norm of learning (Lase et al, 2021). Other than that, many parents were unfamiliar with the schools' performance in delivering a quality education (Haller & Novita, 2021).

In fact, conducting online learning can be stressful for parents as it increased parents' workload dealing with their own work as well as monitoring their children's activities (Prime et al., 2020). To create an atmosphere at home that can help their children to remain enthusiastic and active was one of the major challenges for parents (Spinelli et al, 2020). As well, many parents faced financial difficulties in supporting the online learning which required computers, laptops, software and internet access at home (Abuhammad, 2020). Such requirements could add on more financial burdens for those parents who lost their job or reduced income due to COVID-19 pandemic (Spinelli et al, 2020).

Research on parents' perceptions of online learning among secondary school students has been limited. This study provided valuable insights into how parents navigated the adaptation process during the pandemic, particularly for adolescents, a critical stage in children's development.

MATERIALS AND METHODS

Research design

This cross-sectional study was conducted among parents of secondary school students in Malaysia. The inclusion criteria required participants to be parents of secondary school children while the exclusion criteria included those who did not provide consent or lack internet access. The following flow chart illustrates the recruitment, eligibility screening, exclusion criteria, and final sample selection of parents of secondary school students included in the study.

Figure 1

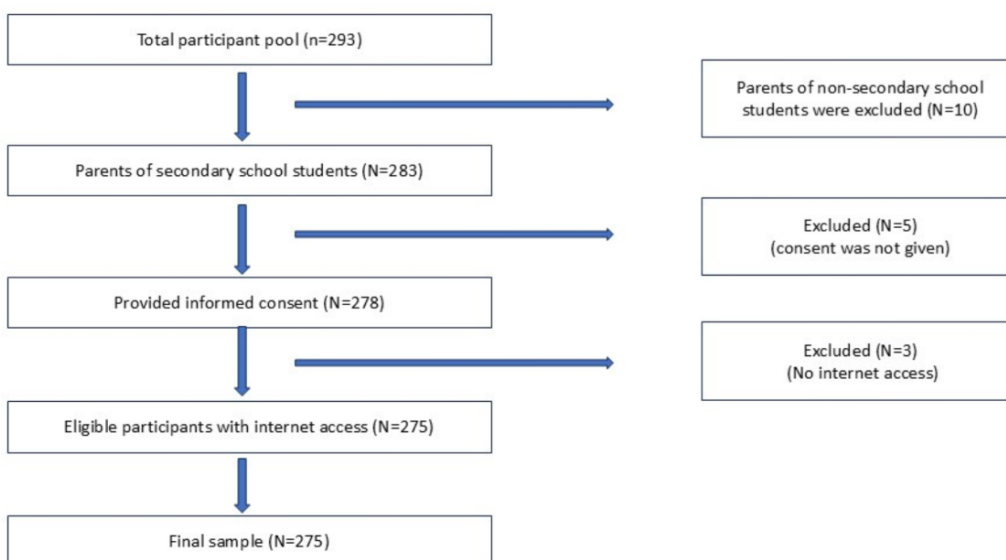


Figure 1. Flow chart illustrating the recruitment, eligibility screening, exclusion criteria, and final sample selection of parents of secondary school students included in the study.

Note: Flow chat of participants recruitment process

Sample size

Sample size was calculated by using Power and Sample Size Calculation [PS software] (Dupont & Plummer, 1997), based on a standard deviation of 1.13 and anticipated knowledge mean of 0.68 from previous study (Hamaidi et al., 2021), probability power of 0.8 and type 1 error probability associated with this null hypothesis was 0.05, minimum sample size of 88 was needed. With an anticipated attrition of 70% for online survey, the total number of sample size needed was $88/0.3=293$ based on calculation provided.

$$n = \frac{2(Z_{\alpha/2} + Z_{\beta})^2 \cdot \sigma^2}{\delta^2}$$

where:

n = required sample size

$Z_{\alpha/2}$ = the significant level (Type 1 error). For $\alpha = 0.05$ (two tailed), this is 1.96.

