The Implementation of Online Learning in Early Childhood Education During the Covid-19 Pandemic

Muhdi[1]
Universitas PGRI Semarang, Indonesia[1,2,3]
Nurkolis[2]
Yovitha Yuliejantiningsih[3]

ABSTRACT: Covid-19 has changed the learning process from class attendance to distance learning using the Internet. Early childhood education is threatened to enter into the lost generation, due to distance learning, which causes confusion for teachers and parents to be able to provide the best stimulation for them. Therefore, the Indonesian government made a new policy on online learning. The objectives of this research are to find how effective at online learning policy formulation, how productive it is in policy implementation, and what are the obstacles of the implementation at Early-Childhood Education (ECE). This qualitative research uses a mixed method approach with an iterative analysis design, conducted in Central Java Province in 35 districts / cities with 1,899 respondents. Data collection techniques with open-closed questionnaires, study from 15 documentation, and in-depth interviews. Data analysis uses quantitative-qualitative software Nvivo12+, with Miles and Huberman models. The results showed the policy formulation of online learning at ECE has been effective. However, the implementation of online learning policy at ECE still takes a lot of effort to become more powerful in preventing a decline in learning. There are five obstacles in in applying this in the field, namely the ability of teachers, the ability of parents, economic capability, facility constraints, and pedagogical constraints.

Keywords: *Online Learning Policy; Children Engagement; Learning Management System*

[2] Corresponding Author:
  Universitas PGRI Semarang, Indonesia
  Email: nurkolis@gmail.com

1 INTRODUCTION

Corona Virus Disease 19 (Covid-19) which has killed millions of the world's population and thousands of Indonesians has changed the way people live. This pandemic has forced people to work, study and worship from home. Early March 2020 the Indonesian Minister of Education and Culture issued a Circular No. 4/2020 so that the learning process is carried out from home through online learning (Kemendikbud, 2020). Some parties question whether the online learning policy can run effectively or not. Some of the questions are related to student readiness, teacher readiness, Education Office readiness, and readiness of learning support facilities such as internet access and ownership of hardware such as laptops, desktops, or smart phones.

Survey results show that almost 64% of Indonesia's population has Internet connection (Pertiwi, 2020). Meanwhile, Internet users in the world have reached 60% of the population (Ramadhan, 2020). This means that Internet connections in Indonesia are above the world average Internet connection. The report of the Indonesian Internet Service Providers Association shows that Internet penetration in Indonesia reached 64.8%, while the Internet penetration rate in Central Java has reached 71.4% (Association, 2018). The high level of Internet penetration in Indonesia can be utilized in supporting the learning process at home and schools, including. Especially at this time many ECE students have used smart phones. For example, in the Special Province of Yogyakarta, smart phone usage in kindergarten children aged 4-6 years reached 94%. One reason for the high level of use of smart phones and tablets is as a means of introducing information and communication technology (Zaini & Soenarto, 2019). Another study shows that the majority of children in Indonesia spend time playing with gadgets (Pebriana, 2017).

As the development of technology & information and the Internet, learning can be done online, and then came many terms such as e-learning, especially learning using electronic devices. Learning that is carried out with the Internet network or with the world wide web is called online learning or online education. Online learning connects students with subject matter via the Internet (Johnson & Manning, 2010). Some refer it as cyber-education (Palloff & Pratt, 2002). Now there are those who use smart phones as a means of learning so-called m-learning or mobile learning because teachers and students can move wherever they are. In the United States, it is called online learning if it meets the minimum criteria of 80% of the learning content delivered in a network. If online is only 1-29%, then it is called web facilitated learning. Called mixed learning or called hybrid learning if learning material is delivered online 30% to 80% (Allen & Seaman, 2013). In Indonesia, there is no policy statement on the use of various terms. So, what is meant by online learning in this article is that learning is not done in person and with the help of electronic devices or gadgets such as desktops, laptops, or smart phones owned by teachers and students / parents of students so that the learning process remains took place in the Covid-19 pandemic situation. Therefore, several terms such as online learning, e-learning, m-learning, e-education will emerge, all of which will be used interchangeably to illustrate the implementation of online learning.

Various research results indicate that the application of online learning in ECE with several terms used, gives positive results and impacts to students (Panjaitan, Yetti & Nurani, 2020; Taufik et al., 2019; Setyaji et al, 2015; Asilestari, 2016). Indeed, there are several obstacles in online learning in ECE such as research (Harjanto & Sumunar, 2018; Suhartanto, 2010; Sari & Setiawan, 2020; Winter et al., 2010; Roach & Lemasters, 2006). However, these studies are small in scale and with a small number of respondents. Meanwhile, this research has a medium scale. That is the provincial level with a large number of respondents. There has never been a similar study of the scope and number of respondents like this. At present, the implementation of online learning policies to prevent the spread of Covid-19 is ongoing. There are no research results that reveal the effectiveness of policies and obstacles in implementing online learning in Indonesia. Therefore, this research is important to do, the results of which can be useful to improve the policy formulation and implementation of policies, especially online learning at ECE.

