

DOES EARLY CHILDHOOD EDUCATION MATTER DURING COVID-19 PANDEMIC: A NARRATIVE REVIEW

Maria Gayatri¹

*¹Badan Kependudukan dan Keluarga Berencana Nasional,
Jalan Permata No. 1, Jakarta Timur (13650).
Email address: maria.gayatri.bkkbn@gmail.com
Phone number: 081382580297*

Abstract

Early childhood is an important milestone in children's life. The practices of online learning are challenging for families with early childhood children. The study examined the implementation of early childhood education during the pandemic of COVID-19. A narrative literature review of some studies published from the inception of the pandemic COVID-19 to October 31, 2020. The search strategy comprised an electronic search of different online database in PubMed, MEDLINE, Web of Science, Scopus and manual search on Google Scholar by an exploration of a web-based search engine and hand searching. The keywords used in this study were "early childhood", "education", "online learning", "pandemic", COVID-19. Early childhood education has been influenced due to school closure. Most of the children experience online learning, to reduce the spread of the outbreak, especially when face-to-face learning cannot be conducted. Parents and teachers have significant roles in supporting the children to improve their cognitive and social development. However, the implementation of home learning causes some difficulties in relation with self-regulation of very young children, the readiness to utilize of digital technology and learning materials, parent's beliefs and attitude on online learning compared with traditional learning, and requirements of demanding time and knowledge to accompany the children. Therefore, it is important to have good communication between parents and teachers to support early childhood online learning during the outbreak.

Keywords: COVID-19, Early childhood, Education, Online learning, Pandemic.

1. Introduction

Since March 2020, the World Health Organization (WHO) has declared the pandemic of the novel coronavirus, known as COVID-19 as a global pandemic. President of Indonesia, Mr. Joko Widodo, suggested people to work from home, school from home and worship at home, since March 16, 2020, to slow down spread of coronavirus. School-age population have been impacted by the school closure, including those in early childhood. Children can not have daily social interactions and activities with their teachers and friends due to the school closures.

The outbreak has changed young children's routines. They should stay at home. Schools are closed and playdates are cancelled. Daily physical activities among children have changed. Spending time for games, sports, study, and play with friends in the parks, school, playgrounds, and gardens becomes limited due to school closure and physical distancing. It is suggested that home is the safest place for children during pandemic.

Early childhood is an important milestone in children's life. However, due to school closure, many education systems move from traditional face-to-face learning to online learning to ensure the class meeting still continue during the outbreak (Organisation for Economic Co-operation and Development (OECD), 2020). Online learning is a platform of learning that many schools adopted during the pandemic. The practices of online learning are challenging for families with early childhood children. The study examined the implementation of early childhood education during the pandemic of COVID-19.

2. Literature Review

Since March until nowadays, due to the coronavirus (COVID-19) pandemic, almost in all provinces and districts in Indonesia had to close all school including child care, playgroup, and kindergarten. The education system moved from face-to-face to online learning. An educational method that provides access to the internet is called as online learning (Kim, 2020). Online learning can make the learning system more flexible, timetable and available and also reduce the educational barriers because of geographical location. To achieve the target, online learning needs different learning teaching and strategies from those used in traditional learning. For some lessons that

need practice such as practicum courses, video observation is one method that suggested as an alternative for student teaching (Kim, 2020).

Moving from traditional education to online virtual classroom is not easy in the beginning, especially in the developing countries where the infrastructure is not well prepared in the whole country. In the remote areas, slum areas or rural areas where the internet connection is limited and many low-income families lived, online learning becomes difficult to achieved. The inequality to access technology still occurred in Indonesia which makes some students become vulnerable because they facing the barriers of education (Azzahra, 2020). Digital technology such as smartphones, tablets, laptops, and the internet connection is needed as a key support equipment in online learning.

