INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PROGRESSIVE EDUCATION & DEVELOPMENT

OPEN ACCESS JOURNAL

Vol 11, Issue 1, (2022) E-ISSN: 2226-6348

The Challenges of eLearning during COVID-19 Pandemic among Primary-Age Children: A Rapid Review of Evidence

Nazirah Hassan[1], Tan Yun Yu[2], Wong Chui Mei Jocelyn[2]

[1]Social Work Program, Center for Research in Psychology and Human Well-Being, Faculty of Social Science and Humanities, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia, [2]Faculty of Education, University Malaya, 50603 Kuala Lumpur, Malaysia.

Corresponding Authors: nazirah@ukm.edu.my

To Link this Article: http://dx.doi.org/10.6007/IJARPED/v11-i1/12222 DOI:10.6007/IJARPED/v11-i1/12222

Published Online: 26 January 2022

Abstract

The COVID-19 pandemic has changed the education system globally with the distinctive rise of online learning, whereby teaching and learning is undertaken on digital platforms remotely. This review paper aims to explore the challenges of online and remote learning among primary-age children during the COVID-19 pandemic. Using a rapid review method, four online journal databases (i.e., Web of Science, SAGE Journals Online, ScienceDirect and Scopus) were searched for relevant articles published between 2019 and 2021. The initial search identified 1623 articles. Through an eligibility criteria screening and check, a total 31 articles were selected. Findings of the review identified four main challenges of online learning during the pandemic, including the difficulties in maintaining communication and engagement, inaccessibility to technology, inadequate support for online learning, and issues related to mental health conditions and the readiness for online learning. This review has implications for the role of educational system and policymakers to improve programs and solutions for online and remote learning among primary-age children.

Keywords: Online Learning, Primary-Age Children, School Closure, Covid-19 Pandemic, Rapid Review Method.

Introduction

The novel coronavirus (COVID-19) outbreak has been declared as a public health emergency of international concern by the World Health Organization (WHO). Later, in March 2020, WHO declared the COVID-19 as a global pandemic. Given this difficult situation, schools across 194 countries were shut and over 1.2 billion children were out of the classroom globally (UNESCO, 2021). The sudden closure of schools forced the educational system in many countries to find the alternatives in order to guarantee children's right to education. Many systems have adopted virtual classrooms. Virtual classroom is an online teaching and learning method that allows teachers and students to present subject materials, interact and engage with each other through online platforms (Dhawan, 2020), such as Google Meet, Zoom, Webex, Microsoft Teams and other e-learning tools. The learning methods can be either synchronous

or asynchronous environments using technological devices with internet access, such as mobile phone, laptop, computer and tablet. In these environments, the learning could be done remotely where students can attend a class and participate and interact with instructors and other students from anywhere in the world (Singh & Thurman, 2019). Until now, after 20 months into the pandemic, around 27 per cent of countries worldwide continue to have schools fully or partially closed (UNICEF, 2021). Nonetheless, many countries are opening their schools and children are slowly returning to school.

Online learning or e-learning has created tension for the learners, and the most affected are primary school aged children. Primary-age children or middle childhood is referring to children aged between six to 11 years old (UNICEF, 2021). At this stage, children are connected to their involvement in the early grades of school, and this is the time when children develop foundational skills for building healthy social relationships and learn roles that will prepare them for adolescence and adulthood. According to Piaget in his theory of cognitive development, middle children are developing their concrete operational skills where they are improving their logical thinking (Wadsworth, 1971). Children use their logical thinking to solve problems and use their logical principle to understand cause and effect, size and distance (Sigel & Hooper, 1968). Also, they are able to classify objects, understand the identity of objects, and understand the concept of reversibility (Wadsworth, 1971). All these skills are incorporated into formal education that takes place in a school environment. Nonetheless, during the pandemic, most children's formal education takes place at home. This unprecedented shift has had a profound impact not only on children, but also parents and teachers.

School closures have shifted education from classroom to home, and from face to face to online learning. Since April 2020, 1.57 billion children worldwide have been educated from home and assisted by families that had little or no experience of protracted home-schooling (O'Sullivan et al., 2020). This new norm consequently impacts the psychological wellbeing of families as well as the children. In fact, due to the general unreadiness of school systems and teachers to conduct online and remote teaching, this circumstance may contribute to less effective teaching methods, minimize learning outcomes and induce education inequality (Dayal & Tiko, 2020). This might discourage children from having positive attitudes towards learning (Khan & Mikuska, 2021). In so doing, this paper presents a review literature of empirical findings for the challenges of online learning environment during the COVID-19 pandemic among primary-age children throughout the perspective of children, parents and teachers.

