Emergency remote learning during the COVID-19 pandemic: Perspectives of elementary schools in rural area of Indonesia

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ABSTRACT
Amidst the COVID-19 pandemic, the Indonesian government issued a distance and online learning policy so that students study in a state of emergency. Education is a conscious effort to provide a meaningful learning experience for students. This experience includes cognitive, affective, and psychomotor aspects. This research is at the cutting edge of portraying the emergency remote learning of elementary schools in rural area of Indonesia in response to the COVID-19 pandemic. In the COVID-19 emergency, the Indonesian government issues a distance and online learning policy so that students can study even in a state of social distancing. The digital transformation of teachers and students is the impact of the learning process during the pandemic since the beginning of 2020. This research was a qualitative research employing a case study. Sources of data were teachers and students in elementary schools selected by purposive sampling. The technique applied interview and observation using interview sheet instruments and field notes about the reality of the implementation of education in schools. The results indicate that 80.81% of the learning process for low grade students is fully controlled by their parents, while in high grade students online and distance learning processes are not as formal as they should be. The implications of the results of this study illustrate that basic education in Indonesia has not yet ready in terms of human resources and technology, especially in the rural areas of frontier, outermost and underdeveloped. The contribution in this research is to provide an understanding to education observers how the process or learning experience is in pandemic and normal situations.

Introduction
Education in the world has changed drastically in its implementation, from face-to-face learning to blended learning (Winata, Zaqiah, Supiana, & Helmawati, 2021; Ansori & Sari, 2020), flipped learning (Carrillo & Flores, 2020), hybrid learning (Ololube, 2014) and so on. This learning has a significant impact on learning but demands digital and literacy skills for both teachers and students (Grimaldi & Ball, 2021; Prescott, Bundschuh, Kazakoff, & Macaruso, 2018; Ololube, 2014).

This research is motivated by the current situation in Indonesia conducting social distancing so that all state elementary and Islamic elementary schools are carried out remotely, online, and offline, as has been done by other countries affected by the corona virus.
The implementation of this learning refers to a Letter issued by the Ministry of Education and Culture regarding the implementation of learning during the COVID-19 emergency period. Distance learning can be implemented with various supporting applications, as well as online learning. Meanwhile offline learning is carried out through television stations at TVRI whose programs have been designed in collaboration with the Ministry of Education and Culture of the Republic of Indonesia.

This research aims to depict the reality of the implementation of learning at the elementary school level both in urban and remote areas. The implementation of learning during the COVID-19 pandemic has both positive and negative impacts. One of the positive impacts of online learning is that it triggers the acceleration of educational transformation, learning is more flexible wherever and whenever, while the negative impact is that human resources and equipment are not ready to implement distance learning (Sugiarto, 2020). In the emergency situation of the COVID-19 pandemic, the problems increase, not only in the areas of frontier, outermost and underdeveloped, but also in urban areas. During the COVID-19 pandemic, all learning processes are shifted to online learning, especially for red zone areas. Learning is done with various applications that can be used during online learning.

COVID-19 has had an impact on the transformation of technology in education in Indonesia, especially at the elementary school level. Information technology has become a key word in online or distance learning during the COVID-19 pandemic to enable students to learn better, faster and smarter (Pujiilestari, 2020). Another term is known as ICT (Information and Communication Technology). UNESCO reveals that there are several benefits that can be obtained by implementing ICT in the education system including facilitating and expanding access to education networks, increasing educational equity, learning quality, teacher professionalism and being more effective and efficient in education management and government (Adisel & Prananosa, 2020). People who are digitally literate and information technology can be considered to have adequate ICT literacy (Muskania & Zulela MS, 2021). Teachers in the practice of implementing distance learning must also have adequate ICT literacy to facilitate the learning process. Moreover, teachers need special training to improve their ICT competence (König, Jäger-Biela, & Glutsch, 2020).