There are some advantages of implementing online learning such as quick and efficient delivery of courses through geographical and time constraints, flexible, convenient, increased accessibility and interest for non-traditional students, increased participation rates, and cost-effective (Heirdsfield, Davis, Lennox, Walker, & Zhang, 2007; Kim, 2020). However, there are some drawbacks of online learning for young children such as depend on the technological abilities of students and teachers, need parent/adult guidance, need more interactive methods to make young children focused in online learning (Kim, 2020). A study in Jordan reveals there are four barriers of distance learning during the pandemic: 1) Personal barriers which included lack of training and support, lack of technical expertise, inadequate communication and lack of qualifications; 2) Technical barriers which included insufficient investment and maintenance and poor connectivity; 3) Logistical barriers which included difficulties when using distance learning, lack of student preparedness, dissatisfaction with distance learning modality and inability of distance learning to meet student's needs; and 4) Financial barriers which included inability to buy technology and inability to pay for internet services (Abuhammad, 2020).

3. Research Methods

This study was a narrative review study, in which literature in English language was evaluated using electronic search strategy of different database in PubMed, MEDLINE, Web of Science, Scopus, and manual search on Google Scholar.

Searching in databases was used by exploring of a web-based engine and hand searching using key words of “early childhood”, “education”, “online learning”, “pandemic”, “home learning”, “home schooling”, “outbreak”, and “COVID-19”. The keywords were chosen for evaluation in PubMed database accordance with the Medical Subject Headings (MeSH) system. In a hierarchy called a tree, MeSH concepts are grouped, with more specific concepts arranged under wider forms (Ecker & Skelly, 2010). The use of MeSH terms expands the search strategy and optimizes it (Ecker & Skelly, 2010). The articles included in the study were research on the process, factors and outcome related with early childhood education during the pandemic COVID-19 that published from the inception of the pandemic COVID-19 to October 31, 2020.

About 68 paper abstracts were selected and reviewed in term of the inclusion and exclusion criteria in the beginning evaluation of the article titles. Based on the criteria, there were 15 articles were appropriate to be further reviewed. In the next phase, Author prepared the full paper of each article’s title. Author tried to find the full text article through various databased. However, if the full text could not be found, Author tried to send a request of full article to the correspondence author’s email directly. Only studies which fulfilled the inclusion and exclusion criteria and found the full text would be extracted and included in the study. The articles were classified based on scientific content.

4. Result and discussion

4.1. Early Childhood education

In the digital era, early childhood are familiar with touchscreen technologies with internet connection (Kim, 2020). Early childhood education focuses on learning by playing, interacting and exploring by using various languages, their body interaction and movement for communication (OMEP Executive Commitee, 2020). Early childhood education involves multifunctional activities can build young children’s emotional and affective relationship. Therefore, gesture, physical contact, body language, facial expression, dynamic movement, outdoor playground, or hugs are needed for children learning system.

During the pandemic, there are some changes in daily activities such as less physical active time, sleep later at night or irregular sleep schedule, spend more time for sedentary and screen time which increased risk of exposed by unsafe and inappropriate substances, favorable diets disturbance, increase risk of obesity, and language delay (Guan et al., 2020; Lau & Lee, 2020; Wang, Zhang, Zhao, Zhang, & Jiang, 2020). Physical activities went down by 59%, time watching television increased by 66%, time playing video games increased by 35% and screen time increased by 81% during April 2020 when the pandemic occurred (Guan et al., 2020).

Home confinement has caused potential physical and mental health problems such as weight gain, stress, frustration, boredom, lack in-person contact (Wang et al., 2020). Guidelines of learning system for early childhood should be clear and easy to understand in achieving the educational requirements and promoting healthy lifestyle, so it is not overburden the pupils (Wang et al., 2020). However, isolation or confinement may also increase a risk of domestic violence (Yoshikawa et al., 2020)

4.2. Challenges of online learning

School closures significantly reduce the transmission of the virus. Most of the children experience online learning, to reduce the spread of the outbreak, especially when face-to-face learning cannot be conducted. Online learning is an important learning system during pandemic. By online learning, the educational contents and materials can be delivered. Moreover, young children can meet and interact with their teachers and friends. Stimulating activities among young children can be developed through online learning.