Methodology

Two explore the research objective, a rapid review method was used. Rapid review is a form of knowledge synthesis in which components of the systematic review process are simplified or omitted to produce information in a timely manner (Khangura et al., 2012). Based on the previous studies, a rapid review should be conducted between one and 12 months, and it is recommended that a review must be guided by a review protocol (Tricco et al., 2015). In doing so, this review was conducted for a three months period beginning on October 1, 2021 until December 31, 2021.

For this purpose, we used a scoping review protocol guided by Arksey and O'Malley (2005). Also, this paper adapted from the Preferred Reporting Items for Systematic Reviews and Meta

Analyses-revised version (PRISMA 2020; Page et al. 2021) for the search process. To identify potentially relevant studies for inclusion, four electronic databases were searched, including Web of Science, SAGE Journals Online, ScienceDirect and Scopus. These databases are top list journal databases and cover a large multidisciplinary database covering published material in the social sciences and humanities. As a result, a total of 1623 articles were retrieved from the databases (see Figure 1). Nonetheless, insignificant 1211 articles were excluded after the titles and abstracts were reviewed. These articles were mostly not relevant to the challenges of online and remote learning environments during the COVID-19 pandemic among primary-age children. In this context, the environmental challenges can be conceptualized difficulties faced by learners, educators and others with online teaching. These difficulties include technical, psychological, social and policy issues that can disrupt children's learning environment, and induce learning loss (Engzell et al., 2021). Therefore, the inclusion criteria for the search included online learning during COVID-19 pandemic, education for primary-age children, challenges of online classes faced by children, educators and parents, and the policies related to online learning for primary-age children.

Articles retrieved from databases	Excluded titles and abstracts	Potentially relevant full articles	Excluded full text report	Selected articles
N=1623	N=1211	N=412	N=381	N=31

Figure 1 *Search process*

Primary-age children refers to children between 6 and 11 years old (UNICEF, 2021). We also limited our search from 2019 until 2021, which was the period of pandemic Covid-19. Based on these inclusions, our search strategy was developed as shown in Table 1. All 31 articles were descriptively explained in a summary table. The data extracted from all articles were formed on the basis of thematic analysis and data synthesis.

Table 1
Searching strategies from four databases

Database	Searching strategies
ScienceDirect	(Children AND online AND education AND learning AND covid AND pandemic (Open Access & Open Archives) =599) (Timespan: January 1, 2019 to July 31, 2021)
SAGE Journals	(Children AND online AND education AND learning AND covid AND pandemic = 734) (Timespan: January 1, 2018 to July 31, 2021)
Scopus	((TITLE-ABS-KEY (Children AND online AND education AND learning AND covid AND pandemic) PUBYEAR > 2019) = 154
Web of Science	(Children AND online AND education AND learning AND covid AND pandemic (All Fields) = 145) (Timespan: January 1, 2019 to July 31, 2021)

Findings

All 31 articles were reviewed and summarized as shown in Table 2. Articles selected include perspectives from children, educators, parents/caregivers and other stakeholders (e.g policy makers, professionals) from different countries worldwide, including Asian, Europe, Australia, the United States of America and middle east. Their methods range from qualitative interviews.

Table 2
A summary table of 31 articles

Author	Design and Method	Objective(s)	Main findings of the challenges
Khan & Mikuska (2021)	Mixed method of 55 primary school teachers	The challenges of safeguarding children using online platforms	Difficult to maintain communication, & to balance personal & professionalism.
Meeter (2021)	Quantitative data of 53, 659 primary school students	The forms of computer-assisted learning on mathematics	The use of practicing software benefited less among disadvantaged populations
Siong & John (2021)	Mixed method of 312 participants aged 11-12 years old.	Attitudes toward physical activity learning during pandemic	Male & younger participants showed less attitudes towards physical activities due to poor interaction
Zhang et al (2020)	Quantitative longitudinal cohort study of 1271 primary school students	Assessment of mental health before & after school closing	Mental health effects associated with lengthy school closure, & enforced social isolation.
Popyk (2021)	A larger qualitative study of migrant children	The impact of lockdown & distance learning on learning practices	Difficult to understand learning materials, too much homework & parents unable to provide support
Hurwitz et al (2021)	A written survey on 106 teachers in the elementary grades	Challenges on special education for students with autism	Educators are less able to work on behavioral goals, track student progress or help students interact socially.
Averett (2021)	Qualitative interviews with 31 parents with children with disabilities.	Experiences & challenges of remote learning among children with disabilities.	Children struggled with distractions, disruption, & difficulty navigating technology & various learning platforms.
Tomasik et al (2021)	The school performance of 28,685 primary & secondary school students	The impact of the school closures on learning gains for mathematic and language courses	Primary school students showed the decreased pace of learning progress due to the cognitive, motivational and socio-emotional factors.