Several relevant studies to this research are research about the impact of COVID-19 on the Implementation of Online Learning in Elementary Schools imply that the online learning process can use various supporting applications with low condition learning. Classroom requires collaboration between people and teachers because children are not yet proficient in operating the devices and applications used in the learning process (Dewi, 2020). Another study about the Impact of COVID-19 on the Dynamics of Learning in Indonesia indicate that the impacts of COVID-19 on education in Indonesia are 1) schools are moved to homes through an online learning process; 2) the transformation of technology-based learning media through the use of Whatsapp Group, Zoom, Google Classroom, WebEx, Youtube, and TV channels (TVRI); 3) adjustment of learning methods; 4) adjustment of learning evaluation to determine standard of grade promotion and graduation; and 5) demands for cooperation between parents of students at home as a substitute for teachers in controlling children’s learning (Mansyur, 2020). The third research entitled Barriers to Online Learning for Elementary School Teachers in Banjarnegara Regency, the results of the research are the obstacles experienced by teachers during online learning, including learning applications, internet networks and devices, learning management, and assessment (Giandi, 2020).

From the results of the analysis of relevant research, it indicates that research related to the online learning process for elementary school students during the pandemic time has been widely carried out using different approaches to find research results. However, not much of the relevant research discusses the educational challenges faced by teachers in the implementation of online learning.
transformation process during the pandemic. Thus, the researchers are interested to conduct study on the emergency remote learning through the implementation of online learning in elementary schools during the COVID-19 pandemic in West Nusa Tenggara province Indonesia.

Method

This study aims to describe the challenges experienced by teachers and students during the COVID-19 pandemic that caused digital transformation in the world of education, especially basic education in Indonesia. The research sample was determined by purposive sampling with a total of 4 teachers and 4 students as representatives from districts and cities. Data analysis was carried out by data reduction, data management and grouping, interpretation, and drawing conclusions. The approach in this research was a qualitative research applying a case study. Sources of data were teachers and students involving in learning activity during the pandemic in various cities and regencies in West Nusa Tenggara (NTB) Province.

The technique for data collection used in-depth interview technique with interview sheet instruments, observations and documentation about the implementation of learning in elementary schools. Data analysis was carried out by data reduction, data management and grouping, interpretation, and drawing conclusions. The data analysis was qualitative applying the Miles & Huberman’s model i.e. data reduction, data presentation and drawing conclusions or verification (Moleong, 2018). The collected data was then reduced. The next step was to display the data. The final step was to draw conclusions. The initial conclusions put forward were tentative, and would change if no strong evidence was found to support them at the next stage of data collection. However, if the conclusions raised at an early stage are supported by valid and consistent evidence when the researcher returns to the data collection field, then the conclusions put forward are credible conclusions (Fuad & Nugroho, 2014). The techniques for checking the validity of the data were triangulation of data, increasing persistence, and using reference materials (Sugiyono, 2011).

Results

The learning process conducted in Indonesia viewed from the school location, can be grouped into schools located in urban and in rural districts. In general, the learning process before the pandemic can be seen from several aspects as shown in Table 1.

<table>
<thead>
<tr>
<th>No.</th>
<th>Aspect</th>
<th>Districs</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Urban</td>
</tr>
<tr>
<td>1</td>
<td>Infrastructure</td>
<td>Most of the learning facilities and infrastructure are supportive in the learning process</td>
</tr>
</tbody>
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Hermanto, Zulela Ms., Muhammad Japar. Emergency remote learning during the COVID-19 pandemic: Perspectives of elementary schools in rural area of Indonesia
Online learning requires teachers to have high technology literacy because if ICT literacy is low, teachers will find it difficult to make the learning process meaningful. Therefore, digital literacy skills are absolutely necessary during the pandemic (Suchyadi, Sundari, & Alfiani, 2021). Likewise with the limitations of the devices owned by students because not all of them come from families with middle to upper economies who at least have Android as a tool to support the learning process. Those are the findings of researchers with several problems in the learning process in elementary schools in rural areas of Indonesia.