The implementation of home learning has challenged families with young age children. Some potential challenges are occurred during home learning in relation with self-regulation of very young children, remaining focused and concentrated during online learning, the readiness to utilize of digital technology and learning materials, parent's positive beliefs and attitude on online learning compared with traditional learning, motivation to be active and interactive during online learning, accessibility, quality of preschool program, and requirements of demanding time and knowledge to accompany the children (Dias, Almodóvar, Atilas, Vargas, & Zúñiga León, 2020; Dong, Cao, & Li, 2020; Organisation for Economic Co-operation and Development (OECD),

2020). Young children may not have technological abilities like adults such as typing some words, sharing files or uploading the assignments, but they can utilize the simple technology such as mute the microphone, turn on the camera or leave from the meeting.

There are three phases which need to be enhance in the process of home learning: planning, implementation and reflection (Kim, 2020). In the planning session, teachers should prepare the syllabus, materials, online learning tools and virtual instruments to support the process of teaching class through online. During the implementations, teachers should have a good communication with the parents by sending emails to inform the preparedness needed for learning process and ensure the timetable of each class. Then, teachers should create an interactive and creative class to encourage physical and cognitive development for early childhood. In the reflection session, teachers ask their student to share the insight and reflections of the lesson and experience during online learning (Kim, 2020).

Online learning for very young children have led to some difficulties such as the lack of focus and interest of early childhood, the interruption from other family members during the virtual meeting, and limited resources and materials for online learning (Lau & Lee, 2020). As preschool students, it is difficult for young children to keep concentrated during online learning. Children's behaviors such as jumping on the chair, rolling on the floor or bringing their pets or toys to online class are unavoidable during the virtual class (Pramling Samuelsson, Wagner, & Eriksen Ødegaard, 2020). Therefore, teacher's and parent's cooperation are needed to create the class more conducive.

A study in China reveals that parents of young children appear to oppose the online learning due to the limitations of online learning, the insufficient self-regulation of young children, and parent's lack of time and technical expertise to facilitate online learning (Dong et al., 2020). Furthermore, there are some parent's negative believe of online learning such as less effective when online learning compared with traditional learning, probability lead to vision problems such as myopia among early childhood because increasing of screen time, and limited physical activities especially for children who addicted with gadgets during stay at home (Dong et al., 2020; Lau & Lee, 2020). A study in Sweden shows that parents see preschool as a secure place

including how the workers minimize the potential risks from highly contagious virus in school (Pramling Samuelsson et al., 2020).

In Indonesia's online learning, unequal access to the internet connection, the inequality in teacher qualifications and education quality and also the limited ICT skills are becoming a barrier especially during the COVID-19 Pandemic (Azzahra, 2020). Teachers need to equip with knowledge to use and deliver the lessons by using ICT because it is not easy to deliver lessons for early childhood with online learning.

4.3. Teachers' and Families' support

Besides the students, the teachers also need capacity building to use Information and Communication Technology (ICT) effectively in their teaching then practice it in facilitating their students to enhance the learning process. Capability to handle online learning by develop teacher's presentation skills, skills to make children stay focused and interacting are needed by teachers to accomplish the online learning goals.

Open communication need to be developed between children, their parents and teachers to help the young children is they have any physical and psychological problems during online learning and home confinement (Wang et al., 2020). Good and intense communication between parents and teachers are needed to achieve the online learning goals. Parental emotional support and teachers enthusiasm towards online learning are associated with learning attitudes such as pupil's self-efficacy, ambitious learning goals, enjoyment of reading and motivation to master tasks (Organisation for Economic Co-operation and Development (OECD), 2020). Parents and teachers have significant roles in supporting the children to improve their cognitive, social and emotional development.

