

Implementation and Challenges of Online Learning in Early Childhood Education Post Covid-19 Pandemic

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Abstract

This study highlights the importance of implementing an appropriate learning system to achieve learning objectives, especially in the context of early childhood education post-covid-19. This study aims to determine the implementation and challenges faced by teachers and parents in online learning post-covid-19. Using a descriptive qualitative research method, data collection was carried out through observation, interviews, and Google Forms, and analyzed using the triangulation method. The results showed various challenges such as limited facilities and infrastructure, lack of understanding of teachers and parents, and less than optimal collaboration. In addition, the condition of the child and the limitations of the media used are also obstacles. This study suggests that teachers need to facilitate internet networks and understand the characteristics of effective online learning. The main indicators of successful online learning for early childhood include the presentation of appropriate materials, the use of appropriate methods and media, and clear assessment strategies. This implementation is important to ensure that children still get an optimal learning experience even though it is done online.

Keywords : *Online learning; implementation; challenge; post-covid; early childhood*

INTRODUCTION

Incident Covid 19 has devastated all aspects of life throughout the world, including in the field of education. The Covid pandemic has also spread throughout Indonesia. This outbreak initially originated from the city of Wuhan in China in December 2019 (Mohan & Vinod, 2020; Wang et al., 2020). At the beginning of 2023, the World Health Organization (WHO) stated that the end of the Covid pandemic would be demonstrated by the success of countries around the world, but continued to emphasize that the Covid pandemic would continue to exist on this Earth (Fenner & Cernev, 2021). The Covid pandemic has changed the world, and our world of education has also changed. Like what should happen. If we return to the way things were before the Covid pandemic, we will not learn and blame future generations (Cooper, 2021). Decree of the President of the Republic of Indonesia (Keppres) Number 17 of 2023 concerning Determination of the End of the Corona Virus Disease Pandemic Status in Indonesia.

Pandemic Covid has given a new color to the world of Indonesian education. We all have unprepared faces today. Almost all countries experience the same thing, namely stuttering and panicking when attacked by these small invisible creatures. A variety of policies, from the truly mature to the amateurish, are a bitter choice for educational institutions and ministries. There are several lessons that we need to learn from the education emergency during the Covid-19, starting from positive things such as emphasizing regarding the digitalization of negative learning education such as a lack of digital literacy among students and a lack of learning support infrastructure (Pokhrel & Chhetri, 2021; Sahulata, 2023; Valentia, 2023). This learning should make us all stronger in every line of defense, from families, teachers, schools, to ministries at the central level. Because the most valuable lessons are the lessons, we learn (Madi et al., 2023; Openo, 2020; Wieland & Kollias, 2020). And the experience of this pandemic must be a guide so that when the world shakes again, we no longer stutter.

The post-covid world of education is increasingly strengthening the digitalization of education (Tan, 2021; Thahir et al., 2023; Zancajo et al., 2022). This will be a chore for everyone, including the holder. This pandemic has certainly not only caused the rise of teenagers as 'digital natives', but also children's ages (David, 2022). This is of course not a bad thing, but teachers and parents must keep pace with this development. What needs to be done is how to adapt teaching methods to digital technology (Ally, 2019; Caena & Redecker, 2019). Where learning should prioritize a process, not results. Therefore, if all value comes from good and bad (consequences), then digital technology has delivered it. On the other hand, from the teacher's point of view, there must be some convenience to access the learning process profitably. Various forms of online training, seminars and conferences have become a kind of new culture in the world of education (Pratama et al., 2020). This is another positive value regarding information openness after the Covid pandemic end (Schmiedeberg & Thönnissen, 2021; Wolf et al., 2020). This is encouraging news for teachers to improve their professional competence.

Therefore, the post-pandemic learning process should no longer be a process of transferring knowledge or knowledge, but rather processing knowledge or knowledge provided through digital technology (D. T. K. Ng et al., 2023; Rapanta et al., 2021). Learning will be more meaningful and better. Apart from that, maturity in the learning process must be created through educational digitalization programs. However, the challenge of educational digitalization is of course how to generalize perceptions and infrastructure (Broo & Schooling, 2023; Verdecchia et al., 2022). because without infrastructure support, digitizing education will just be a big discussion without results. Because in the online learning process there are still many technical problems related to digital technology (Adedoyin & Soykan, 2023).

