The Effectiveness of Children's Learning Time in Online Learning System during the Covid 19 Pandemic in Kindergartens

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Abstract. This study is to determine the effectiveness of children's learning time when the parents take over the role of the teacher as a controller of children's learning at home. This study uses a quantitative approach, the type of survey research. The sample of this study consisted of 15 teachers and 150 students, 70 students aged 4-5 years old and 80 students aged 5-6 years, from 15 kindergartens in Makassar. The data analysis used quantitative descriptive. The results show that the children's effective learning time during the COVID-19 pandemic has decreased significantly by 200 percent from the average 900 minutes of learning time per week in direct learning to 300 minutes in online learning or a decrease of 66% in learning time. The change in effective learning time was due to an adjustment in the government's learning from home policies, which impacted the unpreparedness of schools in implementing the online learning system. Support for human resources, especially teachers' ICT skills and the opportunity for parents to become children's learning companions, is deficient. Another obstacle is the limited availability of school infrastructure and parental support for online learning.

Keywords: Effective learning time, online learning in kindergartens, Covid-19.

INTRODUCTION

The outbreak of Coronavirus Disease 2019 (COVID-19) has had a huge impact on the world. According to the UNESCO Institute of Statistics (Hassana & Mirzab, 2020), The number of students affected was 1,186,127,211, comprising 67.7% of the total enrolled learners in 144 countrywide from pre-elementary school to high school and tertiary II. Kandri (2020) reported that around 1.5 billion students - nearly 90% of all elementary, middle, and high school students in the world, are no longer physically able to attend school. The impact is dramatic and transformative as educators strive to implement workable short-term solutions to distance teaching and learning, particularly in emerging markets, where students and schools face additional challenges related to the availability of finance and infrastructure.

The impact of COVID-19 is felt in various sectors of human life, such as the impact on social, economic, and government. Likewise, in the field of education, the imposition of restrictions on community activities in various regions in Indonesia impacts the implementation of the teaching and learning process for all levels of education, starting from early childhood education services to tertiary institutions. Changes in the implementation of

learning are carried out by changing the face-to-face learning model in the classroom into an online learning system that requires internet access support, facilities and infrastructure, and no technology illiteracy (Hidayah, Adawiyah, & Mahanani, 2020).

The change in the learning system is an effort to maintain the students' rights to get educational services in a safe condition while staying at home. (Khasanah, Pramudibyanto, & Widuroyekti, 2020). The implementation of the home learning program by the Ministry of Education and Culture is one solution to ensure schools continue their functions as part of the nation's intellectual life. Arifa, F. N. (2020) stated that the process of learning from home through distance education is a solution to provide educational services. Through learning at home, students can complete their learning program according to their level of education through the online learning system that has been implemented by schools in collaboration with students' parents. Online learning appears as an asset to connect students, keep them engaged, and prevent lost hours of study when traditional classroom teaching suddenly stops (Agarwal, S. and Dewan, J .: 2020). According to Setiawan, L. D. (2020), there is a change in the design of learning to adjust health protocols as a substitute for the learning that temporarily cannot be entirely carried out offline.

The implementation of learning during 2020 ensures that all schools have made various efforts in implementing online learning systems regardless of various obstacles and weaknesses. These obstacles include those, who implement the program, have not been trained to use the equipment for distance learning models (Kahfi, A .: 2020). This is because changes in the learning system are policies that occur due to the sudden and scale restrictions so that the readiness of educational institutions is carried out conditionally. Another impact that occurred according to Jaelani, A. et al. (2020) is a change in the learning system that affects the process of teaching and learning activities and the level of students' development in responding to the learning material. Before implementing learning, teachers are required to prepare the lesson plans, communicate with parents, and provide other supporting facilities (Ayuni, D. et al. (2020).

The implementation of educational services at the early childhood level cannot be separated from the learning problem as the impact of COVID-19. Even according to Muhdi, Nurkolis and Yuliejantiningsih, Y. (2020), early childhood education is at risk of entering the lost generation due to distance learning, which confuses teachers and parents to provide the best stimulation for students. Therefore, early childhood education services, especially kindergartens, are inseparable from the necessity to follow the learning system from a conventional model to online learning. In the implementation of learning in kindergartens according to Pramana, C. (2020), government policies emphasize the need to take innovative steps, provide solutions to problems that occur, and consider better ways to provide education during the pandemic.