As can be known, the outbreak has changed the way of living including social life such as isolation, psychological distress, substantial economic distress, depression, restricted travel and also domestic violence (Campbell, 2020; Patrick et al., 2020). The changes, difficulties, and hardship caused by the outbreak, have made some parents to be resistant to the process of digital and online learning for early childhood. Nowadays, parents should focus not only on their daily routine but also in assisting their children during online learning. Parental guidance plays an important role for early childhood online learning (Lau & Lee, 2020). As adults, parents should help

young children to prepare the material, guide them to be in touch with technology, translate the lessons from their teachers, support their children to do worksheet or homework and also to submit the assignments through student's email.

During the pandemic, parents not only need a good parenting skill but also need a good capability of education to accompany and support their children in online learning (Abuhammad, 2020; Lau & Lee, 2020; Wang et al., 2020). Parents need to monitor their child's performance and guide their children to build self-discipline during stay at home. During the isolation, parents and children have more time to meet and do some activities together, such as doing domestic works together, so the family bonds and children's self-skills can be strengthened.

Parents and teachers should encourage healthy movement behaviors among children (Guan et al., 2020). This is important because 1) home confinement may related with increasing risk of vitamin D deficiency, mental health problems, and myopia, 2) physical activities may reduce the risk of respiratory infections among children, 3) healthy movement behaviors can be used as coping strategy for life-changing among children, 4) the impact of healthy movement behaviors are more pronounced, and 5) longer health impacts and economic consequences (Guan et al., 2020).

However, parents who are still working from the office during pandemics, such as those who work in hospital, clinics, pharmacy, or etc., cannot accompany their children on online learning. In this condition, parents can utilize media-based learning platforms and recorded online learning to guide their children doing the worksheets, so children are not at risk to be disadvantaged in their academic goals. Later, when the pandemic begins to fall and schools begin to reopen, social distancing in school should be practiced to minimize the spread of the virus (Viner et al., 2020).

5. Conclusions and suggestions

Pandemic COVID-19 has a potential impact of early childhood educational system worldwide. It may influence children's cognitive and social development. Teachers, parents, governments and all societies must be in collaboration to do mitigating actions to reduce negative impacts on the future generations. Therefore, it

is important to have good communication between parents and teachers to support early childhood online learning during the outbreak.

It is recommended to prepare the learning materials much more details to support early childhood education. It will help parents to be well prepared and more focused in supporting their young children during home learning. The promotion of the benefits of online learning should be improved, so parents will have more positive beliefs and attitudes, then can fully support their young age children in the online learning. Holistic and humanistic learning system for early childhood should be implemented to fulfill the rights of education among children. Moreover, the curricula guidelines should be clear and well developed to maximize the ability to utilize the online learning system. Future research is necessary to examine how online learning for very young children has created changes in academic performances.