Based on the learning problems during the pandemic and previous studies, the questions of this study are, first, how is the effectiveness of online learning policy formulation in ECE, how is the implementation of this policy in ECE, and what are the obstacles faced by all subjects related to policy implementation? This study aims to describe the formulation of online learning policies in

early childhood education, policy implementation, and related constraints. The results of this study are expected to be useful as input for policy makers in developing online learning policies at the District / City Education and Culture Office, as a reference for school principals and teachers in implementing learning policies in the field and providing solutions to learning problems during the pandemic.

2 THEORITICAL STUDY

The Circular issued by the Minister of Education, and Culture is included in the formal type of public policy in the form of regulations in the field of education, hereinafter referred to as education policy (Nugroho, 2017). The Minister of Education and Culture has forced education practitioners to change learning models from conventional learning models in person to online learning models. Educational policy is public policy in the field of education (Nugroho, 2008) whose starting point is in the interests of students (Tilaar & Nugroho, 2009). The characteristics of educational policy include having goals, having legal-formal aspects, being made by the authorities, being able to be evaluated, and having an operational concept (Imron, 1995). Some year-ago recommendation made that policy to consider curriculum and digital technology on education (Kong *et al.*, 2014). Including social media will take important part in education and will reshape the future of education (Jebba & Umaru, 2019). There are four benefits of online learning namely convenience, flexibility, cost-effectiveness, and time flexibility (Layne et al., 2013). Teacher must facilitate active learning and student-centered learning (Sharoff, 2019). One of the key successes of online learning is meta cognitive and thinking skills of students (Yu, 2020). Another key success is student engagement to complete the tasks (Kwon et al., 2019).

In organizing online learning, several aspects that need to be considered are planning, measuring student needs, support systems, developing teacher competencies, designing material, choosing the right platform, and evaluating the progress of learning outcomes (Lynch, 2002). Other opinions state aspects that need to be considered in online learning are students, teachers, learning material that includes quality and flexibility, the quality of technology or platforms used, and the learning environment (Inoue, 2007). Platforms in online learning systems are learning management systems (LMS) that can create virtual-learning environments (Coates, 2006). Another opinion said the need for three main aspects, namely developers, educators, and students, each of whom faced the same challenges, namely technological challenges, development challenges, and pedagogical challenges. Factors supporting the success of online learning are the dimensions of the system which includes three things, namely the quality of the system and infrastructure, the quality of information and learning, and the quality of institutions and services. In Indonesia, there are still things that need to be repaired the most important is the infrastructure of providing access points in the outermost, foremost, and isolated areas (Pangondian et al., 2019).

Online learning can be successfully carried out if you pay attention to the following main things: ensuring access and technology, the existence of guidelines and procedures, the existence of maximum participation from students, the teacher implementing collaborative learning, and the existence of interaction. There are three levels of student interaction, namely interaction with concepts, interaction with assignments, and interaction with others both teachers and other students (Palloff & Pratt, 2002). The students' test score will improve significantly when online learning run interactively (Ha & Im, 2020). To make it more effective, it requires share understanding of learning goals (Vonderwell & Zachariah, 2005). However, teacher needs to pay attention on student to safeguard themselves when online (Seok & Dacosta, 2020). There was some obstacle in implementing e-learning. Internet access in Indonesia is a still problem (Harjanto & Sumunar, 2018). Another problem in Indonesia there is no minimum standard in implementing e-learning (Suhartanto, 2010). This condition is far different from China that prepares e-learning for the last decades (Wang, Zhu, Chen & Yan, 2009).

3 METHOD

This qualitative research uses a mixed method approach with an iterative analysis design, was conducted in Central Java Province in 35 regencies / cities with total respondent of 1,899 ECE

teachers consisting of 519 ECE teachers under the Ministry of Religion and 1,380 ECE teachers under the Education and Culture Department. Data was collected for two weeks at the end of March to early April 2020. This study uses a mixed approach between quantitative-qualitative. The research procedure following Miles and Huberman models starting from data collection, data presentation, data reduction, and conclusion. Data collection techniques use instrument of open-closed questionnaires either that are circulated through Google forms distributed through WhatsApp Group of ECE teachers. This study also uses documentation from 15 Government and Local Government report and completed with in-depth interviews through voice applications on WhatsApp. Data analysis of closed questionnaires analysis using Pivoting Program on Excel. While the data of open entry's questionnaires and interviews transcript's analysis using NVivo 12+ quantitative-qualitative software. Written documents used were 15 policies ranging from Government Regulations in lieu of Laws. Government Regulations, Presidential Decrees, Circular Letters of the Minister of Education and Culture, Circular Letters of Regents / Mayors, Circular Letters of the Head of the Office of Education and Culture, and Circular Letters Head of Regency / City Ministry of Religion.