Learning during COVID-19 using an online system is carried out with various kinds of problems. According to Bahasoan, A. N. et al. (2020) online learning systems implemented during the COVID-19 pandemic are effective but inefficient. It is effectively implemented because of the conditions requiring online learning, but it is inefficient because it costs more than offline learning. Likewise, in its implementation, distance learning using online media is only effective for certain learning materials (Nadeak, B.: 2020). Moreover, learning in kindergartens functions to develop children's potential based on their developmental aspects such as cognitive, social-emotional, language, religious and moral values, and art. The implementation of learning according to Anugrahana, A. (2020) includes WhatsApps, WhatsApp Web, Google Classroom, Google Group, TeamLink, Microsoft Teams, Kaizala Microsoft, Zoom Meeting & Webinar, Youtube, Google Hangouts. Meanwhile in kindergartens during the COVID-19 pandemic, online learning was implemented using the Zoom application for face-to-face learning and WhatsApp to provide learning materials and assignments (Hikmat et al .: 2020). However, not all of these applications can be used by schools, teachers and parents, even some students tend to prefer direct learning compared to online media (Agustin Mawarni, I. T. et al .: 2020). Likewise for parents, Wardani, A. et al. (2021) mentions that the implementation of online learning has some obstacles such as a lack of parents' understanding of the material, parents' difficulties in fostering children's interest in learning, parent's condition to not having enough time to accompany their children

because they have to work, parents' impatience in accompanying their children studying at home, parents' difficulties in operating gadgets, and obstacles related to internet service connectivity.

Various obstacles in implementing online learning have an impact on students' learning activities. Moreover, the conditions and characteristics of learning at the early childhood education level are different from those of other formal education. Rina, G., & Karmila, M. (2020) suggest that learning in early childhood education services has a different characteristic. Therefore, the study aimed to know to what extent children's learning time activities were effective using an online system. The time for face-to-face learning lasts at least 180 minutes per day or 900 minutes per week. Therefore, these results compare the effective time of conventional learning and online learning during the COVID-19 pandemic.

This study provides an overview of the effective learning time of early childhood education services toward the implementation of learning at home as an impact of the learning system during the COVID-19 pandemic. In addition, it provides an overview of the causes of a decrease in effective learning time based on schools, teachers, and parents. The results of this study provide information for early childhood education services to carry out home learning programs effectively by minimizing obstacles that can arise.

METHOD

This study uses a quantitative approach, the type of survey research. Lawrence (2012) stated that survey research is quantitative research, where researchers ask the respondents about their past or present beliefs, opinions, characteristics of an object, and behavior. The survey research method deals with questions about one's own beliefs and behavior. Therefore, this research aims to broadly explore the causes or things that affect the students' effective learning time during the COVID-19 pandemic in kindergartens. The sample of this study consisted of 15 teachers and 150 students, 70 students aged 4-5 years and 80 students aged 5-6 years, from 15 kindergartens in Makassar. Questionnaire was used to collect data on teachers' and parents' activities when implementing learning from home.

Table 1. Respondent Data

Description	Number	Data Information Technique
Group A Teachers	7	Questionnaire
Group B Teachers	8	Questionnaire
Group A Students' Parents	70	Questionnaire
Group B Students' Parents	80	Questionnaire

The approach in data analysis used in explaining the findings is a quantitative approach using percentage analysis and presented in descriptive form. The data was generated from important or interesting patterns in the use of online learning systems toward children's effective learning time in kindergarten and discussing or answering a problem in implementing learning at home. The research findings were obtained through analysis by compiling several questionnaires to be submitted as material to explore respondents' information.