Engzell et al (2021)	Secondary data of exam performance of 350,000 primary school students	The effect of school closures on primary school student progress	About 60% students were from less-educated homes, confirming worries about the uneven toll of the pandemic on children and families.
Yorke et al (2021)	Phone surveys with 127 school principals and 316 teachers.	Understanding of the response of school principals & teachers during school closures.	Schools in rural areas receive less support from local government, lack the appropriate information, & unsure of how they should respond
Gore et al (2021)	Quantitative data of 3030 year 3 and 4 students	Progressive achievement tests in mathematics or reading.	The least advantaged schools achieved 2 months less growth in mathematics, particularly for younger students.
Dimopoulos et al (2021)	Quantitative data using two secondary sources	Familiarity of parents with the technology usage and addressing the inequalities of education that occurred during online learning	Parents from lower socioeconomic background face limitations in utilizing the benefit of online learning
Doll et al (2021)	Qualitative case study design	Experiences of educators that support online learning education	Technology is one of the challenges for the educators, children and parents to adapt, despite parents and children are inconsistent in their experience of using online platform
Dong et al (2020)	Quantitative data using survey from a total of 3275 parents in China	Chinese Parents' opinion on young children's online learning	Reject online learning because of limitations of online platform, self-regulations of children, lacking in professional knowledge
Duran & Ömeroğlu (2021)	Qualitative semi structured interview with 25 parents in Turkey	Time spent of children with their parents at home during the pandemic	Parents and children spent more quality time at home engaging in online and school activities
Jalongo (2021)	Reviewing implications regarding world health pandemic COVID-19	Challenges faced by Children, Parents and Educators due to COVID-19 pandemic	Quality of Life and well-being has been threatened, stresses and inequality towards affected families, alteration on teaching methods, relying on technology and structure of education has been restricted
Kim & Padilla (2020)	Qualitative Case Study of Latino residents in Silicon Valley	Technology barriers among lower income residents to access online education	Socioeconomic barriers where mostly residents of lower income and rural areas were unable to afford digital devices and internet at home

Munastiwi & Puryono, (2021)	Quantitative (only for 5th interview question) and Qualitative methods used to interviews respondents	Effectiveness of education performance during pandemic	Managements of kindergartens and educators has difficulties towards learn-from-home policy due to unpreparedness
O'Sullivan et al (2020)	Qualitative study using semi structured interviews	Effect of home-schooling on psychological during pandemic	Mostly difficult for those from less fortunate backgrounds due to burden in finance and lacking in the access of internet
Soltero-González & Gillanders (2021)	Qualitative study using questionnaires and semi-structured interviews with 20 parents	Challenges that Latinx parents faced during pandemic	Established genuine relationship between parents and teachers as they collaborate to find effective ways for children to engage in online activities
Wheeler & Hill (2021).	Qualitative and Quantitative data with 10 questions on 500 families	Spend time interacting with children at home	Children were benefited by engaging in reading activities and interacting with parents
Rasmitadila et al (2020)	Case study on 67 primary school teachers	Perceptions of primary school teachers of online learning in a program called School from Home during pandemic	Technical obstacles, student conditioning, the participation of students, and online teaching experience are the challenges faced by teachers during online teaching
Moss et al (2020)	Survey of 1653 primary school teachers	Exploring how teachers prioritise their responsibilities towards families and children during pandemic	Teachers focuses on children's well-being during pandemic including their family condition and poverty
Polydoros & Alasona (2021)	Quantitative random sampling of 160 primary school teachers	Investigate whether distance learning would influence teaching and learning of primary school students in science	Teachers need training in the use of new technologies and distance learning methodology for the subject of science
Kruszewska et al (2020)	Survey on 239 Polish teachers of early childhood education	The experienced and how Polish teachers cope with the pandemic	Students lack of information technology at home, lack communication with parents, lack of motivation, and health problems emerge among children

Hascher et al (2021)	Qualitative semi structured online interviews on 21 teachers	Understanding how school closure affect teachers' well-being and lives	Factors like high workload, social distancing and feelings of lack self-efficacy resulted in negative evaluation on teachers' well-being unless being supported by school resources and individual aspects like resilience, clear work structures, coping strategies
Dayal (2020)	Case study on 3 teachers from 2 ECEC centres (early childhood education and care)	Exploring teachers' feelings on pandemic and ways for centres to support education of young children	Teachers experienced challenges and opportunities during remote teaching; the two centres innovate in delivering education for young children
Logan et al (2021)	Multi-site case study with 5 senior managers or CEOs of early childhood education and care organisations	Understanding how pandemic impacted educators' well-being and the strategies used to support their well-being	Educators' well-being was negatively impacted by exposure to physical risk, fear, anxiety, financial stress and feelings of betrayal; strategies used to support include crisis planning, increase focused communication, support for physical safety, well-being resources and programmes
Maity et al (2021)	Quantitative study with 720 primary school students	Factors that influence digital learning of primary students during pandemic	The school structure (willingness of school to conduct virtual classes); accessibility and availability of internet and the economic capabilities of parents to bear internet charges are the main issue
Eadie et al (2021)	Online survey on 232 educators	Explore the impact of pandemic on the well-being of educators and relationship of educators and child	Organizations needed to prioritize in supporting educators' well-being and promote quality educator-child relationships as it is important for children's development and learning
Bubb (2020)	2010 online surveys of teachers, parents and students	Explore the views of teachers, parents and pupils on online learning during pandemic	Parental involvement increased during home-school. They gained more knowledge about their children's learning, and they had opportunities to play a more important role.