4   RESULT AND DISCUSSION

4.1   *Result*

4.1.1   *Qualitative Data*

Based on qualitative data, it was found five main obstacles in the implementation of online learning, namely obstacles from the teacher's side, obstacles from the parents' side, constraints on facilities and infrastructure, economic constraints, and pedagogical constraints.

4.1.1.1   The ability of teachers to deal with learning challenges during the pandemic is still inadequate

The first obstacle is from the teacher's point of view, with the following phrases that are repeated frequently.

"cannot carry out online learning "(this statement admits by many teachers)," there is no clear technical guide regulating online learning "," due to time constraints teachers cannot monitor students directly "," teachers have difficulty communicating with people parents and students at home "," teachers were overwhelmed in judging because they had to open videos and recordings of the children one by one "," could not send and receive videos because the signals were sometimes difficult "," lack of tools online "," school human resources were available who do not understand well about online "," a lot of material cannot be conveyed so that monitoring of children's learning is not optimal "," teachers do not have smartphone communication tools "," geographic location is not very supportive "," we also only provide several times already in the lesson plan, the main obstacle is that the student guardian has to go out to buy internet and paper packages to support activities, so we don't dare to provide there are many "," to directly monitor road obstacles that are far away due to remote villages and online signal constraints "," the problem is sometimes children learn that the time they want to learn cannot be determined at will so we (teachers) have to be patient "," obstacles in online learning when in remote areas. and far from the city, it is difficult to access the assignments given by the school, so the teacher also has to visit house to house because not every child has a school communication tool in the mountains and villages to find out how the child learns ", and" learning in early childhood a lot of emphasis on habituation or giving examples so that online learning is certainly not appropriate if it is carried out by parents who in fact have jobs that are not as professional as teachers, for example traders who prioritize looking for profit rather than being educators at home to replace the role of teachers.

4.1.1.2 The ability of parents to solve children's learning problems at home still requires guidance from teachers and the government

The second obstacle from the parents' side can be seen from the respondent's repeated statements as follows.

"There are some student guardians who are not used to being online", "cooperation with parents who are less creative with their children", "children often get angry when their parents teach them", "guardians do not have androids", "not all guardians of students have an Android cellphone "," there are parents who are still less active in guiding their children "," are constrained when uploading a visual video, there are some student guardians who cannot download because of technical problems "," supervision from parents is lacking "," not all guardians of students have an android cellphone "," the response of parents who are not responsive in their children's duties "," because parents work outside the home while the children are at home "," there are student guardians who do not understand "," not all student guardians use androids " , "The active role of parents is lacking so there are those who are not active", "parents who do not have Android or laptop facilities", "lack of knowledge about technology", "time is consumed for taking care of learning whereas if the child is two or more children "," Learning at home makes parents restless and a burden "," lack of response to parents because students' parents do not always hold cell phones that are always connected to the internet so teachers have difficulty contacting students "," learning at home is not optimal "," the lack of encouragement from parents in delivering assignments then the guardian of students may be part of the economic problem for buying quotas or problems with the attention of the parents of the children in telling the child that the teacher has given the child the task ", All students do their assignments because of the minimum number of parents who don't have an Android cellphone "," sometimes even though parents have an Android cellphone there are some parents who don't want to accompany their children studying at home because many parents are busy with their work "," not all parents have the time to accompany their children in online learning, and ECE are not yet able to learn online by themselves without guidance parents."

4.1.1.3 Facility constraints from related parties to support early childhood learning during a pandemic

The third obstacle is the aspects of online learning facilities and infrastructure based on teacher recognition as follows. Many respondents mentioned the statements of obstacles or constraints.

""The network is not good", "internet quota equals difficult internet connection", "bad signal", "not all students have the media for the learning", "the lack of equipment to receive assignments from teachers cannot accept everything to guardians of students "," not all guardians of students have WhatsApp "," internet network and also the lack of parents who have Android cellphones because they are still in the village area "," lack of tools owned by the school and parents "," slow signal and not necessarily all guardians have cellphones and also how to explain it to children is not necessarily effective "," when there are students whose parents do not have cellphones "," do not have cellphones and do not have friends near their homes "," signal is weak because we are in the mountains ", "Apart from that, the response of the guardians is still small to support children's activities at home", "more than 50% of my children cannot participate in this online activity for various reasons", and " I don't have a cellphone and don't have a quota or can't operate a cellphone ."