RESULTS AND DISCUSSION

Result

1. Types of online learning applications in kindergarten

The research results on the implementation of learning in kindergartens during the COVID-19 pandemic show that the learning used an online system in zoom meetings, google meetings, google forms, and WhatsApp applications. The comparison of the use of these applications in the implementation of learning in kindergarten is in Figure 1.
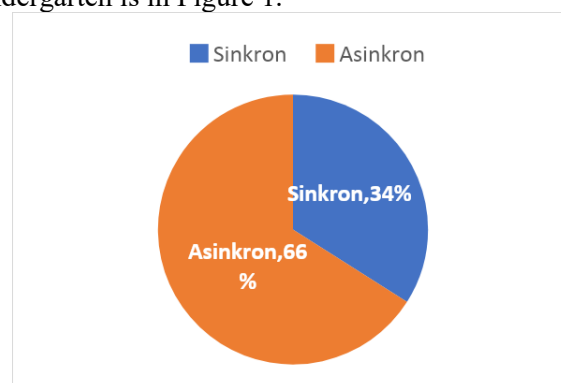

Figure 1. The Use of Learning System Based on Types

The use of applications in the implementation of learning in kindergarten is more on the use of asynchronous applications. The implementation of asynchronous learning

was 66 percent whereas synchronous learning was 34 percent. The implementation of learning using asynchronous media is more widely used by schools and parents because of the level of
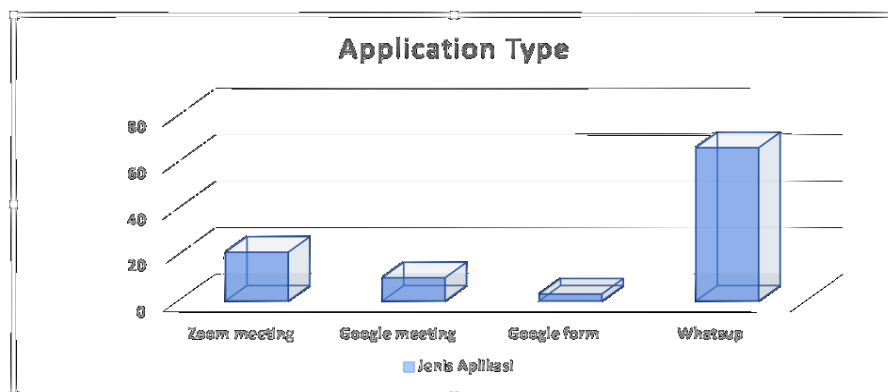
mastery in using the application.

Figure 2. The Use of Application System in Learning

The implementation of online learning mainly uses the WhatsApp application because it is considered easy to use. The implementation of the learning is more familiar with the WhatsApp application by 66 percent compared to other applications such as zoom meetings by 21 percent, google meeting by 3 percent, and google form by 3 percent.

2. The Effectiveness of Learning Time During the Pandemic

The implementation of learning during the COVID-19 pandemic is supported by the collaboration between schools and parents of students. Therefore, the effectiveness of learning time by students is determined by these two parties. The data on the effective learning time for early childhood are as follows:

Table 2. The Use of Effective Learning Time (Daily) during Covid-19 Pandemic

Learning Time	Group aged 4-5 year	Group aged 5-6 year
120 minutes	0 %	0 %
90 minutes	6 %	10 %
60 minutes	30 %	46 %
30 minutes	62 %	44 %
> 30 minutes	2 %	0 %
Total	**100 %**	**100 %**

The effective use of students' learning time in the implementation of learning in kindergarten for two age groups is in the range of 30-60 minutes per day. Only a few children can

maintain learning with the duration of time 60 - 90 minutes.

The data shows a significant change in the effective learning time both to the 4-5 year and the 5-6 year learning group. The use of effective time is on average 60 minutes per day or around 300 minutes per week. This shows a reduction in the children's effective learning time which is carried out at home as much as 600 minutes per week based on the effective time for direct learning classes. The reduction of the learning time intensity is due to changes and adjustments to the learning model at home, school facilities and infrastructure, human resources, and the area where the children live.

Discussion

Home learning using online media basically functions as a substitute for the implementation of direct learning as Jena, P. K. (2020) suggests that teachers can use virtual classrooms to teach from home with all the necessary tools that make online sessions as effective as traditional sessions. However, various changes in the intensity of learning time from 900 minutes per week to 300 minutes per week decreased the effective learning time by up to 200 percent. This reduction will have an impact on the quality of learning as an effort to achieve the maximum potential of children's development. Children's interest to follow the learning process at home is very different from learning activities that occur in direct learning which is divided into 4 learning stages, namely initial activities

for 30 minutes, core activities for 90 minutes, rest for 30 minutes and final activities for 30 minutes. .