semi-structured interviews, quantitative survey, longitudinal survey, case study and mixed methods. Included in this review are studies that used secondary data, including examination performance and government documents or reports. On the basis of thematic analysis, four major themes of the challenges emerged. First, the difficulties in maintaining communication and engagement (e.g. Khan & Mikuska, 2021; Siong & John, 2021). This reduces motivation in online learning, chronic absence, learning loss and poor performance. Secondly, inaccessibility to technology (e.g., Doll et al., 2021; Kim & Padilla, 2020), that includes children who cannot access the internet, unable to afford digital devices and the lack of technological

knowledge due to the financial constraints and geographical restrictions (i.e., rural areas). Thirdly, the challenges entail the lack of support for online learning (Munastiwi & Puryono, 2021; Jalongo, 2021). This can be explained in relation to unprepared parents to facilitate learning at home, inexperienced educators in online instructions, and the failure of the educational system to provide adequate support for children (e.g., internet connectivity; effectives programs). Fourth is the issues related to mental health conditions and the readiness for or motivation in online learning (Zhang et al., 2020; Tomasik et al., 2021). Nonetheless, few studies reported effective online learning and positive outcomes (e.g., Bubb & Jones, 2020; Eadie et al., 2021; Wheeler & Hill, 2021), where they revealed that parental involvement at home and online benefited children's' development and learning. Despite these positive outcomes, these studies also argue the challenges faced by children from the perspectives of educators and parents.

Discussion

Educator Perspectives

Since COVID-19, students are not able to study at traditional school settings anymore. Hence, the solutions for schools and educators to provide a better learning environment for students include distance learning as well as using online platforms (Rasmitadila et al., 2020). Educators are expected to provide a good quality of education even in distance learning. Schools can plan online learning to provide meaningful learning experiences for students even not at school setting (Rasmitadila et al., 2020). There are different types of internet-based learning such as direct learning by using platforms to have video calls or chats with students. There is also an independent learning approach where learning is conducted indirectly, such as online discussions, videos, articles. However, there are a few challenges presented to educators from using online learning systems, including technical obstacles. Most of the articles that reviewed mentioned that technical obstacles are the biggest issue that educators faced during distance learning. In this era of globalization, technology, especially the use of social media has been widely used, but not every student has the privilege to have internet access or own a communication device like a handphone or laptop, especially in villages because the data packages are costly (Polydoros & Alasona, 2021). If students do not have access to devices and the internet, then educators could not implement their teaching plans and activities with them, so they will miss out on their education. Hence, it is important that schools, parents, teachers and even the government should collaborate to find a solution to this challenge. Bubb and Jones (2020) mentioned that the pandemic has put a greater gap for children in poorer homes and those from a privileged background as children with poorer homes have less opportunity to access technology devices. Teachers also have to face crisis situations that are out of their job scope such as being a support for parents, schools and staff.

Besides, educators would need more training regarding technical issues using online technology such as Microsoft Teams, Viber and other online platforms (Dayal & Tiko, 2020). Educators are usually trained in a traditional setting; hence they are not familiar with all the technologies, but due to distance learning, they need to learn and adapt with online technology in order to provide educational activities to their students. This challenge is crucial for experienced educators as well because it would affect the quality of their teaching and take up a lot of time just to figure out how to use the technology. This would actually add on to educators' workload as they need to spend their free time learning new skills like different

types and functions of technology. Additionally, educators also lack experience in online teaching. Kruszewska et al (2020) mentioned that online teaching needed different methodology, different types of activities and work planning. Teachers need to spend more effort and time to find resources to plan tasks that are suitable for children according to their cognitive standard. Nevertheless, educators are not properly trained to do online teaching, so they need to learn by themselves before they can find the most effective and also suitable ways for online teaching.

Another challenge that educators faced is the condition of students (Rasmitadila et al., 2020). Due to COVID-19, all of the family members are working and studying from home, which would cause distraction for students as they did not have the proper studying environment at home. When students lose focus, it is difficult for educators to monitor their condition, to know whether the students are listening or not, and it is hard for educators to make sure that each student understands what the teachers are teaching. Not every child could perform well at home because the environment is not educational friendly as there will be a lot of other distractions like television. Children are easily distracted by the environment because they lack private space for learning. The next challenge is the participation of students (Rasmitadila et al., 2020). Educators cannot control the participation of students because they are not in a school setting, instead students are at home and as mentioned, family activities would cause huge distractions for students therefore the participation of students for online learning would drop tremendously. Educators need to spend time to find ways and plan different activities to make sure that it could keep students' enthusiasm in learning at home, not just direct learning through online platforms but also during independent learning like watching videos or online postings.