4.1.1.4 Declining to weak economic capacity due to the long period of the COVID-19 pandemic

The fourth obstacle is the weak economic capacity of the community with the following expressions.

"parents have no quota "," student guardian has run out of quota "," suck up internet quota "," it is burdensome for parents to also use cellphones "," student quota limitations so that some do not follow "," money problems to purchase quotas or suddenly install Internet network "," the obstacle is the economic factor because not all parents or teachers can afford to buy internet quota "," the community's economy is inadequate so they can't access online facilities "," for

example don't have an Android cellphone "," can't afford to buy it. internet quota package "," for students with limited economic conditions and online learning will be very burdensome for students "," lack of funds for internet facilities "," not all children can participate in online learning because the economic conditions of parents make it impossible to buy an android mobile phone as a tool for online learning "," other than that the problem lies in the user who is less so that it is difficult to m follow this online learning ", and" not all learning participants (in this case parents) understand technology given their diverse educational and economic backgrounds."

4.1.1.5 Pedagogical constraints that need more attention from various parties related to the most effective learning needed for early childhood

The fifth obstacle is the pedagogical aspect based on the acknowledgment of the teacher who completes the open questionnaire as follows. Similar statements were made by the teachers and not all of them are presented here.

"Cannot directly meet the child because the assessment from the observation of the child's attitude", "the child is less controlled in carrying out their duties", "the child feels boredom", "child work is not optimal", "the child always asks when the school-teacher enters me. want to study with the teacher at school "," the delivery of activities is not maximal "," so that the results are less than optimal "," difficult to communicate "," difficult to monitor the tasks that children do at home "," cannot face children directly so that do not know exactly the child's development ", and" the side effects of online learning will provide opportunities for children to open sites that are not appropriate and as parents who will be affected by the impact "," sometimes there are guardians of students who don't listen because they are busy and there also those who do not have a quota "," the limitations of learning media in children's homes "," there is a signal problem in our place to download videos of children's learning outcomes "," learning results are poor g is not immediately accepted "," sometimes there are busy parents who cannot assist the children completely "," children themselves are sometimes less responsive and enthusiastic to their parents "," evaluation cannot be done maximally because of network constraints "," constraints the lack of cooperative attitude of parents to report children's activities while at home "," students who do not actively interact with teachers "," students who do not have cellphones so that assignments distributed in groups cannot be opened and read "," information sometimes becomes unclear ", "Because written language is sometimes different from spoken language", "there are children who are not in the mood to do assignments so that teachers and parents work together to be extra encouraging and motivating", "because children who guide students' parents involve the parents and parents. It takes up the parents' time, "children can't use their own cellphones yet", "my problem is that when I give lessons or assignments to my students, not all children because maybe the child's mood is always changing "," maybe because of the busyness of each working parent "," or maybe not all parents have and understand about this online "," the problem is the delivery of material cannot be maximized like in school because only through simple text and short videos and the teacher could not monitor how well the students understood the material because students could not ask questions directly like in class "," teachers could not directly criticize students' work ", and" teachers only can monitor from parents' reports only. "

4.1.2 *Quantitative Data*

4.1.2.1 The Effectiveness of Online Learning Policy Formulation at ECE

All documents used in this study were analyzed for correlation using Nvivo12 + software and obtained the lowest Pearson correlation of 0.13 and the highest of 0.84. This means that as young as the documents used in this analysis are relevant to the purpose of the study. In addition to ensuring the validity of the documents used, a Text-Query analysis and the word "education" was found 183 times, "health" was found 89 times, and "school" was found 83 times. These three words are words that are found in many of the policy documents analyzed. The results can be seen in Figure 1.
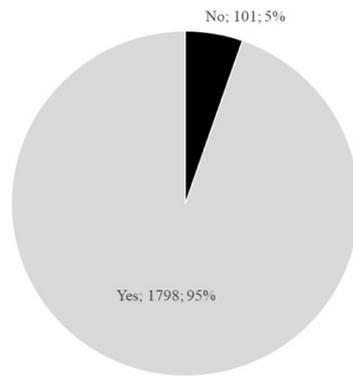
Figure 1. The validity of the Analysis of Documents (Data Process using Indonesian Language)

Policies made by the Government and Local Government have been known by ECE teachers to carry out online learning in order to prevent the spread of Covid-19. The results 90% of teachers understand this policy and only 10% stated not understand. This can be seen from the answers of respondents in Figure 2.