The implementation of learning at home using online media has a different mechanism. The learning process is generally carried out using asynchronous media where the teacher sends the subject matter to each child using asynchronous applications then the parents organize and guide the learning process at home. This condition causes the implementation of learning carried out by children to vary according to the academic culture of the school, the characteristics of the children, the conditions of the home environment related to the facilities and infrastructure that support the implementation of online learning. Hanifah Salsabila, U. et al. (2020) reveal that in the implementation of online learning, certainly, there are obstacles that challenge education actors, related to academic culture including values, attitudes, knowledge, skills, and readiness of technology-related facilities and infrastructure.

The effective timing of children's learning at home during the COVID-19 pandemic takes place with a number of learning mechanisms, namely 1) using a combination of synchronous and asynchronous learning media; 2) implementation of learning using asynchronous media. The implementation mechanism that combines synchronous and asynchronous is carried out by implementing learning interactions between teachers and students using direct communication media such as the zoom meeting application and google meeting then followed by asynchronous learning in the form of sending children's worksheets via WhatsApp and the children sending their worksheets. In the implementation of learning using asynchronous media, the teacher provides overall learning instructions through the use of WhatsApp and google meetings and gives freedom to children to complete the worksheets and send them back using the same online learning media.

Synchronous and asynchronous learning has become a difficult choice for some kindergarten educational institutions. This is because teachers and parents do not master the use of synchronous applications such as zoom meetings and google meetings, so it is considered that the use of these applications is not effective in early childhood learning. Likewise, Haqien, D. and Rahman, A. A. (2020) in their research results stated that the use of zoom meetings in learning is less effective.

The findings of the use of effective time in learning at home especially in kindergartens were done more on giving assignments that were sent through asynchronous media. Meanwhile, Wahyono, P., Husamah, H. and Budi, A. S. (2020) argued that teachers should not merely give assignments, but they must appreciate the students' achievements and apply a flexible curriculum adapted to the conditions of the school environment and students. The use of the task-giving learning model is carried out because it is the easiest choice when online learning is required without considering the readiness of the school's resources. Dhawan, S. (2020) stated that the COVID-19 pandemic situation is challenging education systems worldwide and forcing educators to switch to online teaching mode overnight. Many academic institutions that were previously reluctant to change their traditional pedagogical approach had no choice but to switch entirely to online teaching-learning.

The involvement of parents influences the use of effective learning time for children. The parents have a role as controllers of children's learning methods at home. Arfiani, N., Nofia Sari, O. and Vitriana, B. (2020) suggest that online learning requires a more dominant role for parents than teaching and learning activities using conventional methods. Parents need to understand the characteristic of children's learning and allow them to complete their tasks with regular learning time and appropriate achievement targets. However, differences in parents' abilities are one of the keys to successful learning and effectiveness in using the learning time. Some parents find it difficult to guide their children due to their inability to use technology, the availability of time to accompany their children to learn, differences in parenting patterns that lead to the unequal potential development of children. Thus, the tendency for the learning system to provide more parental roles than teachers still needs further studies. Herliandry, L. D. et al. (2020) assert that the learning technique needs to be evaluated according to local conditions because of the distribution of facilities and the ability of parents to provide different online learning facilities to students in Indonesia.

CONCLUSIONS AND SUGGESTIONS

The implementation of learning during the

COVID-19 pandemic has an influence on the effective time of children's learning. Changes in the quantity of learning are one of the factors that can affect the expected quality of learning. The effectiveness of learning time that takes place in kindergarten during the COVID-19 pandemic has a very significant difference from the implementation of direct learning. The decrease in intensity reaches 200 percent of the learning time that has been carried out at schools. The lack of learning effectiveness is due to the readiness of schools to implement an online learning system, including the support of human resources, especially the ICT capabilities of teachers and the opportunity for parents to become children's learning companions, and the lack of availability of school facilities and infrastructure and parental supports related to the implementation of online learning systems. In practice, online learning in early childhood education services is dominated by asynchronous learning systems.

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