


## Distance Learning during Pandemic: A Review of New Challenges and Opportunities for Educational Refinements in Indonesia

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### Abstract

Changes that arise due to the coronavirus afflict all sides of life. One of the new problems is the change in learning methods from face-to-face to distance learning. This study aimed to analyze the new challenges and opportunities that arise from the distance learning process during the Covid 19 pandemic in Indonesia. The research method used to collect data is through academic search engines at several specific literacy sources in Indonesia, given a deadline of 2020. The data analysis used is the content analysis paradigm with the presentation in linguistic formulations. This review found that Indonesian learners learn very quickly by means of self-regulated learning. The integration pattern of teachers, students and parents is the way to solve problems from online learning. Student creativity and independence are new opportunities for students in Indonesia.

**Keywords:** Distance Learning, Educational Refinements, Learning at Pandemic

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## INTRODUCTION

The world was shocked by the emergence of a disease caused by a virus at the end of 2019. The virus reportedly emerged from a Huanan Seafood Wholesale Market in Wuhan City, the capital of Hubei Province, Central China. At the beginning of its appearance, the virus was known as the 2019 novel coronavirus or abbreviated as 2019-nCoV. The viruses are named based on their genetic structure to facilitate the development of diagnostic tests, vaccines and drugs (WHO, 2020c; Zu et al., 2020; Harapan et al., 2020). The Coronaviruses subfamily (CoVs) is divided genotypically and serologically into four genera,  $\alpha$ ,  $\beta$ ,  $\gamma$ , and  $\delta$  coronavirus. CoV infection in humans is caused by  $\alpha$  -- CoVs and  $\beta$ -CoVs (Lin et al., 2020; COVID & Team, 2020).

It did not take long for the virus outbreak to be a global epidemic until finally, the UN, through WHO declared the Covid-19 outbreak a global pandemic (Chavez et al., 2020; Lau et al., 2020; Bai et al., 2020; Rothan & Byrareddy, 2020). As of March 26, 2020, out of 198 countries, there were 468,644 confirmed positive cases, 21,191 deaths, and 114,218 recovered. The nature of the Covid-19 virus is known to be highly contagious and spreads from one person to another (Chavez et al., 2020). This pandemic prompted the world to immediately take action to prevent all potentials that resulted in the addition of positive Covid-19 patients, for example, through the cessation of community activities (crowd

place), social (physical) distance implementation, and callous policies, namely lockdowns as carried out by China, Italy and Malaysia.

COVID-19 in Indonesia was first reported on March 2, 2020, with a total of two cases. Meanwhile, data for Indonesia is updated until April 20, 2020, at 16.30 WIB (Emerging Infection Ministry of Health RI, 2020) is 6,760 Confirmed Cases, 590 Death Cases (8.7%), 747 Cured Cases (11.1%), 5,423 Internal Cases Care (80.2%). COVID-19 has changed many longstanding habits. The consequences of this virus are able to change the order of life globally (Remuzzi & Remuzzi, 2020). Travel abroad is restricted, while meetings are carried out through strict protocols. Companies stop employees from working from home until educational institutions are also closed and replaced by distance learning or online learning. On March 26, 2020, UNESCO confirmed that approximately 1.52 billion students from 165 countries were taught at home (UNESCO, 2020). This policy is indeed very burdensome for many parties, but it is very urgent to reduce the spread of the Covid-19.

The Distance Learning regulation during the Covid-19 period was through the issuance of Government Regulation on March 18, 2020. This leaflet stated that all indoor and outdoor activities in all sectors are temporarily postponed to reduce the coronavirus spread, especially in the education field. On March 24, 2020, the Minister of Education and Culture of the Republic of Indonesia issued leaflet Number 4 of 2020 concerning the Implementation of Education Policies in a COVID-19 Emergency. The circular explains that the learning process is carried out at home through online/long-distance learning to provide meaningful learning experiences for students. Learning activities are shifted using online learning with e-learning and blended learning systems (Abdillah, 2013), social media and smartphones (Rahadi and Abdillah, 2013; Trihandayani and Abdillah, 2019).