Figure 2. Policies Known to Respondents

ECE teachers also know that the policies made by the Government take several forms, such as the Presidential Regulation in Lieu of Law Government Regulation, and Ministerial Circular. Respondents' answers in this matter may be more than one and the results are 77% ECE teachers know that there is an SE Minister of Education and Culture, 42% of teachers know there is a Government Regulation, and 11% know that the main basis is Presidential Regulation.

Policies issued by the Regional Government have also been understood by ECE teachers. In answering this choice respondents may choose more than one. The results showed that 58% of respondents knew that there was an SE Head of the Education and Culture Office or the Head of the Regency / City Ministry of Religion Office. As many as 36% of respondents claimed to know there was a Decree of the Head of the Education and Culture Office or the Head of the Regency / City Ministry of Religion Office. Meanwhile those who know there are policies in the form of SK or SE of Regents / Mayors of 36%. Based on the ECE teacher's understanding of online learning policies in order to break the chain of the spread of Covid-19, most teachers have implemented it with 95% implement it while other 5% did not. This can be seen in Figure 3.

No; 101; 5%

Yes; 1798; 95%

Figure 3. Teachers Conduct Online Learning

4.1.2.2 The Implementation of Online Learning Policy at ECE

Judging from the experience of ECE teachers implementing online learning, there are many who have no experience. Figure 4 shows that only 6% of ECE teachers are accustomed to applying online learning, another 13% sometimes apply, and surprisingly 81% say they have never applied online learning in their classrooms.
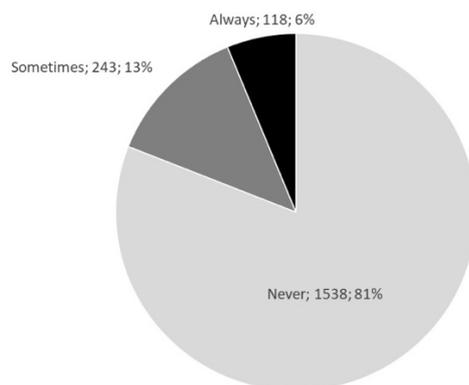

Always; 118; 6%

Sometimes; 243; 13%

Never; 1538; 81%

Figure 4. The Teacher's Experience of Conducting Online Learning

After the Covid-19 pandemic and the presence of the Minister of Education and Culture, as many as 82% of ECE teachers who were respondents of this study claimed to be motivated to practice online learning (figure 5). The Covid-19 pandemic has encouraged the Ministry of Education and Culture to issue a circular on the implementation of online learning.
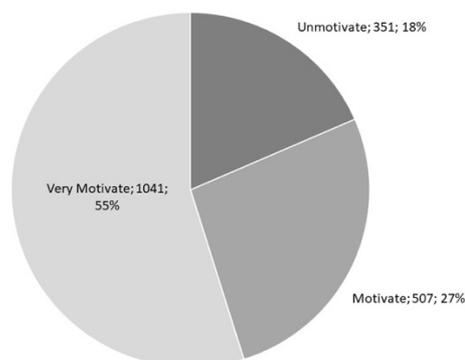

Unmotivate; 351; 18%

Very Motivate; 1041; 55%

Motivate; 507; 27%

Figure 5. Teacher Motivation to Practice Online Learning

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In this online learning emergency, ECE teachers who became research respondents claimed that 83% had made lesson plans and the other 13% had not made them. Based on the experience of implementing online learning, the lesson plans made are not for online learning because they have never received online learning training. Most ECE teachers in Central Java Province use text media as well as tools to interact with students at 63%. The rest uses visual media 29%, text 5%, and Audio 3% (picture 6). This is contradicted by statements about the choice of platform they use to help online learning that 95% of teachers use the WhatsApp application. Even though the social media application is classified as the application that uses the most text, not audio visual.
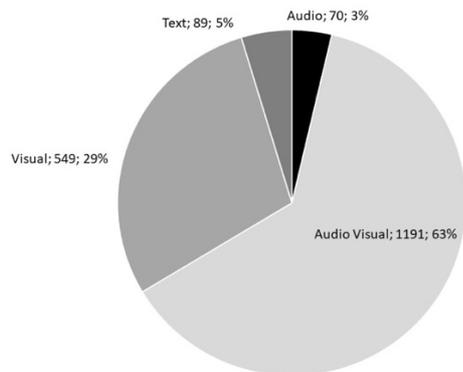

Figure 6. Media Used by Teachers in Online Learning

Because the platform used is the application that uses more text, the learning methods used by ECE teachers are assignments reaching 95% and are equipped with questions and answers, discussions, brainstorming, and experimentation. ECE teachers state that in online learning they do not use a single method but a mixture of several methods even though it is recognized that assignment is the most widely used method. 61% of teachers stated that they did written evaluations both online and offline. Evaluation options that are also mostly done by ECE teachers are portfolio evaluation and product evaluation by sending results online and offline. Overall, 51% of teachers stated that the implementation of online learning in ECE was only sufficient.