Online learning is a learning design system whose implementation uses an internet network and is carried out indirectly between teachers and children, with the same learning time for learning materials by sending text, audio, images, animation and video streaming, as well as website-based learning applications that are used. via the internet network (Halim et al., 2022; Rasmitadila et al., 2020; Syakur et al., 2020; Yuliansyah & Ayu, 2021). The government also provides various facilities to support online learning, through broadcasting learning via television and radio as well as providing free/cheap quotas to teachers and students (Harahap et al., 2021). Diverse learning requires all parties from teachers, parents and students to collaborate and interact with each other in the learning process (Khadijah & Gusman, 2020). This collaboration and interaction is carried out by teachers as activity planners and evaluation of learning outcomes, while parents act as trainers and supervisors for children at home in monitoring the learning process (Hewi & Asnawati, 2020). Teachers also need to work more creatively in preparing the curriculum such as materials, methods, media and daily learning assessments. The implementation and assessment used in online learning will be different after the end of Covid so that it can increase children's interest and enthusiasm for learning (Muhdi et al., 2020).

Apart from that, teachers should also pay attention to several things that are considered important, such as the condition of the family environment such as parents and the location where they live and recognize children's potential (Saputri & Pradana, 2021). Because of the challenges parents and children's potential bring There is a big impact during the online learning process, namely the decline in parents' economic capabilities during the pandemic, resulting in consequences after the end of Covid (Feinberg et al., 2022; Gassman-Pines et al., 2020). Learning that is carried out after the pandemic ends is still very problematic, especially in Early Childhood Education (ECE), namely how learning should be carried out online even though the pandemic is over. The learning process used in early childhood education should pay attention to all aspects of child development and provide children with direct, enjoyable and meaningful experiences (Sudarsana, 2018; Watini, 2020). Ideally, learning in an early childhood environment should utilize a learning system that maximizes children's ability to play while learning (Clabaugh et al., 2019; Rahiem, 2021). Therefore, after Covid has ended and online learning has become known, it is still suitable to be applied in the learning process.

Based on data and facts obtained from the results of initial observations and interviews at three early childhood education institutions in Kendari City, Southeast Sulawesi Province, it is

known that the problems faced by teachers and parents in implementing online learning, one of the problems faced by teachers and parents is knowledge about understanding materials, methods, media and facilities and infrastructure. This explains several problems faced by teachers and parents, namely when learning online the teacher is not very familiar and still has little interesting teaching material to carry out online learning. Apart from that, there is limited information and government bureaucracy regarding Providing assistance to fulfill facilities after the Covid pandemic. Apart from the lack of awareness of teachers and parents in guiding their children during the online learning process after Covid-19, there is a lack of parental understanding regarding online learning so that parents do not guide their children during the learning process. With this phenomenon, researchers want to know the implementation of online learning and its problems in early childhood after the Covid-19 pandemic. Therefore, researchers formulated a problem, namely how to implement and challenge online learning in early childhood for teachers and parents after the Covid-19 pandemic. The aim of this research is to obtain information from teachers and parents about implementation and problems. facing online learning after the Covid-19 pandemic

RESEARCH METHODOLOGY

The type of research used is qualitative with a descriptive approach, meaning that the results obtained provide an overview for teachers and parents regarding the implementation of online learning in early childhood after the Covid pandemic (Doyle et al., 2020; Novianti & Garzia, 2020). This study uses the purposive sampling technique, namely where researchers select participants or samples intentionally based on certain criteria that are considered relevant to the research objectives, based on the researcher's consideration that the sample can provide in-depth and valuable information related to the phenomenon being studied. Overall, this study involved teachers and parents in Kendari City, Southeast Sulawesi Province, with a total of 42 respondents divided into 19 teachers and 22 parents. The research locations were at three locations of early childhood education institutions (ECE) in Kendari city, namely TK Aisyiyah 1 (A), Kindergarten Ummusshabri (B) and Kindergarten Mutiara Aida (C). This research was conducted for 3 months, namely from October to December. 2022

Data collection techniques in this research used observation and questionnaires via Google Form as in the following table

Table 1. Data Collection Techniques and Subjects

Subject	Teacher	Parent	Total
Group A	8	9	17
Group B	7	7	14
Group C	4	7	11
Total	19	23	42

The technique for checking the validity of data uses triangulation, namely combining or combining various methods used to study interconnected phenomena from various points of view and points of view. Triangulation used in this research was 4 things, namely: (1) Triangulation method: comparing information and data from observations and Google Form questionnaires; (2) Triangulation between researchers; (3) Triangulation of data sources: comparing informant results with related documentation; (4) Triangulation Theory (Patricia, 2020). The data analysis technique used to describe the research results was carried out in a structured manner using four conceptual methods, namely data collection and reduction (Azungah, 2018).