Online learning or E-learning, or distance learning, is aimed to facilitate students to carry out more comprehensive and varied learning without doing it face to face (Moore et al., 2011; Jonassen, 2002). Through the facilities provided by the system, students can learn without being limited by distance, space and time. Learning through online media not only presents the material in written form but can also be more varied such as adding video or audio (Sahlström et al., 2019; Shalev-Shwartz, 2011). This learning model describes efforts to provide access to learning for teachers and students who are constrained by geographical distance so that in the learning process, an interactive communication system is needed that connects the two with the various resources needed in it. Distance learning is adopted to increase student motivation towards collaborative learning, reduce the limits of learning offered by schools, and enable students to achieve unforgettable learning experiences (Anderson, 2008; Tsai et al., 2016).

The distance learning process offers the possibility to encourage learning that can cross national borders through free access to educational sites for a variety of subjects (Fuicu et al., 2017; Clark, 2020). Distance learning is a revolution that describes other forms of learning, for example, online learning, e-Learning, learning technology, online collaborative learning, virtual learning, web-based learning, and so on (Moore et al., 2011).

By doing online learning, students have the flexibility in choosing study time while enabling them to study anytime and anywhere (Ayu, 2020). Students can interact with the teacher using several applications such as classrooms, video conference, telephone or Live Chat, Zoom, or Whatsapp groups. This type of learning is an educational innovation to answer the challenges of the availability of varied learning resources. The success of a model or learning media depends on the characteristics of the students. As Nakayama expressed, all literature in e-learning indicates that not all students will be successful in online learning. The phenomenon is due to the learning environment and the characteristics of students (Nakayama & Yamamoto, 2007).

The thing that is most inherent in distance learning activities is the level of student learning independence that dramatically affects online learning success (Samruayruen et al., 2013; Wong et al., 2019; Merriam & Baumgartner, 2020). Unfortunately, the low level of self-regulated learning is still held by many students in Indonesia. This problem is very concerning because the teaching and learning process is the most crucial activity in the process of forming and developing the quality of Human Resources (HR) (Avelar et al., 2019; Suratno, 2014). The quality of human resources can be developed through education, experience, and training (Kai Ming Au et al., 2008; Hodges et al., 2020). Therefore, development in the field of education needs to be well-planned and directed in order to develop quality human resources in the future (Mróz et al., 2020; Zaidi et al., 2019). The low quality of human resources is directly correlated with the low quality of education and the low quality of education related to the education system itself (Akareem & Hossain, 2016).

## **METHOD**

This research was a review of articles with the thematic approach and chronological approach. This study analyzed the results of research based on distance learning in Indonesia. In a chronological approach, this research also provided limitations on reference sources during the Covid pandemic era in 2020. The references were from the Science direct website (<https://www.sciencedirect.com/>) and the google scholar page (<https://scholar.google.com/>). Source search was limited to research articles to see the latest problems that had been tested through empirical research. The collected articles were then further examined in terms of the quality of the publishers. For science direct, it was noted whether the article is still indexed by Scopus. Consequently, the Indonesia sources were rechecked to ensure that they were published by a SINTA (Science and Technology Index) journal. The steps in the review process were as follows: The first step was to determine the topic's novelty and in accordance with the current phenomenon. The second was to examine the selected literature both in terms of authors, publishers and writing biographies of the selected articles and, after that, taking notes directly when reading based on predetermined columns to focus on the predetermined theme. The next step was to analyze critically, avoiding summarization by providing opinions from authors based on other sources. The last step was by looking for feedback to maintain the objectivity of the presented research results.