Declaration of interest

The author declares no competing interest

References

- Abuhammad, S. (2020). Barriers to distance learning during the COVID-19 outbreak: A qualitative review from parents' perspective. *Heliyon*, 6(11), e05482. <https://doi.org/10.1016/j.heliyon.2020.e05482>
- Azzahra, N. F. (2020). *Policy Bried No. 2: Addressing Distance Learning Barriers in Indonesia Amid the Covid-19 Pandemic*. Jakarta.
- Campbell, A. M. (2020). An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. *Forensic Science International: Reports*, 2, 1–3. <https://doi.org/https://doi.org/10.1016/j.fsir.2020.100089>
- Dias, M. J. A., Almodóvar, M., Atilas, J. T., Vargas, A. C., & Zúñiga León, I. M. (2020). Rising to the Challenge: Innovative early childhood teachers adapt to the COVID-19 era. *Childhood Education*, 96(6), 38–45. <https://doi.org/10.1080/00094056.2020.1846385>
- 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*, 118. <https://doi.org/10.1016/j.chilyouth.2020.105440>
- Ecker, E., & Skelly, A. (2010). Conducting a winning literature search. *Evidence-Based Spine-Care Journal*, 1(01), 9–14. <https://doi.org/10.1055/s-0028-1100887>
- Guan, H., Okely, A. D., Aguilar-Farias, N., del Pozo Cruz, B., Draper, C. E., El Hamdouchi, A., ... Veldman, S. L. C. (2020). Promoting healthy movement behaviours among children during the COVID-19 pandemic. *The Lancet Child and Adolescent Health*, 4(6), 416–418. [https://doi.org/10.1016/S2352-4642\(20\)30131-0](https://doi.org/10.1016/S2352-4642(20)30131-0)
- Heirdsfield, A., Davis, J., Lennox, S., Walker, S., & Zhang, W. (2007). Online learning

- environments: What early childhood teacher education students say. *Journal of Early Childhood Teacher Education*, 28(2), 115–126. <https://doi.org/10.1080/10901020701366699>
- Kim, J. (2020). Learning and Teaching Online During Covid-19: Experiences of Student Teachers in an Early Childhood Education Practicum. *International Journal of Early Childhood*, 52(2), 145–158. <https://doi.org/10.1007/s13158-020-00272-6>
- Lau, E. Y. H., & Lee, K. (2020). Parents' Views on Young Children's Distance Learning and Screen Time During COVID-19 Class Suspension in Hong Kong. *Early Education and Development*, 1–18. <https://doi.org/10.1080/10409289.2020.1843925>
- OMEP Executive Committee. (2020). OMEP Position Paper: Early Childhood Education and Care in the Time of COVID-19. *International Journal of Early Childhood*, 52(2), 119–128. <https://doi.org/10.1007/s13158-020-00273-5>
- Organisation for Economic Co-operation and Development (OECD). (2020). *Strengthening online learning when schools are closed : The role of families and teachers in supporting students during the COVID-19 crisis*. Paris.
- Patrick, S. W., Henkhaus, L. E., Zickafoose, J. S., Lovell, K., Halvorson, A., Loch, S., ... Davis, M. M. (2020). Well-being of Parents and Children During the COVID-19 Pandemic: A National Survey. *Pediatrics*, 146(4), 1–8. <https://doi.org/10.1542/peds.2020-016824>
- Pramling Samuelsson, I., Wagner, J. T., & Eriksen Ødegaard, E. (2020). The Coronavirus Pandemic and Lessons Learned in Preschools in Norway, Sweden and the United States: OMEP Policy Forum. *International Journal of Early Childhood*, 52(2), 129–144. <https://doi.org/10.1007/s13158-020-00267-3>
- Viner, R. M., Russell, S. J., Croker, H., Packer, J., Ward, J., Stansfield, C., ... Booy, R. (2020). School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. *The Lancet*, 4, 397–404. [https://doi.org/https://doi.org/10.1016/S2352-4642\(20\)30095-X](https://doi.org/https://doi.org/10.1016/S2352-4642(20)30095-X)
- Wang, G. H., Zhang, Y., Zhao, J., Zhang, J., & Jiang, F. (2020). Mitigate the effects of home confinement on children during the COVID-19 outbreak. *The Lancet*, 395, 945–947. <https://doi.org/10.3969/j.issn.1674-8115.2020.03.001>
- Yoshikawa, H., Wuermli, A. J., Britto, P. R., Dreyer, B., Leckman, J. F., Lye, S. J., ... Stein, A. (2020). Effects of the Global Coronavirus Disease-2019 Pandemic on Early Childhood Development: Short- and Long-Term Risks and Mitigating Program and Policy Actions. *Journal of Pediatrics*, 223(1), 188–193. <https://doi.org/10.1016/j.jpeds.2020.05.020>