4.1.2.3 The Obstacles to Implementation of Online Learning at ECE

Of all the statements that came from respondents as many as 1,899 ECE teachers be coded with Nvivo12+ software, it can be concluded that there are five main obstacles in organizing online learning in ECE. This result can be seen in Figure 7 below.
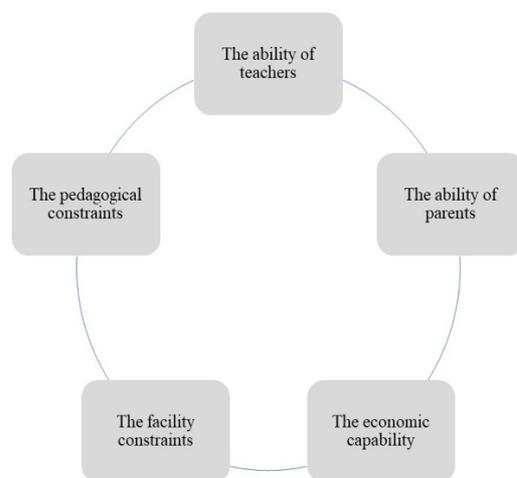

Figure 7. The Obstacles of Online Learning Implementation at ECE

4.2   *Discussion*

4.2.1   *The Effectiveness of Online Learning Policy Formulation at ECE*

The Studies on the effectiveness of educational policies can be carried out through the characteristics of wisdom, including having a purpose, fulfilling legal aspects, being made by the authorities, and having an operational perspective (Imron, 1995). This study is based on policies made by the Government to Local Governments. Does this online learning policy serve a purpose? The highest regulation in the context of this study is a Government Regulation in Lieu of a Law (Doc-1) which aims to deal with the 2019 Corona Virus disease pandemic (Covid-19). Likewise, the presidential decree (Doc-2) and Government Regulation have the same goal, namely handling Covid-19 (Doc-3). Two Circulars of the Minister of Education and Culture have a mission, which is to prevent the spread of Covid-19 (Docs-4 and 5). At the provincial and district government levels, the circular of the head of the education office and the head of the service has the objective of learning about the pandemic and dealing with Covid-19.

Does the policy meet legal aspects? Law Number 30 of 2014 concerning Government Administration states that one of the principles adopted in governance is the principle of legality which in the administration of Government puts forward the legal basis of a decision and / or action taken by a Government Agency and / or officer, thus, the policy this has fulfilled the legal aspect. Does the policy make by an authorized official? Policies made by various levels of government have been made by authorized officials ranging from the President, the Minister, the Governor, the Regent, the Head of the Education and Culture Office or the Head of the Provincial Ministry of Religion, and the Regent / Municipal Education and Culture Office or head of the Regency / City Ministry of Religion. This procedure shows that the policy has met the criteria as a policy.

The next question is, does this policy have an operational aspect? At the lowest level of policy makers at the district / city level, policies issued have it. For example, a circular issued by the Head of the Education, and Culture Office has been enforced when students are prohibited from attending school, what should be given to students while at home, what educators should do while at school, and how to prevent Covid-19 transmission from occurring 19 (Doc. -6)? Based on respondents' answers, all ECE teachers are 100% aware of the educational policy related to online learning to prevent the spread of Covid-19.

However, not all can do online learning for several reasons, such as who carries out as much as 95% while 5% cannot implement it because of problems with the teacher's ability, availability of equipment, and Internet connection? The characteristics or aspects of this learning policy have been fulfilled and understood by most ECE teachers, even the majority of ECE teachers have implemented online learning according to their abilities. Thus, it can be concluded that the online learning policy in early-childhood education during the Covid-19 pandemic was quite effective in the research area.

4.2.2   *The Implementation of Online Learning Policy at ECE*

Has the implementation of online learning policies been effective? To discuss it, the next study will discuss aspects of students, teachers, interactions, media, technology platforms used, and evaluation of learning outcomes. The results of this study cannot reveal the readiness of students to take part in online learning in ECE. Using the results of an earlier survey which stated that 94% of ECE children aged 4-6 years in Yogyakarta had used a smart phone (Zaini & Soenarto, 2019). The conditions in Central Java are not too different from those in Yogyakarta if we use the survey results of Internet penetration rates (Association, 2018). The Internet penetration rate in Central Java is only 2% lower than Yogyakarta.