## **RESULT AND DISCUSSIONS**

### **Long-Distance Learning Policy**

UNESCO (2020) stated that there are 68 million students affected by school closures and the transfer of the distance school model, ranging from early childhood education (PAUD) to higher education. Since the government has implemented social distancing to prevent the spread of the COVID-19 outbreak, there has been a limitation on meetings with large numbers, including in education. This has an impact on teaching and learning activities in educational institutions that were initially face-to-face in class, shifting to long-distance education in a network (online).

Formally, distance learning policy is based on the Regulation of the Minister of Education and Culture Number 109/2013 Article 2, states that the purpose of distance learning is to provide higher education services to groups of people who cannot attend face-to-face education, and expand access and make it easier education services in learning. In this way, it can be interpreted that distance learning is an education system that has the characteristics of open, independent learning, and complete learning by utilizing Technology, Information and Communication (ICT) and/or using other technologies, and/or in the form of integrated learning.

The policy provides not only advice but also several information tools (websites and applications) that can be accessed by schools, teachers, students and parents in facilitating and supporting teaching and learning activities while at home. The Ministry of Education independently issued the Rumah Belajar website channel, which can be accessed by elementary/equivalent, junior high school/equivalent and high school/equivalent students through the following link <https://belajar.kemdikbud.go.id>. In the channel, various menus can support student learning experiences to be more meaningful such as learning resources that contain various learning materials in the form of images, videos, animations, simulations, evaluations, and games, digital classes to organize learning with assigned teachers, laboratories containing practicum simulations a laboratory that is packaged with worksheets and practical theory, as well as a question bank that presents various types of questions to carry out practice questions and learning evaluations.

Through smartphone access, students can also take advantage of the smart application provided by the Ministry of Education and Culture, namely Education TV. During the author's experience in accessing experiments, there were often obstacles where direct teaching services by teachers cannot be seen by students (an error occurs). Besides, through private support from home and abroad, students are also given free access to distance learning through Microsoft tools (office 365 Education), Google Indonesia, Smart Class, Ruangguru, School, Quipper, Zenius, Cisco System Indonesia, ICANDO., MejaKita, IndonesiaX and Udemy.

The implementation of distance learning requires good communication between students, parents, and schools due to the long and impossible distance between students, parents, and schools to be able to meet face to face continuously. Communication between students and schools is done in the virtual world. The media used are several social media, such as Facebook, WhatsApp, and Skype. Meanwhile, between parents and schools, they focus more on consultation, discussion, and sharing about children's learning development during distance learning and continuing student education after graduating, and the school will also be consulted. (Faiqotul, 2016).

### **Obstacles of the Implementation of Distance Learning**

The obstacle to the process of implementing distance learning is that there is still a lack of understanding of the implementation process in the community as a fast and accurate implementation step as a solution to empowering the level of education in their environment. This requires awareness and full understanding. The need for implementing teaching techniques shows the readiness of executors who can fundamentally understand the process of implementing activities in general, based on basic rules and mechanisms in carrying out work. For trained personnel, it is specifically necessary to develop specific skills in supporting the development process in accordance with the needs applied in the development area in terms of the character of the needs and application of the techniques to be carried out. The need for skilled personnel shows that the readiness of the development process implementation process can be evaluated and monitored in components with skills and resource readiness (Taufik, 2019).

Napitupulu found that although the majority of students (95.8%) already had the equipment to undergo DL, on the other hand, students felt that the current DL method was not right because students felt they could not easily monitor DL development, could not get learning material easily nor could they can study the material efficiently. Overall, both from the technology side and the lecturer side, students are not satisfied with the DL method they are currently doing and are also dissatisfied with the lecturers' ability to deliver material to DL (Napitupulu, R. M. 2020).

From these needs, the school will sort out the process of implementing distance learning activities (DL) according to each region's needs because the needs in each government area will be different. Thus, it becomes an obstacle to the development of the distance learning process considering the readiness and preparation of the teaching staff and the mechanisms applied do not meet the implementation competency standards considering that the centralized education pattern is still structured and does not develop a pattern of applying technology that accelerates the process of education. An educational mechanism that has not been standardized has resulted in a lack of readiness for education providers, and special education for technical operators of distance learning activities is needed in a comprehensive, detailed and well-measured manner (Taufik, 2019).