Z_{β} = the critical value for the power. For a power of 0.80, this is 0.84.

σ = the standard deviation (provided as 1.13)

δ = the anticipated difference in means (provided as 0.68)

Sampling method

The sampling method used was snowballing method which was a non-probability and convenient type of sampling method. In this technique, existing subject provided referrals to recruit samples required until reaching the targeted size. During the pandemic time, face-to-face data collection was not possible to reach the entire Malaysian population. Therefore, convenient sampling was unavoidable. This causes a potential sampling bias as there is a tendency to share the questionnaire to those with similar backgrounds, which can lead to a non-representative sample.

Instrument for data collection

The research was conducted using the questionnaires adapted from several studies. This questionnaire consisted of 5 sections. Section A was about parents and school students' sociodemographic background (Ribeiro et al, 2021), section B was about parent's general perception of online learning (Lubis & Lubis, 2020), section C was based on parents' perception toward the benefits of online learning satisfaction (Ludji & Marpang, 2021), section D was focused on parents' perception toward the challenges of online learning (Ludji & Marpang, 2021) and section E was based on parents' involvement and support for children on online learning activities (Lase et al., 2021). Cronbach's Alpha test is important to determine the reliability of the instrument used to assess the impact of five variables on parents' perception towards online learning during the pandemic. In this study, a Cronbach's Alpha test result of 0.871 was obtained in section B, 0.816 in section C and 0.823 in section E respectively. It was suggested that the study questionnaire was reliable.

Method of collecting the response in section B, C and D was by Likert scale ranging from "strongly agree" for 5 points to strongly disagree for 1 point. Last part in section C ranged from full understanding for 5 points to no understanding for 1 point. For the first part in section E, the participant was required to choose between Yes, Yes but limited and No for question 1 and Yes, Not sure and No for question 2. For the second part in section E, the participant could choose for more than one option.

Data collection and data analysis

The questionnaire was then set up in Google Form. For those parents who were interested to participate, a link was shared via WhatsApp's to access the Google Form. Before answering the questionnaire, the respondents had to read thoroughly the consent form embedded in the Google Form before completion of the questionnaire. The data analysed by using IBM Statistical Package for Social Science Program (version 27) to generate descriptive analysis consisting of percentages, frequency and mean score (standard deviation).

RESULTS

A total of 275 respondents participated in this study whereby majority were female (70.9%) and were predominantly in the age of 46 to 50 years old. Most of the respondents were from Peninsular Malaysia followed by Sarawak and Sabah. More than half of the secondary school children were female (51.6%) and were currently in form 5 (44.0%) at the time of data collection. Detailed information on sociodemographic characteristics of the respondents were presented in Table 1.

Table 2 presented the parents general perception of online learning. A total 43.3% of the parents agreed that their children could develop technological competence while using E-learning and 34.2% of parents agreed that their child could understand the learning materials. But on the other hand, some of the parents disagreed (34.9% disagreed and 27.6% strongly disagreed) on the statement about E-learning was more beneficial than traditional learning. The detailed of the finding were presented in Table 2.

A total 41.5% of the respondents agreed that via online learning, it can provide an individualized experience and flexible system of education and also protect safety from the transmission of Covid-19 (43.6%). However, about half of the parents (52%) believed that their children gained a maximum understanding during online learning was average. Table 3 showed the details of the findings.

In terms of perception of parents toward the challenges of online learning, Table 4 showed that most of the respondents chose to agree that online learning can increase the parents' workload (34.2%), students became less motivated during online home learning (32.0%), and inefficient learning for school children who are not facilitated with individual devices (25.85%).

Table 5 represented the parent's involvement and support for children on online learning activities. Majority (62.5%) had availability but limited time to accompany their children's learning activities at home while 23.6% had full time availability to accompany their children. In terms of parental actions and support for children's learning activities at home as shown in Table 6, majority of the respondents (88.4%) could provide internet package and also most of the parents (80%) could provide additional equipment. However, less than half of the respondents (42.9%) could contribute for explanation and complete for their children's assignment.