The data collected is coded A, B and C depending on the origin of the subject. To determine the implementation of online learning, four indicators were chosen, namely Material, Method, Media and Assessment/Evaluation. adapted from several previous studies (Harahap et al., 2021)

Table 2. Indicators for determining online learning

Indicator	Description
Material	Text forms, Graphics, Powerpoint and various multimedia elements,
Method	Direct, Indirect, Interactive and independent learning
Media	Audio-visual, zoom media or Google Classroom, YouTube and other electronic media
Assessment	Performance, Anecdotal record, Assignment, or Portfolio and. Other assessments

Data was measured by categorization using a four-point Likert scale, namely very often done (4), often done (3), rarely done (2), and never done (1). (Yamashita, 2022) before calculating to get the average as in the following table

Table 3. Indicator measurement scale

Category	Scale	Information
Very often done	4	If carried out continuously more than 8 times in the learning period
Often done	3	If carried out continuously between 4 – 8 times in the learning period
Rarely done	2	If carried out continuously between 1 – 3 times in the learning period
Never done	1	If it has never been implemented, it will be implemented during the learning period

Meanwhile, this learning assessment categorization scale is also used to measure the difficulty of online learning after the Covid-19 pandemic. To measure the overall value of implementation indicators, use cumulative values (Wind et al., 2018) as in the following table:

Table 4 Cumulative value

Cumulative Value	Information
3.50 – 4.00	Very effective
2.50 – 3.49	Effective
1.50 – 2.49	Effective enough
0.01 – 1.49	Ineffective

RESULT AND DISCUSSION

Result

In this research, the researchers selected respondents from three ECE schools in Kendari city which included teacher and parent aspects, namely 42 respondents, consisting of 17 respondents at school A, 14 respondents at school B, and 11 respondents at school C. Of all the respondents, there were 19 respondents from the teacher aspect and 23 respondents from parents. Teachers and parents act as research subjects and provide the necessary data. They were selected based on the predetermined population in the three ECE schools, namely TK Aisyiyah 1(A), TK Ummusshabri (B) and TK Mutiara Aida (C) as shown in table 6

Table 5. Respondent Characteristics

Group	Description (%)		Total
	Teacher	Parent	
A	8 (19.05)	9 (21.43)	17 (40.47)
B	7 (16.67)	7 (16.67)	14 (33.33)
C	4 (09.52)	7 (16.67)	11 (26.19)
Amount	19 (45.24)	23 (54.76)	42 (100)

The results of the research found that online learning was an indicator during the Covid 19 era to implement it at that time, as well as the problems that emerged in the learning process. in early childhood education. This is proven by the results of data processing which shows the average value of each indicator (material, method, media and evaluation) after the intervention. The indicators of the learning material presented show that the presentation instrument in text form is very effective with an average of (4.0), then the presentation in graphic form for all groups is effective with an average of (2.82), then in the form of power point presentation for group A and B is quite effective with values (2.05 and 2.45), but group C is effective with (2.55), and the presentation in multimedia form for the three groups shows very effective with an average value of (3.65). Meanwhile, the learning method indicators presented show that the direct learning presentation instrument shows that group B is very effective with an average of (3.71), while groups A and C show effective with an average value of (3.47 and 3.45), then presentation in the form of indirect learning shows that all groups A, B, and C are effective with an average of (3.29, 3.14 and 3.19), then in the form of interactive learning presentation it shows quite effective for both groups A and B and C with average scores (1.88, 2.5 and 2.36), and the presentation of learning in independent form shows that it is very effective. This can be seen from the average scores for groups A B and C (3.65, 3.26 and 3.63).