This phenomenon is a challenge for Indonesia and countries with the most recent developing status (Au et al., 2018). Through this activity, students gain knowledge that will be used as provisions in the future (Au et al., 2018). The facts show that there are many complaints submitted by teachers, students and even parents. Teachers find it difficult to find the right tools to practice distance learning (Indonesia Inside, 2020), students are less able to adapt to the tools chosen by the teacher, and they have difficulty managing teaching and learning activities from home (CNN Indonesia, 2020), and parents also find it challenging to act as a monitor for student learning activities (BBC, 2020).

In the implementation of Distance Learning, there are often obstacles or inconsistencies with the learning process. Many people think that the responsibility of teachers in implementing distance learning is lighter than traditional learning (Hubackova & Semradova, 2016). Currently, the education system faces many problems. During the COVID-19 pandemic, learning in Indonesia was transferred to Distance Learning (DL), but the lack of equipment, personnel, resources, and limited educational technology, as well as the skills and quality of teachers, were not sufficient (Dursun et al., 2013; Jaya, 2017). The use of internet/e-learning media has considerable obstacles, network connections, and technical errors such as server down and error hinder the success of learning (Nurmukhametov et al., 2015).

Distance learning activities tend to be only about assigning assignments by teachers and collecting assignments by students. This, of course, deviates significantly from the true nature of distance learning. The distance learning components, such as regular, substantive, and supportive communication, are ignored by the teacher so that the learning process is less acceptable to students (Griffiths, 2016). Distance learning must also pay attention to integrity education (Suud et al., 2020) and student honesty (Suud et al., 2019). In addition, perceptual activities and explanation of material, which are very crucial in an effort to understand students related to the material, are also eliminated. Since the implementation of teaching and learning activities at home starting March 16, 2020, in all schools in Indonesia, teachers and school officials have begun discussing distance learning designs applied to their students. However, in rural schools, schools and teachers tended to choose the most accessible way for students, such as WhatsApp. Through the use of instant messaging applications, teachers can share instructions and assignments that must be done by students.

The use of hypermedia technology has no added value if it is used only to replace paper or handwritten tasks (Yengin et al., 2011). During this pandemic, many people were not responsible for committing crimes even in the world of education, one of which was the leakage of accounts listed in the discussion and learning support application, which harmed many parties and the learning process was disrupted. Although the use of android and web applications as learning media can foster interest, motivation, learning independence and rapid development (Tahar, n.d.), it is difficult to control the development of learning. Although education games can foster interest in learning, the increase in learning success is still small and ineffective (Education et al., 2012). Teacher creativity in providing material through the media is also needed to influence students'

interest in distance learning (Simbolon, 2014). The problem in accepting the concepts and principles of the material will be difficult in DL learning without face-to-face although educators can take advantage of learning media in the learning process such as PowerPoints, Hyperlinks, Video Tutorials, compact disks (CDs) and interactive multimedia based on CAI (Abdi et al., 2018). The digitalization of education for both schools in urban and rural environments must be synchronous considering that educational projects are one of the essential efforts to form human resources who are technology literate or have adequate digital literacy (Bozkurt et al., 2015).

The support of abundant technology infrastructure in urban environments also encourages students to take advantage of sites and applications offered by the government in collaboration with private parties such as IS-5. They take advantage of the Quipper and Zenius applications as well as IS-1 and IS-3, which use the teacher room. The opposite happens to students in rural environments. Some schools are able to provide the best service in the distance learning process by providing directions for teachers to continue to look for platforms that suit the characteristics of their students. Visual appearance also greatly influences student acceptance in utilizing the teacher's platform as a distance learning tool (Lee et al., 2014; Ulfa et al., 2017; Ting et al., 2020).