Table 1

Sociodemographic and background of the respondents

	n (%)	Mean (SD)
Parent's gender		
Male	80 (29.1)	
Female	195 (70.9)	
Age of parents		
< 36	36 (13.1)	
36 - 40	15 (5.5)	
41 - 45	70 (25.5)	
46 - 50	75 (27.3)	
51 - 55	61 (22.2)	
56 - 60	18 (6.5)	
Origin		
Peninsular Malaysia	175 (63.6)	
Sarawak	92 (33.5)	
Sabah	8 (2.9)	
Number of children in secondary education	Min = 1 Max = 5	1.54 (0.711)
Age of children	Min = 13 Max = 17	15.79 (1.365)
Gender of children		
Male	133 (48.4)	
Female	142 (51.6)	
Education level of the children		
Form 1	25 (9.1)	
Form 2	36 (13.1)	
Form 3	33 (12.0)	
Form 4	60 (21.8)	
Form 5	121 (44.0)	

Notes: Data was presented as either n (%) or mean \pm standard deviation. n = 275

DISCUSSION

The finding of this study showed that most of the parents concerned upon their children's education during the Covid- 19 pandemic. Majority had positive perception on online learning which showed about one third of the respondents (34.2%) agreed that their children can understand the learning materials and 33.8% agreed that their children could easily obtain the learning resources during online learning. This finding was supported by Dhawan (2020) which stated that the E-learning methods enable the children to customize their processes based on their requirement. Moreover, there are plenty of online tools available which is important for an effective and efficient learning environment. In addition, the educators during closure of school can implement the use of audio, videos and text to reach out to their students in order to maintain a human touch to the learning materials. As a result, online learning can help to create a collaborative and interactive learning environment where students can learn interestingly by asking queries and giving immediate feedback. What was more, the effect of teachers' engagement with online teaching, their technical ability was relatively higher, and this will eventually increase parents' satisfaction towards online learning (Haller & Novita, 2021).

However, most of the parents were worried about the negative impact on their children's education. Most of the respondents (62.5%) disagreed that E-learning was more beneficial than traditional learning in terms of communication skills and ability to concentrate. Apart from that, all the students varied in terms of capability, adaptability and confidence level. Some might not feel comfortable with online learning leading to increase frustration and confusion. Besides, the decrease in learners' motivation was also due to the large number of tasks that need to be done within a short period of time, less pleasant learning methods and a limited interaction with friends (Lase et al., 2021).

Most of the respondents agreed and strongly agreed (43.6% and 33.1%) that online learning can provide safety from the risk of Covid 19 transmission. In addition, most of the respondent agreed (41.5%) that it is beneficial to have online learning as it provided a platform for their children to become more creative and innovative with digital technology. According to Cheshmehzangi et al., (2023), the use of ICT (Information and communications technology) in teaching and learning process have been considered essential especially in this new norm of living due to this pandemic. Apart from that, 41.5% of parents agreed that online learning can provide individualized experience and flexible system of education. Because learning through online resource can help encouraging pupils to be more engaged in deciding their own learning and were more capable of developing autonomous character in them especially in young adults' students. As well it might be beneficial if students deliberately sense a need to comprehend the subject and can arrange themselves to study (Sumbawati et al., 2020).

With regard to challenges, 34.2% of parents agreed that online learning increased their workload. It was found that parents showed high percentage of feeling depressed, overstretched and frustrated by the increasing burden of their stress and work as they faced difficulty to manage their time between accompanying their children to study while maintaining the quality of their personal workload (Lase et al., 2021). Other than that, they provided their children's online learning needs at home by supplying all the gadgets or notebooks as well as additional costs to acquire the data plan (Wardhani & Krisnani, 2020). However, 31.6% of parents disagreed that they had limited economical capacity to provide the needs for their children's online learning. This meant most of the parents were capable and could afford in providing the online learning needs such as electronic gadgets and internet package to their children.