Educators encounter lack of teaching tasks and ideas. Teachers understand that they need to adapt their teaching structure around the age of children and get the support from parents in order for the activities and plans to be implemented at home (Moss et al., 2020). However, the challenge that they face during distance learning is lacking tasks that can motivate and engage students to keep their enthusiasm towards online learning. Teachers need to create tasks that can fit into parental activities at home so that parents could help to monitor or carry out the activities that teachers plan for children to make sure that their education is not left behind. Without parental support, it will be difficult for teachers to carry out the plans for online teaching.

One challenge that is of concern for educators would be the cognitive and social competence level of children (Hascher, Beltman & Mansfield, 2021). As children are being kept at home without any social interaction with other peers, there might be the concern of the delay of children's social level. They might be more shy and quiet compared to other children because they spent a long time at home away from people. The lack of interaction with peers during the lockdown period would be one of the factors for social concerns. Moreover, children who could not pay attention during online learning would have difficulties keeping up with other children when they go back to traditional school settings hence there might be a concern for their education progress. Hascher et al (2021) mentioned that these social and cognitive issues will affect their developmental level as the children do not get as much social interaction with peers and could not focus during online class.

Educators have perceived negative well-being as another challenge as the burden they had was doubled (Logan et al., 2021). Not only do they need to care for their students' education while working from home, they also need to take care of their own family. When they experienced uncertainty due to the virus and also switching from traditional teaching to distance learning, their stress level and emotional stability would be affected (Logan et al., 2021). When educators are stressed with work-life balance, their mental and physical well-being would be affected as well, not to mention their work performance as it would be difficult for them to deliver good and strategic tasks for children. During the pandemic, teachers would have increased workload and responsibilities as they need more time to prepare materials and educate themselves on online technologies when they are not teaching. At the time when the risks were not fully understood, educators experienced stress and anxiety of their physical health and also the financial and job safety as they might lose their job and have no income during this period of time. Eadie et al (2021) stated that poor well-being of educators will affect their relationship with children and affect their performance as teachers could not perform well during distance learning. The quality of teaching will be threatened as well.

Parent/Caregiver Perspectives

Parents' view is one of the aspects that play an important role influencing children's environmental education especially amidst the COVID-19 pandemic. Children have to adapt to a new platform of learning environment and the same goes to the parents who need to guide their children in attending daily classes or activities from their respective educators. There are various types of environmental education that were being imposed to assess children's schooling during the COVID-19 pandemic that came abruptly for instance, home-schooling, online learning activities and also online teaching According to Dimopoulos et al (2021), school systems had to improvise their learning method while maintaining the effectiveness of children's learning to obtain knowledge and skills. As we know, most of the learning methods use digital technology to access so, parents mediate between encouraging their children to properly make use of the convenience of accessing the internet for the purpose of browsing and exploring resources. Meanwhile, hindering them from getting exposed to the negativity of digital resources such as inappropriate content from certain websites, online threats, cyberbullying and addiction to videos (Dong, Cao & Li, 2020).

On the other hand, O'Sullivan et al (2020) mentioned that it is a great approach to utilize the technology that we have to continue children's education despite the pandemic however, it may be a burden for the lower income parents. Unlike parents who are higher in socioeconomic level, they are able to adapt to the new learning style of their children such as laptops, computers, internet and other digital gadgets to be used while attending online classes but those from poverty background parents would find it a struggle to provide the necessities for their children to attend their classes (Munastiwi & Puryono, 2021). In fact, the cost of education in general would be much higher compared to attending schools in a traditional way. Aside from that, some of the children or families who lived in rural areas may not be conducive to learn due to insufficient electronic devices as well as unstable internet connection so, that would increase the likelihood of children not being able to attend classes through online platform consistently (Doll et al., 2021).

Not only that, lower socioeconomic status parents shared that they could not avoid spending on electronic devices but with limited devices as this era of technology is rapidly evolving and eventually, they will need to engage with digital access in daily lives such as seeking for employment, browsing for resources and information as well as children's education (Kim & Padilla, 2020). Most of the low-income families do have access to the internet but they are not free to access the internet whenever they want because they do not have the network installed in their household. So, they would use the public internet connections to access to daily necessities such as parents sending text-messages and email to get in touch with the children's academic progress and also children sending emails to submit their assignments to their teachers or educators. Moreover, Jalongo (2021) also mentioned that the basic requirement for online learning is to have a stable and reliable internet connection but, families who live in rural areas, even if they can get access to the internet, the internet connection have limited access to the number of electronic devices connected which restricted them to have the WIFI connection when they need to use it. Therefore, they might not be able to have the benefit of utilizing digital technology for their school work compared to families in the area that is covered with high internet connection speed.