Meanwhile, the indicators of the learning media used show that the audio-visual media presentation instrument shows that all groups A, B and C are very effective with an average of (3.53, 3.64 and 3.55), then the presentation in the form of learning using Zoom and Google Classroom media shows that all groups A, B, and C are quite effective with averages (2.35, 2.07 and 2.45), then in the form of learning presentations using YouTube and Google media, both groups A and B and C show quite effective with average values (2.0, 1.73 and 2.0), and the presentation of learning in other forms of electronic media shows that groups A and C are effective, this can be seen from the average value (3.24 and 3.25), but group B is very effective with an average value (3.57). Furthermore, the evaluation indicators used in the demonstration assessment instrument show that group B is very effective with an average value (3.57), but groups A and C are effective with an average value (3.47 and 3.46). Next, the anecdotal notes assessment instrument for all groups was very effective with average scores (3.71, 3.57 and 3.64), then the presentation of the instrument in the form of giving assignments, all groups said it was very effective with average scores (3.65, 3.78 and 3.73), and Presentation of the assessment instrument in other forms it shows effective in groups A and B with an average value (3.0 and 3.21) while group C is quite effective with an average value (2.91)

Based on the activeness in learning activities, the results of the study indicate that post-Covid online learning was implemented effectively in terms of materials, methods, media, and evaluation indicators. However, there are still some online learning instruments that are still lacking, such as learning materials in the form of graphics, interactive learning methods, and media used Zoom, Google Classroom, and YouTube. This shows that overall, the implementation of post-Covid online learning was successful and very good to be improved because it further increases the effectiveness of learning in early childhood.

Table 6. Description of research results

Indikators	Instrument	Results Description		
		A (%)	B (%)	C (%)
Materi	Text Format	4.00	4.00	4.00
	Chart,	2.82	2.50	2.64
	Power Point	2.05	2.43	2.55
	Multimedia,	3.65	3.57	3.72
Method	Live Learning,	3.47	3.71	3.45
	Indirect,	3.29	3.14	3.19
	Interactive	1.88	2.5	2.36
	Independent	3.65	3.26	3.63
Media	Audio-visual,	3.53	3.64	3.45
	zoom or google			
	classroom,	2.35	2.07	2.45
	youtube /Google	2.00	1.79	2.00
	Other Electronic Media	3.24	3.57	3.45
Evaluation	Work method	3.47	3.57	3.36
	Anecdotal Notes	3.71	3.57	3.64
	Assignment of			
	assignments	3.65	3.78	3.73
	Masterpiece	3.00	3.21	2.91

The results of observations, interviews, and Google form data are quite effective, but there are still some problems related to the implementation of post-Covid online learning, namely that many schools still lack supporting devices in the form of available technology. For online learning facilities, other obstacles are sometimes the internet connection is not smooth, the availability of facilities is quite adequate, the internet costs are expensive, while making teaching materials takes a long time, teaching children with different abilities, collaborating, explaining the material in detail, giving appreciation to children, and conditioning children are still difficult for teachers and parents in carrying out learning. Therefore, teachers and parents feel very difficult during the learning process. The main key is that online learning must be adjusted to local conditions.

Table 7. Online Learning Challenges

Online Learning Challenges	Percentage	
Availability of internet or wifi	2.18	Low
Internet quota fees	1.35	Expensive
Objective assessment	2.35	Less effective
Time to create materials and media	1.94	Limited
Measuring students' abilities	2.12	Difficult
Different children's knowledge	2.18	Less attention
Children's creativity	2.29	Less Visible
Explain comprehensive material	2.35	Lack of direction
Give appreciation to children	1.88	Difficult
Child discipline	2.00	It's hard to measure

(source: secondary data)

DISCUSSION

Basically, learning is a process characterized by interactions between various elements of the education system, including students, teachers, learning tools/materials, with a learning environment that supports the process of achieving learning goals (Fadhli et al., 2023; Jacobson et

al., 2019; Yulia, 2020). The success of the learning process is realized if all these elements are managed well according to the standard learning management system that has been found (Ruth C. & Richard E. Mayer, 2023; Savov et al., 2019). This element is the presentation of learning materials that support the learning process, such as in the form of text, graphics, power points and other multimedia. This is in line with (Isrokatun et al., 2021). That in online learning you must have interesting teaching materials to carry out online learning (Kim, 2020). Besides it is presented in varied forms so that it is fun for children. The method used in Learning is a strategy for delivering material from a teacher or teaching staff to students. This learning method was developed to assist teaching staff in providing material based on the nature or characteristics of each child. Current learning methods are needed to provide maximum understanding to children. These methods are direct, indirect, interactive and independent learning. This is in line with (Lantis, 2022; L.-K. Ng & Lo, 2022; Totok Hari Prasetyo et al., 2022). that learning methods or strategies and active learning tips are one solution to overcome these learning problems, especially learning loss that occurs in the post-pandemic era.