The collaborative aspect is something that cannot be separated in learning activities at this time. In line with Hapsari and Yonata (2014) that collaboration skills can train in exchanging ideas and information to find creative solutions, and the success of completing tasks really depends on the extent to which they interact with each other. Therefore, collaboration in learning activities is a necessity that cannot be underestimated at this time.

Students today, as part of Generation Z, are known to be very close to technology, should open opportunities and easiness in carrying out distance learning, which is identical to the use of electronic devices (Minghat et al., 2020), but in some cases, this does not have a strong correlation that teachers, schools and the government need to conduct a further evaluation.

Based on research conducted by Churiyah et al. (2020), WhatsApp media is used by teachers to evaluate and monitor student activities through the help of parents, collaborative online learning systems such as Google Classroom, Ruangguru, and several other systems that collaborate with WhatsApp media for conduct questions and answers about the task and the media used.

At the primary school level teacher, it needs to be understood that the students do not really understand technology. Moreover, to apply an online learning model, students are not well-prepared. On the other hand, the experience of SD/MI teachers in using learning technology is considered to be less than optimal because so far, mostly elementary students learn without using technology. Eventually, it also affects the ability of teachers to use technology-based learning media because the ability to use learning technology is directly proportional to the frequent use of it (Hung, 2016).

Meanwhile, student residence also affects the ability to use technology. Students who live in urban areas will be more responsive to technology, but in contrast to students who live in rural areas, implementing online media-based learning processes will certainly be very difficult. So, the teacher, as a facilitator in learning, will also follow the development of students' abilities in carrying out this learning process from a distance.

In a situation like this, parents are increasingly worried if the implementation of learning is carried out in schools because children will have more opportunities to contract the virus. So that with the government policy to implement learning at home, many parents are very supportive of this policy. But on the other hand, the parents' readiness to face this online learning system is not fully felt by the parents because they are too sudden.

## Solutions to Distance Learning Problems

The first two months of DL were run by presenting the survey data. In the April 1, 2020 phase, it was known that 76.7% of respondents from 17000 students were not into learning from home. The KPAI concluded that DL phase 1 was not effective (Catherine, 2020). To overcome the various problems that arise from DL, several solutions were found from the results of empirical research. For example, Insiroh offers active, interesting learning to avoid boredom in self-study. To avoid boredom and increase student creativity, teachers can carry out education based on local wisdom, such as that which is implemented in combination with the culture of *lelakaq* and *kale*, which are deeply rooted in the social institutions of the Sasak tribe. (Insiroh et al., 2020).

The training participants are given a conceptual understanding of distance learning while practicing the use of online learning instruments or applications such as zoom, youtube, Edmodo and google form. This training has succeeded in achieving its goal of increasing the capacity of trainees in managing distance learning. Participants are expected to have technical skills in operating various online learning applications. Besides, participants also understand how to apply these distance learning tools appropriately in order to achieve optimal learning goals (Ariadhy et al., 2020).

Azzahra, with his research on the implementation of distance learning, adapted to regional conditions, Establishing regional working groups to provide guidance, developing a supervisory framework and strategies for the use of School Operational Costs (BOS), giving broader autonomy to school principals, Maintaining public-private partnerships in the education sector, Equipping teachers with skills to carry out distance learning, Equipping teachers with skills to carry out distance learning (Azzahra, N. F., 2020). Also, teachers are given training on interactive remote learning media Syahroni, M. (2020).

Applications that can be used in DL are, for example, online media google class, WhatsApp (Manurung, R. P. 2020), Zoom (Haqien, D., & Rahman, A. A. 2020), Microsoft teams (Hulu, R. J. 2020), Edmodo (Rais, A., & Hoiriyah, H. 2020, November), Google Classroom (Suastika, G. 2020), and steam loose parts (Damayanti et al., 2020). To avoid boredom, teacher students are advised to use interesting learning videos (Ammy, P. M. 2020). Videos provided to students can be downloaded from existing learning videos, and according to the theme being studied, the teacher makes his own video and gives it to students. Videos can also be given in the form of animation (Harahap, F. M., & UNJ, P. V. K. B. 2020) so that the students feel more enthusiastic about learning than just reading and completing assignments given to students.