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<table>
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<th>No.</th>
<th>Aspect</th>
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<th>Rural</th>
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<tr>
<td>2</td>
<td>Environment</td>
<td>The urban environment supports the learning process because students generally have easier access to school and there are no demands from parents to work for their children.</td>
<td>In rural areas, the environment does not support to the learning process, for example 1) Children have to travel kilometers by foot to get to school. 2) The terrain to go to school is not a smooth road, but they have to go through rivers, muddy ground, broken bridges. 3) The demands of parents to help their work such as farming, gardening, and others.</td>
</tr>
<tr>
<td>3</td>
<td>Learning Sources</td>
<td>Complete learning resources from the Ministry of Education and Culture in the form of teacher and student handbooks. Students are also equipped with worksheets issued by publishers. The problem: teachers have not developed teaching materials provided by the Ministry of Education and Culture adapted to potential and culture</td>
<td>Limited learning resources; teacher and student handbooks are limited in number so they must be held by the teacher, and used in groups in class. Students also do not have handbooks that can be taken home.</td>
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<td>4</td>
<td>Learning Media</td>
<td>Learning media applies the use of multimedia, such as print, audio, video animation, and so on.</td>
<td>Teachers rarely use the media. The media often used are print media or media that come directly from the surrounding environment.</td>
</tr>
<tr>
<td>5</td>
<td>Study Time</td>
<td>At 07.00 am – 3 pm (full day)</td>
<td>At 09.00 – 11.00 wib Even when high grade students are allowed to go home because their younger siblings have gone home, the students concerned are allowed to go home, and this may happen every day.</td>
</tr>
<tr>
<td>6</td>
<td>ICT</td>
<td>In general, ICT skills are adequate for teachers and students, except for the elderly teachers.</td>
<td>The use of ICT in the rural area is minimal, because electricity is only available at night.</td>
</tr>
</tbody>
</table>
urban areas.

Based on the results of interviews in the rural areas of frontier, outermost and underdeveloped, the problems faced by teachers and students in the learning process are: (a) limited electricity (there are some areas that have electricity access only at night), (b) very limited learning support tools, (c) limited technology use skills for students because they have never used technological devices such as androids, laptops, and (d) limited signal, because in some areas it is difficult to have signal or even have no signal at all. The signal will be available, if the students go to a higher area with a terrain that is not as smooth as the urban area with a distance of kilometers. Moreover, they should climb a tree or climb up a mountain or hill.

Another obstacle in the online learning process is all education is carried out in an effort to build personality. Education at the elementary school level is a formal education providing basic values and norms in shaping a child’s personality so that he/she can become a complete human in later adulthood. The implementation of technology-based online learning has a negative impact on the moral degradation and personality of students. In formal conditions such as the teaching and learning process, the conditions experienced are not formal which can be seen from the way students dress, the atmosphere around students and there are even some students who are replaced by their parents to work on practice questions and final exams. This will greatly impact the formation of the character of the nation’s next generation. Because everything may be replaced by technology, but there is one thing that cannot be replaced by technology, namely the students’ character formation and personality requiring extra continuous attention and modeling.

Discussion

Learning during the COVID-19 period has a very significant impact, especially on the use of technology in the learning process. Ongoing learning requires the ability to use technology in its implementation (Nahdi & Jatisunda, 2020). People's dependence on the internet makes digitalization of education the only way that can be done during the COVID-19 pandemic (Suchyadi et al., 2021). This problem will be even more difficult for rural areas (frontier, outermost and underdeveloped) because before online learning there were already many problems in this area (Putra, Arianti, & Elbadiansyah, 2019), ranging from the unavailability of electricity to the absence of a signal in the area so that the implementation of learning in accordance with circular letter No. 4 of 2020 concerning the implementation of learning carried out online without contact and meetings between teachers and students issued by the Ministry of Education and Culture (Putra et al., 2019) cannot be fully implemented in the rural area because of these limitations.