In addition, parents may face other challenges when their children attend online learning from home. Parents will have difficulty to facilitate their children during online learning because, after all, they are not trained educators so they may lack certain skills and knowledge to assist their child when they are engaging in activities (Dong et al., 2020). In this case, parent-teacher relationship is crucial for the parents to collaborate with the teachers to come up with approaches in guiding their children at home to engage in online activities or learning with the teachers and other classmates. Apparently, parents have the obligation to create an effective learning environment at home to support and facilitate their children's learning (Soltero-González & Gillanders, 2021). Thus, teachers and parents must communicate well and adapt to useful strategies to ensure children are able to progress in their learning. Furthermore, Doll et al (2021) stated that parents' expectations and engagement in their children's online education would influence the children's experiences in online learning. This is because every parent has different expectations towards the school or educators of what activities their children should do. For example, some parents prefer their child to engage in hands-on, creative and fun activities as they prefer to get involved with their children to allow them to learn through playing and interacting with their parents. However, some parents prefer to prioritize preparing their children for school therefore, they prefer their children to be given worksheets to acquire knowledge and skills for academic success. Apart from that, Munastiwi and Puryono (2021) also emphasized that parents' involvement or supervision would impact children's performance such as, when the parents spend time and effort to encourage and assist their child throughout their learning process, they would perform better compared to parents who let their children learn on their own.
Conversely, Dong et al (2020) argued that parents of Chinese families in their research have different beliefs and point of view compared to the westerns culture. In the early years, parents of Chinese families appreciated and held positive belief on the usage of electronic devices and technologies as it is beneficial and helps to enhance academic development and also enable children to learn external knowledge and skills to develop children's competencies such as language and expressions. Despite that, the rapid growth of technology nowadays left parents concerned whether it acts as an advantage or is harmful to allow their children to access the digital world so frequently. Therefore, parents tend to set boundaries

to what extent children can surf the internet or engage in using electronic devices. For instance, parents will set rules to limit children's access to digital devices and restrict the frequency and time duration of using electronic devices.

On top of that, according to Dong et al (2020), parents reject and resist online education for their young children due to three reasons which include children unable to self-regulate, drawback of online learning and time consuming and lack of professional knowledge from the parents. Firstly, children were unable to self-regulate during online learning. For instance, the children were unable to concentrate or pay attention closely during online classes because their attention span is short and they will easily get distracted with the surroundings of their home environment. Thus, parents find it difficult to manage their children's online education as the parents do not have the teacher's authority. Secondly, Chinese families reject online education because online learning will be lacking in terms of atmosphere. Children are not able to interact hands-on or practical activities with their classmates and teachers and children do not treat online learning like a formal class so, learning will not be too effective. Thirdly, time consuming and lacking professional knowledge, whereas parents who work from home during the period of pandemic have to juggle between their work and managing their children's school work. Meanwhile, some parents find it beneficial as it helps to strengthen the bond between parents and children relationship since they are able to spend more time with their children at home.

According to Duran and Ömeroğlu (2021), young children is crucial to attend formal learning in school as they are at the age of building the foundation of knowledge and skills but due to the COVID-19 pandemic, they are unable to communicate with their peers and educators face-to-face which caused unfavorable experiences to both parents, children and teachers. Apart from that, Wheeler and Hill (2021) addressed that, parents will be spending more time with their children at home. Apparently, parents will need to hold the responsibilities to ensure that even without the physical interactions with their children's peers and teachers, they are still able to facilitate their child's learning for example, assist the children to engage into educational activities and so forth. However, it is also quite hectic for the parents trying to get their child involved in different play activities to distract them from feeling bored and experiencing any other negative emotions and behaviors such as aggressive, sad, grumpy, ill-tempered and others (Duran & Ömeroğlu, 2021).

Conclusion

This review included mostly articles from the perspectives of educators and parents. Based on the analysis, this review has confirmed that the school closure has profoundly impacted millions of children worldwide. Frustrations rise as many schools in many countries still close or partially close amid the COVID-19 surge. Online learning remains an option in many countries. The challenges include inadequate technology and internet connections, inexperienced teachers with online platforms, problem of assessments, worse student performance, mental health concerns, social isolation, demotivation and absences. Though many children, teachers and parents struggle with remote and online learning, some evidence showed positive outcomes. There is a potential that the education system worldwide has changed dramatically. The findings of this study may be used as a reference for policy makers and educational systems for improving policies on online learning so as to capture Sustainable

Development Goal 4, that is, to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all children.