In fact, most children use gadgets to play alone (Pebriana, 2017). As a result, the social interaction of ECE children with friends and the surrounding environment is not good. Even children who play gadgets since the childhood result in less effective development of communication and tend to be passive (Ulya, 2019). Though gadgets, including computers can be used by parents to introduce lessons to their children. Based on the results of research children who have been introduced and taught basic computers will be more skilled in learning activities (Taufik et al.,2019).

ECE children can learn to type, drawing, making tables, and composing stories, even learning mathematics (Setyaji et al., 2015).

From the teacher's side claimed that 95% stated they have been implementing online learning in the past one month. It was because there was no other choice because in person learning could not be done. But do ECE teachers have the ability to carry out online learning? As many as 81% stated that they had never applied online learning, even though the ability of teachers is an important factor affecting the quality of online learning. Based on the results of in-depth interviews with some teachers, they stated that they had not once taken part in the preparation of online learning material. So that the material prepared does not meet the standards of online learning material.

The training provided to ECE teachers includes planning online learning, the process of interaction with students, evaluating learning, selecting the right media to deliver material to students. In this online learning emergency, ECE teachers who were research respondents stated that 83% had made lesson plans, and 17% had not. However, the lesson plans made were not for online learning because they had never received training about it. In online learning, one of the things that are very important to note is the interaction. There are three student interactions, namely interaction with concepts, interaction with assignments, and interactions with other people both with teachers and other students (Juwah, 2006). "Interaction with concepts" is students' contact with other people's conceptualizations. It involves the interaction between students' existing understanding frameworks and the material to be studied. "Interaction with assignments" is the application and testing of new concepts into meaningful tasks. These stage students must be able to build an understanding which then becomes the basis for doing the assignments given by the teacher. "Interaction with others" is the creation and testing of new concepts during conversations with teachers and other students and reflecting on concepts and assignments that have been worked on.

For maximum interaction to occur, the choice of instructional media used must also be correct, such as the audiovisual. Meanwhile audio media alone or text alone cannot allow for maximum interaction. Audiovisual media such as interactive computers and CDs will help motor children become more sensitive and honed (Asilestari, 2016). The results showed that there was an interaction between digital learning media and confidence in learning outcomes (Panjaitan et al., 2020). Online Learning failure rates are reported between 20-80%. Based on the analysis of quantitative content in stages 24 studies concluded that interaction factors are important factors that support the success of online learning (Rostaminezhad et al., 2013).

Mostly, around 95% of PAUD teachers in Central Java Province use text media as an online learning aid in the WhatsApp application, which is the social media application which is classified as the application that uses text the most. Research suggests that the unique characteristics of media may support or limit certain types of learning. So that certain types of media used to require certain strategies and approaches to increase the effectiveness of online learning (Swan, 2003). The factor of the lack of teacher skills, the choice of the appropriate technology platform, the media used, the methods used by the teacher, ultimately encourages teachers to conduct an evaluation with old habits. The assignment method used by the teacher encourages parents to complain that their child gets too many assignments from school. This was captured by the Minister of Education and Culture that the online learning process is expected to not always provide assignment of subject matter to students. The Minister's policy states that learning should be directed at providing life skills, especially related to the prevention of Covid-19 as stated in the distribution and statements in the mass media (Doc. 5).

Based on these conditions, the first thing that ECE teachers need to do is force themselves to attend online learning training. An important rule on online learning is to have to push teachers and students out of their comfort zones. They must dare to go beyond what is already known and conventional. The teacher must radically change his way of thinking and stick to the idea of out of the box thinking (Lynch, 2002). This condition must be utilized by the Education and Culture Office and the District / City Ministry of Religious affairs immediately to conduct online learning training for ECE teachers. Moreover, 82% of ECE teachers who were respondents of this study

claimed to be motivated to practice online learning. Taking into account the ability of the teacher, the ability of parents, the readiness of learning facilities, the process of interaction during learning, the media and choice of platforms used, the learning methods, and the evaluation used by ECE teachers, it can be concluded that the implementation of online learning has not been effective.