Table 2

Parents general perception of online learning

	n (%)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
In my opinion, my child can understand the learning material even though the learning process is carried out using E-learning.	19 (6.9)	65 (23.6)	85 (30.9)	94 (34.2)	12 (4.4)
In my opinion, my child feels happy when he/she learns by using E-learning.	27 (9.8)	67 (24.4)	97 (35.3)	67 (24.4)	17 (6.2)
In my opinion, my child can easily get the learning resources while using E-learning.	21 (7.6)	61 (22.2)	72 (26.2)	93 (33.8)	28 (10.2)
In my opinion, my child can still concentrate while learning by using E-learning.	28 (10.2)	86 (31.3)	81 (29.5)	69 (25.1)	11 (4.0)
In my opinion, my child can develop his technological competence while he/she use E-learning.	21 (7.6)	38 (13.8)	63 (22.9)	119 (43.3)	34 (12.4)
In my opinion, E-learning can help to improve my child's communication skills.	38 (13.8)	84 (30.5)	85 (30.9)	54 (19.6)	14 (5.1)
In my opinion, E-learning can help to arrange my child's learning schedule.	30 (10.9)	68 (24.7)	83 (30.2)	84 (30.5)	10 (3.6)
In my opinion, E-learning is more beneficial than traditional learning in school for my child.	76 (27.6)	96 (34.9)	57 (20.7)	40 (14.5)	6 (2.2)

Notes: Data was presented as n (%). n = 275

Table 3*Parents perception towards the benefits of online learning satisfaction*

	n (%)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Part I					
Provide an individualized experience and flexible system of education	11 (4.0)	39 (14.2)	96 (34.9)	114 (41.5)	15 (5.5)
Children become more independent in learning	24 (8.7)	54 (19.6)	76 (27.6)	105 (38.2)	16 (5.8)
Safety from the Covid-19 transmission	4 (1.5)	17 (6.2)	43 (15.6)	120 (43.6)	91 (33.1)
Parents can build better communication and relationship with their children	24 (8.7)	49 (17.8)	87 (31.6)	91 (33.1)	24 (8.7)
Parents are reinforced to be more creative and innovative with digital technology	11 (4.0)	27 (9.8)	85 (30.9)	114 (41.5)	38 (13.8)
	No	Little	Average	Above Average	Full
Part II					
Parents' perception on how far their kids gain their maximum understanding.	4 (1.5)	33 (12.0)	143 (52.0)	84 (30.5)	11 (4.0)

Notes: Data was presented as n (%). n = 275

Furthermore, 33.5% respondents chose neutral that they experienced pressure especially when assisting the children in doing their assignments or evaluations. Due to MCO, most parents worked from home and spent more time with their children to assist their children learning. Besides, secondary school children are usually more matured and independent in dealing with their assignments or evaluation compared to primary school children. This is evidenced by a study from Scarpellini et al. (2021), compared to middle school, primary school children were less independent and parent experience greater effort and higher need for commitment in supporting their children task.

Regarding the parents' involvement, majority of the respondents (86.1%) have the availability to spend time to accompany their children's learning activities. Since, implementation of work from home showed that parents could spend more time with their children at home. This made it easier for the parents to help and accompany their children during online learning. However, among 86.1%, only 23.6% have full time availability to accompany their children at home. This might be due to them still having difficulties in dividing their time between online working and giving attention towards their children's online learning (Novianti & Garzia, 2020). In addition, due to work responsibilities, some parents could only assist their children during night-time while some parents are only free in the morning (Lase et al., 2021).

For the ability to support children's study from home, majority of the parents (53.5%) can support their children's study from home. The level of parental understanding regarding the learning material also plays major role where parents must understand the school materials provided well in order to help the learning process of their children at home. But there were several barriers and challenges during home learning such as personal, technical, logistical and financial barriers. The most contributing element to parental engagement challenges was conciliation between supporting children's school activities and telework, with feeling fatigued and emotionally exhausted (Ribeiro et al., 2021).