The solution that can be given in the online learning process in the rural area is to carry out learning from home (School from Home) with a home visit approach or known as GULING (Teachers’ Mobile). This term emerged during the COVID-19 pandemic where teachers went around serving students who could not access online teaching and learning activities (Gumelar & Dinnur, 2020). This approach is oriented to the implementation of learning from door to door while still using the school uniform as usual. However, the learning atmosphere will be different from the previous conditions because the home visit approach (Purwanto, 2021) is like private lessons. To balance learning activities and equalize digital skills of teachers who teach in the rural area, special training for learning innovation is needed because even within the limitations of innovation, teachers still need to be developed (Putra et al., 2019).

In urban areas, training, workshops, and strengthening of ICT literacy for teachers are needed (Atsani, 2020), as well as providing socialization to parents that the importance of good cooperation is not to replace their child's position in the learning process that takes place through applications used in the learning process. Cooperation
between teachers and parents will have a positive impact on the personality development of students. Some applications that can be used in the distance learning process are: Whatsapp, Youtube, Telegram, Google classroom, Zoom, Google Meet, Google Form, Quizzis, Khoot, e-learning page, LMS, Video convergence, Live chat, Learning House (Platform of Ministry of Education and Culture), Teacher Sharing Program (Platform of Ministry of Education and Culture), and TVRI for areas with poor internet connection or no internet connection (Atsani, 2020).

On the other hand, the learning process that takes place remotely, online or offline for students at the elementary school level is expected by students and parents not to give assignments continuously. It will be better if the learning process is filled with the delivery of material by the teacher via video so that it can be repeated by students. In addition, in the lower grades, the distance learning process is fully accompanied by parents, even the parents or guardians of the students do the work for the task. This has a negative impact on the development of students because it indirectly teaches students to be dishonest. Whereas basic education is the main foundation for instilling character values such as honesty so that they grow with strong character roots.

The parents’ support and assistance in distance learning or from the teacher is expected not to take over the learning activities and tasks and exercises given by the teacher. Let the students have responsibility for their work, parents only play a role in controlling their children’s work during the online learning process. The effect that may not be seen directly is the character and social skills of students which leads to self-regulated learning (SRL) from the online learning process during the COVID-19 pandemic. This SLR is the students’ ability to manage their own learning which refers to the ability to change one’s behavior (Siregar, S, W, Rachmadullah, & Pohan, 2018).

The real digital gap during the COVID-19 pandemic gives us an understanding that it is necessary to continuously improve competence for teachers so that they always have adequate digital knowledge and skills in accordance with changing times. On the other hand, it is also necessary to improve facilities and infrastructure for rural areas of frontier, outermost and underdeveloped having difficulties to access the internet because of the uneven distribution of development in this vast area of Indonesia. One way that can be given to reduce the digital divide is to implement education based on local wisdom (Insyiroh, Hariani, & Mubaroq, 2020) as a solution to face the digital divide in distance learning policies and online during the pandemic in Indonesia.

Conclusion

This study aims to explore the perspectives of elementary school teachers and students in rural area of Indonesia on the implementation of online learning amidst the COVID-19 pandemic. This study employs qualitative approach using interviews and observation with the 4 participants. The reality of the transformation of educational technology in Indonesia provides such an important role that it requires teachers and students to have a qualified ICT literacy to be able to implement the distance learning process as expected. Many obstacles are found in the online learning process, especially in the students’ character formation that cannot be replaced by technology. The face-to-face education pattern and a certain time span will still be needed to form character in addition to the skills of using ICT for students. The study findings reveal that the learning process taken place in low grade students is fully controlled by their parents, while in high grade students the online and distance learning process is not as formal as it should be. The implications of the results of this study illustrate that basic education in Indonesia is not yet ready in terms of human resources and technology, especially in urban areas (frontier, outermost and underdeveloped). Thus, it is necessary to do further research in order to continue to see the development of the education process evenly, especially education in urban areas (frontier, outermost and underdeveloped).
References


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