References

Arksey, H., & O'Malley, L. (2005). Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology, 8*(1), 19-32.

Averett, K. H. (2021). Remote learning, COVID-19, and children with disabilities. *AERA Open, 7*(1), 1-12.

Barraza, L., & Walford, R. A. (2002). Environmental education: A comparison between English and Mexican school children. *Environmental Education Research*, *8*(2), 171-186.

Blanchet-Cohen, N., & Reilly, R. C. (2017). Immigrant children promoting environmental care: enhancing learning, agency and integration through culturally-responsive environmental education. *Environmental Education Research*, *23*(4), 553-572.

Bubb, S., & Jones, M. A. (2020). Learning from the COVID-19 home-schooling experience: Listening to pupils, parents/carers and teachers. *Improving Schools*, *23*(3), 209-222.

Dayal, H. C., & Tiko, L. (2020). When are we going to have the real school? A case study of early childhood education and care teachers' experiences surrounding education during the COVID-19 pandemic. *Australasian Journal of Early Childhood*, *45*(4), 336-347.

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems, 49*(1), 5-22.

Dimopoulos, K., Koutsampelas, C., & Tsatsaroni, A. (2021). Home schooling through online teaching in the era of COVID-19: Exploring the role of home-related Factors that deepen educational inequalities across European societies. *European Educational Research Journal, 20(4), 479–497.*

Doll, K., Ragan, M., Calnin, G., Mason, S., & House, K. (2021). Adapting and enduring: Lessons learned from international school educators during COVID-19*. Journal of Research in International Education, 20(2), 114–133.*

Dong, C., Cao, S., & Li, H. (2020). Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes. *Children and Youth Services Review, 105440.*

Duran, A., & Ömeroğlu, E. (2021). How parents spent time at home with their preschool-aged children during the COVID-19 Pandemic of 2020. *Journal of Early Childhood Research*, 1476718X211059906.

Eadie, P., Levickis, P., Murray, L., Page, J., Elek, C., & Church, A. (2021). Early childhood educators' wellbeing during the COVID-19 pandemic. *Early Childhood Education Journal, 49*, 1-11.

Engzell, P., Frey, A., & Verhagen, M. D. (2021). Learning loss due to school closures during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences, 118*(17), e2022376118.

Garritty, C., Gartlehner, G., Nussbaumer-Streit, B., King, V. J., Hamel, C., Kamel, C., ... & Stevens, A. (2021). Cochrane papid reviews methods group offers evidence-informed guidance to conduct rapid reviews. *Journal of Clinical Epidemiology*, *130*, 13-22.

Gore, J., Fray, L., Miller, A., Harris, J., & Taggart, W. (2021). The impact of COVID-19 on student learning in New South Wales primary schools: an empirical study. *The Australian Educational Researcher, 48*, 1-33.

Hascher, T., Beltman, S., & Mansfield, C. (2021). Swiss primary teachers' professional well-being during school closure due to the COVID-19 pandemic. *Frontiers in Psychology*, *12,* 687512.

Hurwitz, S., Garman-McClaine, B., & Carlock, K. (2021). Special education for students with autism during the COVID-19 pandemic: "Each day brings new challenges". *Autism,* 13623613211035935.

Jalongo, M. R. (2021). The Effects of COVID-19 on Early childhood education and care: Research and resources for children, families, teachers, and teacher educators. *Early Childhood Education Journal, 49,* 1-12.

Khan, T. & Mikuska, É. (2021). The first three weeks of lockdown in England: The challenges of detecting safeguarding issues amid nursery and primary school closures due to COVID-19. *Social Sciences & Humanities Open, 3*(1), 100099.

Khangura, S., Konnyu, K., Cushman, R., Grimshaw, J., & Moher, D. (2012). Evidence summaries: the evolution of a rapid review approach. *Systematic reviews*, *1*(1), 1-9.

Kim, C. J. H., & Padilla, A. M. (2020). Technology for educational purposes among low-Income Latino children living in a Mobile Park in Silicon Valley: A case study before and during COVID-19. *Hispanic Journal of Behavioral Sciences, 42(4), 497–514.*

Kola-Olusanya, A. (2005). Free-choice environmental education: understanding where children learn outside of school. *Environmental Education Research*, *11*(3), 297–307.

Kruszewska, A., Nazaruk, S., & Szewczyk, K. (2020). Polish teachers of early education in the face of distance learning during the COVID-19 pandemic–the difficulties experienced and suggestions for the future. *Education 3-13*, 1-12.

Logan, H., McFarland, L., Cumming, A. T., & Wong, S. (2021). Supporting educator well-being during the COVID-19 pandemic: A case study of leadership in early childhood education and care organisations. *Australasian Journal of Early Childhood*, *46*(4), 309-321.