4.2.3 *The Obstacles to Implementation of Online Learning at ECE*

The first obstacle is the teacher himself. Teachers cannot organize online learning models because they have never attended training. Teachers have not been able to arrange lesson plans for learning and assess children's development of this model, and teachers not capable yet to operate the available online learning platforms. It seems that the ability of ECE teachers in Central Java is different from the abilities of ECE teachers in the Jakarta and Tangerang areas whose ICT skills are already good. Based on the results of research by ECE teachers in the Jakarta and Tangerang areas, teachers have been able to make good use of ICT for the benefit of organizing educational development activities (Rohita, 2020). The ability of PAUD teachers in preparing lesson plans is still happening in other places, especially in rural areas. The results showed that the teacher's ability to develop a fun lesson plan was still minimal. The lack of teacher pedagogical competence, including in the preparation of RPP, ultimately affects the quality of the learning process (Sum & Taran, 2020).

The second obstacle is from the parents, namely many do not have online learning tools, or cannot operate smart phones / laptops / desktops for online learning. And if the parent owns the device, and it can operate, the problem that concerns the parent is another, such as his own job. Parents' involvement in online learning is important to accompany their children when they are physically far away from the teacher. Many factors influence the involvement of PAUD parents in educating children. Including social status factors, family form factors, and family development stages factors (Irma et al., 2019). Therefore, teachers must be able to invite parents of students to play a more role in guiding their children.

The third obstacle is the availability of supporting facilities and infrastructure such as internet access or wi-fi, because in online learning, the existence of an Internet network is very important. Included in the constraints on facilities and infrastructure is the weak signal of cell phones in various suburban areas. These obstacles are not only experienced in learning at ECE, in tertiary institutions that also face technical constraints on limited internet access, as well as weak mentoring, and supervision of education delivery (Harjanto & Sumunar, 2018). In Indonesia, there is no official minimum standard for implementing e-learning from the government, and the survey results show that the quality of e-learning sites is still lacking. The low quality of e-learning is due to the lack of learning infrastructure in schools nationally, especially in relation to the need for the Internet (Suhartanto, 2010). While China could provide the better infrastructure schools and universities need in e-learning, it is believed to be a promising approach as it offers students a way of interacting with teachers. The Chinese government has initiated a number of national projects to prepare infrastructure in schools and even online school projects (Wang et al., 2009).

The fourth obstacle is the economic ability of the parents of students. Many people are economically disadvantaged, so they cannot afford to buy telecommunications devices, to buy data packet quotas, to boast of wi-fi, all of which will hinder the smooth and effective online learning. The fifth obstacle is the pedagogical aspect, namely the difficulty of interaction between teacher and student, the difficulty of the teacher to make an assessment, and the difficulty of the teacher to monitor the negative effects of using smart phone / laptop / desktop devices by children if there is no intensive parental guidance. The constraints of this interaction do not only occur in ECE, but also occur in tertiary institutions that experience communication challenges that are not timely, clear direction regarding learning expectations, assignments and student requirements, and data security (Roach & Lemasters, 2006).

Many ECE teachers have difficulty assessing student learning outcomes. A study shows that teachers have not been able to carry out assessment of early-childhood learning on an ongoing basis and teachers in this learning are not systematic and comprehensive. The negative effect of using gadgets is that children will run amok if no gadget is given up to 40%. Though 22% of

parents claim the goal of giving children gadgets to their children to be smart. In reality, only 1% of children get achievements in school by using gadgets (Novianti & Garzia, 2020). A study revealed that online learning has a number of advantages but also has some potential pitfalls, especially in managing learning and non-learning activities (Winter et al., 2010). That It is, when students are studying online, they can also do activities that do not have to do with ongoing learning. There are five main obstacles in implementing online learning in ECE, namely the ability of teachers, the ability of parents, economic ability, the availability of learning facilities, and pedagogical constraints.

5 CONCLUSION

It can be concluded that the online learning policy in ECE during the Covid-19 pandemic has been effective. This can be seen from the fulfillment of the characteristics or aspects of pandemic learning policies. Besides this, policy has been understood by most ECE teachers, even the majority of ECE teachers have implemented online learning in accordance with their abilities. The conclusion in the implementation of online learning is not yet effective with regard to the ability of teachers, the ability of parents, the readiness of learning tools, the process of interaction during learning, the media and platform choices used, the learning methods, and the evaluation used by ECE teachers. There are five main obstacles in implementing online learning in ECE, namely the ability of teachers, the ability of parents, economic ability, the availability of learning facilities, and pedagogical constraints.

It is recommended that the District / City Education and Culture Office and the District / City Ministry of Religion Office immediately conduct online learning training for ECE teachers. This is important not only during the Covid-19 pandemic, but also anticipates the development of the times with the tendency to use gadgets in the educational process. It is recommended to the Government and Local Governments immediately to invest in communication and information technology facilities and infrastructure in education. The implication is that the Government and Regional Government will immediately change the direction and policy of education by following the development of communication technology and information and the Internet.

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