Sari and her research colleagues found that agile programs can be used in the DL process. In essence, agile does its best in any condition, especially in limited conditions. Agile programs do not have to be with sophisticated technological facilities. If the condition of teachers and students can only learn with modules, then the modules are maximized. Learning is made as detailed as possible so that it can help parents and students to study at home. This agile learning method is essentially involving parents, students and other stakeholders in the implementation plan (Sari, Y. Y., Solihati, N., & Zulaiha, S., 2020).

Furthermore, Kusuma introduced the ClassDojo application, which can be used for elementary school students so that students do not feel bored in learning. Class Dojo is an interactive learning media between teachers and students where the teacher focuses on motivating students in terms of providing direction and learning in positive student behavior that can be helped and can involve parents in educating students. This application is interesting because this application is very light in terms of usage of quota and space on smartphones, and most importantly, this application is free. The teacher can challenge students through routine questions and exercises. Students' responses will be directly compiled by the Class Dojo and then displayed and converted into behavior/attitudes (Kusuma et al., 2020).

Furthermore, Zamzami conducted research and found that the edutainment application could be used in DL learning. The use of edutainment applications can support interest in learning, mastery of knowledge, character building (Khaidir et al., 2020), and others for children's growth and development. These edutainment applications do not replace learning materials that have been planned for face-to-face or online learning. However, this application can use it to explore the learning material. Parents of students can choose and focus on using edutainment applications according to their children's needs. This program demands the role of parents who are actively involved in accompanying students to learn from home (Zamzami, E. M. 2020).

Some of the solutions offered by the researchers above show that Covid 19 has had a positive effect on the development of the quality of learning in Indonesia. Children and parents learn quickly in forced situations that adapt to remote learning. So from here, it can be seen that 4.0 and digital intelligence are not difficult things for the Indonesian people. This phenomenon provides new opportunities for students, teachers and parents to improve the learning process further to be more creative and interesting even though in its time, the pandemic will end, but the habit of distance learning has made an impression and has become a new thing in the world of education in Indonesia.

The learning process through online media should be carried out without burdening students, and it is even suggested that students enjoy using the media used (Balakrishnan & Gan, 2016) so that the government does not make a policy that teachers must implement a particular system. As a result, the teacher is given the freedom to prepare or sort out the media according to their learning needs. Some teachers prefer WhatsApp media to carry out learning, where teachers can send text, images, audio, and videos that support learning.

The expected learning outcomes are related to changes in students. Teaching material factors also greatly determine the interest of students in learning. The lack of teacher's creativity in packaging teaching materials will lead to the saturation of students following the lesson. In terms of psychological relations, as explained by Ibn Sina (Nata, 2003) that psychologically a subject matter cannot be explained in one way only and must be achieved in a way that is in accordance with the psychological development of students. Thus, the material's delivery must be adjusted to the characteristics of the material to balance the relevance of the material and the methods of learning.

## **CONCLUSION**

The distance learning system, in its implementation, has its challenges. However, from the many challenges that exist, solutions can also be found. It cannot be denied that every phenomenon that appears in the environment has its positives and negatives. Likewise, the implementation of DL has obstacles and problems, but it turns out that DL is a new challenge and has a positive effect in accelerating the development of the education system in Indonesia. In less than a year, various creativity of the nation's children has emerged in creating learning applications and offering various methods to overcome this learning from home. So this is a positive thing where the digital era 4.0 is faster and can surpass the progress in its era with the existence of Covid 19. From several research results that have been reviewed, it appears that the role of people has a very significant influence on the DL process. So that communication and attachment of parents and students at home determine the success of DL during the Covid 19 pandemic. In addition, government assistance is needed to provide facilities that support the implementation of distance learning. That way, distance learning can run smoothly and effectively due to good cooperation between teachers, students, parents and the local government.

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