Maity, S., Sahu, T. N., & Sen, N. (2021). COVID-19 and Digital Primary Education: Impact and Strategies for Sustainable Development. *Journal of Development Policy and Practice*, 24551333211049630.

Meeter, M. (2021). Primary school mathematics during Covid-19: No evidence of learning gaps in adaptive practicing results. *Trends in Neuroscience and Education, 25*, 100163.

Moss, G., Allen, R., Bradbury, A., Duncan, S., Harmey, S., & Levy, R. (2020). *Primary teachers' experience of the COVID-19 lockdown–Eight key messages for policymakers going forward.* London, UK: UCL Institute of Education.

Mullenbach, L. E., Andrejewski, R. G., & Mowen, A. J. (2018). Connecting children to nature through residential outdoor environmental education. *Environmental Education Research*, *25*(3), 365–374.

Munastiwi, E., & Puryono, S. (2021). Unprepared management decreases education performance in kindergartens during Covid-19 pandemic. *Heliyon, 7*(5), e07138.

O'Sullivan, K., McGrane, A., Clark, S., & Marshall, K. (2020). *Exploring the impact of* home-schooling on the psychological wellbeing of Irish families during the Novel Coronavirus (COVID-19) pandemic: A qualitative study protocol. *International Journal of Qualitative Methods, 19,160940692098095.*

Otto, S., & Pensini, P. (2017). Nature-based environmental education of children: Environmental knowledge and connectedness to nature, together, are related to ecological behaviour. *Global Environmental Change, 47*, 88-94.

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., ... & Moher, D. 2021. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ, 372* (72), 1-9.

Payne, P. (2005). Families, homes and environmental education. *Australian Journal of Environmental Education, 21*, 81-95.

Polydoros, G., & Alasona, N. (2021). Using E-learning to teach science in COVID-19 era at Primary Education Level. *Journal of Research & Opinion*, *8*(6), 2964-2968.

Popyk, A. (2021). The impact of distance learning on the social practices of schoolchildren during the COVID-19 pandemic: reconstructing values of migrant children in Poland. *European Societies, 23*(1), S530-S544.

Rasmitadila, R., Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A. R. S. (2020). The Perceptions of Primary School Teachers of Online Learning during the COVID-19 Pandemic Period: A Case Study in Indonesia. *Journal of Ethnic & Cultural Studies*, *7*(2), 90.

Research and Resources for Children, Families, Teachers, and Teacher Educators. *Early Childhood Education Journal, 49(5), 763–774.*

Sigel, I. E., & Hooper, F. H. (1968). *Logical Thinking in Children; Research Based on Piaget's Theory.* New York: Holt, Rinehart and Winston.

Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education, 33*(4), 289-306.

Siong, C. N., & John, J. F. (2021). Goal content and attitudes toward physical activity among primary school students during COVID-19 conditional movement control order. *Asian Journal of Sport & Exercise Psychology, 1*(2), 103-107.

Soltero-González, L., & Gillanders, C. (2021). Rethinking home-school partnerships: Lessons learned from latinx parents of young children during the COVID-19 Era*. Early Childhood Education Journal, 49(5), 965–976.*

Tomasik, M. J., Helbling, L. A., & Moser, U. (2021). Educational gains of in-person vs. distance learning in primary and secondary schools: A natural experiment during the COVID-19 pandemic school closures in Switzerland. *International Journal of Psychology, 56*(4), 566-576.

Tricco, A. C., Antony, J., Zarin, W., Strifler, L., Ghassemi, M., Ivory, J., ... & Straus, S. E. (2015). A scoping review of rapid review methods. *BMC medicine, 13*(1), 1-15.

UNESCO. (2021). *Covid-19 impact on education*. Retrieved from, https://en.unesco.org/covid19 /educationresponse

UNICEF. (2021). *Schools still closed for nearly 77 million students 18 months into pandemic – UNICEF.* Retrieved from, https://www.unicef.org/press-releases/schools-still-closed-nearly-77-million-students-18-months-pandemic-unicef

Wadsworth, B. J. (1971). *Piaget's theory of cognitive development: An introduction for students of psychology and education.* New York: McKay.

Wheeler, D. L., & Hill, J. C. (2021). The Impact of COVID-19 on Early Childhood Reading Practices. *Journal of Early Childhood Literacy*, 14687984211044187.

Yorke, D. L., Rose, P., Woldehanna, P. T., & Hailu, D. B. H. (2021). Primary school-level responses to the COVID-19 pandemic in Ethiopia: Evidence from phone surveys of school principals and teachers. *Perspectives in Education, 39*(1), 189-206.

Zhang, L., Zhang, D., Fang, J., Wan, Y., Tao, F., & Sun, Y. (2020). Assessment of mental health of Chinese primary school students before and after school closing and opening during the COVID-19 pandemic. *JAMA network open, 3*(9), e2021482-e2021482.