Media is one of the most important parts of learning to achieve goals. Based on the data found when using online learning, teachers should prepare appropriate media, namely by using the Zoom, Google Meet, WhatsApp and YouTube applications, as well as preparing audio-visual learning media that can be watched when children are at home (Fahruddin et al., 2022; Putra et al., 2021; Rohana, 2020). Stating various media used to carry out online learning such as WhatsApp, Google Meet, Zoom, Google Classroom, and other e-learning platforms. Then the post-Covid online learning assessment model prioritizes work results, anecdotal notes, performance and gifts.

Based on these learning principles regarding how to effectively learn based on these post-covid learning principles, what is hoped is that the government will give freedom to the community and schools to choose the education used in schools, namely online learning (Ana Widyastuti, 2021; Anugrahana, 2020; Harahap et al., 2021). Online learning is also believed to be an instrument for improving the learning process. But on the other hand, it gives full responsibility to parents to be teachers for their children. There are several advantages to using online learning (Churiyah et al., 2020), namely (1) practical and flexible because you can give assignments at any time and report assignments at any time, (2) sending assignments can be done anytime and anywhere, (3) delivery of information is faster and can be reached by many children; and (4) decreasing knowledge of numbers can be done via internet applications.

However, there are several problems in implementing online learning in PAUD, namely: many schools lack supporting equipment in the form of available technology. For online learning facilities, other obstacles are sometimes the internet connection is not smooth, the availability of facilities is insufficient, internet costs are expensive, meanwhile making teaching materials takes a lot of time, teaching with children of different abilities, cooperation, and measuring children's discipline and explaining the material in detail. Likewise, giving appreciation to children and conditioning children is still difficult for teachers and parents to carry out learning. This is in accordance with the opinion of (Roman Andrianto et al., 2019), which states that there are several factors that support the success of online learning, namely technology, the willingness of professional teachers to understand the online learning system, the willingness, ability and confidence of children in implementing it. Apart from that, parents do not understand the tasks and learning processes from early childhood and understand how to use internet applications in the online learning process (Kim, 2020; Novianti & Garzia, 2020). This creates challenges that need to be overcome. The results seen in the field are that parents do not understand the teacher's duties and learning tasks, so parents have difficulty explaining them to their children. There are several factors that cause this, namely learning takes place directly, normally, parental participation is lacking. So that the level of understanding of parents in using online learning. However, implementing online learning has challenges, both in terms of human resources, facilities and technical implementation. As a recommendation for the future, public partnerships and ongoing involvement of many parties are needed. Teacher competencies and skills must continue to be enriched, supported by school policies that encourage teachers to continue learning. Relevant parties also need to evaluate online learning so that learning objectives can be achieved optimally.

CONCLUSION

Online learning is one solution in the post-Covid education process, especially in early childhood education. This shows that in the online learning process, by applying learning principles, namely presentation of materials, methods, media used, and assessments, it is very effective to implement. In addition, post-Covid online learning has challenges in terms of the availability of qualified technology such as electronic devices in the learning process, internet networks, children's conditions and discipline, and the readiness of teachers, students, and parents in facing online learning. Meanwhile, the opportunities for the online learning process that have been implemented are to accustom children directly to practicing independently in the learning process, and from the perspective of educators and parents, encouraging them to master technology and innovate in the learning process so that it is more varied and effective. Therefore, teachers and educational institutions are expected to prioritize continuous professional development to equip educators with digital skills and innovative teaching methods. Parents should also be actively involved in supporting their children's learning environment at home by ensuring access to the necessary technology and creating structured routines. In addition, collaboration between the government, schools, and communities is essential in improving internet infrastructure and providing affordable devices, ensuring equitable access to online learning resources. However, this study is limited to describing the implementation and challenges related to online learning after the Covid pandemic, but has not discussed the root of the problem. Suggestions for further research are to analyze the root of the problem so that we can get the right solution to face the challenges found.

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