Also, regarding the parents' involvement, most of the respondents can provide internet package (88.4%) as well as additional equipment such as smart phones, tablets, laptops (80%). In addition, 52.7% of the respondents can help check the learner's worksheet and around 43% can help explain and complete their children's assignment. It stated that most parents have the ability to engage with online learning activities. Therefore, parents' knowledge, educational

Table 4*Parents' perception towards the challenges of online learning*

	n (%)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Increased the parents' workload	10 (3.6)	55 (20.0)	83 (30.2)	94 (34.2)	33 (12.0)
Do not have sufficient features in the smartphones to support online learning	30 (10.9)	85 (30.9)	99 (36.0)	54 (19.6)	7 (2.5)
Lack of support also comes from the insufficient internet network connection	36 (13.1)	97 (35.2)	61 (22.2)	63 (22.9)	18 (6.5)
Limited economical capacity	38 (13.8)	87 (31.6)	81 (29.5)	50 (18.2)	19 (6.9)
Pressure (when assisting the children in doing their assignments or evaluations)	34 (12.4)	61 (22.2)	92 (33.5)	67 (24.4)	21 (7.6)
Kids become less motivated during online home learning (Boredom, distraction)	16 (5.8)	41 (14.9)	73 (26.5)	88 (32.0)	57 (20.7)
Inefficient learning (Students who are not facilitated with individual devices)	24 (8.7)	57 (20.7)	71 (25.8)	68 (24.7)	55 (20.0)

*Notes: Data was presented as n (%). n = 275***Table 5***Parents involvement for children on online learning activities*

	n (%)		
	Yes	Yes, but limited	No
Availability of time for parents to accompany children's learning activities at home	65 (23.6)	172 (62.5)	38 (13.8)
	Yes	Not Sure	No
Ability or competence to support children's study from home	147 (53.5)	96 (34.9)	32 (11.6)

*Notes: Data was presented as n (%). n = 275***Table 6***Parents support for children on online learning activities*

	n (%)
Provide internet Package	243 (88.4)
Provide additional equipment (devices) e.g., Phone, tablets and laptops	220 (80.0)
Help explain and complete child's material and assignment	118 (42.9)
Checking learner's worksheet	145 (52.7)

Notes: Data was presented as n (%). n = 275

background and socioeconomic status play big crucial role in ensuring that their children can adapt well to virtual learning (Azubuiké and Aina, 2020).

There were few limitations to this study. Due to the Covid-19 pandemic, the data collection was done virtually via the distribution of Google Form. This had forced us to use the snowballing technique that target respondents which fit the inclusion criteria by sharing the Google form questionnaires among their acquaintances. This caused a potential sampling bias as there was a tendency to share the questionnaire to those with similar backgrounds such as similar age and educational level. Next, response bias was inevitable and common in research involving self-report as they tend to answer the questions untruthfully as they might feel pressured to give answers that were socially acceptable.

CONCLUSION

This research found that majority of the respondents have found it difficult to adapt to this sudden change especially parents as they were required to become the full-time educators of their children. Even though, they suffered from several kind of stress, most parents tried to endeavor the burdensome situations. Therefore, for the successful online learning to overcome the pandemic, not only the school children's effort and the teachers' ability but also the complementary support of parents was a major role for the whole learning procedure during this intense period.

Future research should hence focus not only on parents of secondary school students, but also analyze the parents of primary and university students. In addition, it can further look into teachers' or lecturers' perception towards online learning. This could indirectly determine the students' performance and at the same time maintain the quality of teaching and learning.

AUTHOR CONTRIBUTIONS

The following study was undertaken by Kimberly Hu Kai Wen, Muhammad Haziq Haidhar Bin Suhaimi, Nurul Aqilah Najwa Binti Mohd Hairul and Raja Sarah Natasha Binti Raja Putra as part of a research project under the supervision of Myat Su Bo and Cheah Whye Lian. The manuscript was written by Myat Su Bo and Cheah Whye Lian who also supervised, edited and reviewed the contents.

ETHICS APPROVAL

The study was approved by the Medical Ethical Committee of Universiti Malaysia Sarawak [FME/22/23].

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Not applicable.

CONFLICTS OF INTEREST

The authors declare no conflict of interest in this work.

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