

The Impact of Distance Learning Policies on Student Achievement in Elementary Schools during the COVID-19 Pandemic

Sulmiah^{1*}

^{1,2} Faculty of Social Sciences and Law, Makassar State University

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ABSTRACT

The COVID-19 pandemic has forced a rapid transition from face-to-face learning to Distance Learning (DL), posing significant challenges in elementary education, which plays a crucial role in the academic and social development of students. This study aims to examine the impact of DL on student learning achievements, focusing on factors that affect its effectiveness. The methodology used is a Systematic Literature Review (SLR), gathering data from 28 nationally and internationally accredited journals. The findings show that student learning achievements have variably decreased, influenced by technology accessibility, digital readiness of educators and students, and environmental support. Consequently, this study recommends the importance of enhancing digital infrastructure, continuous training for teachers, and inclusive strategies that support all students without deepening educational disparities. These findings are expected to assist policymakers and educational practitioners in designing more effective interventions to support DL in the future.

Article Information

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Kebijakan Pendidikan;
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ABSTRACT

Pandemi COVID-19 telah memaksa transisi perubahan cepat dari pembelajaran tatap muka ke Pembelajaran Jarak Jauh (PJJ), menimbulkan tantangan signifikan dalam pendidikan dasar yang berperan krusial dalam pengembangan akademik dan sosial siswa. Penelitian ini bertujuan untuk mengkaji dampak DL terhadap prestasi belajar siswa, dengan fokus pada faktor-faktor yang mempengaruhi efektivitasnya. Metodologi yang digunakan adalah Studi Literatur Sistematis (SLR), mengumpulkan data dari 28 jurnal terakreditasi nasional dan internasional. Hasil penelitian menunjukkan bahwa prestasi belajar siswa mengalami penurunan variatif, dipengaruhi oleh aksesibilitas teknologi, kesiapan digital para pendidik dan siswa, serta dukungan lingkungan. Implikasinya, penelitian ini menyarankan pentingnya peningkatan infrastruktur digital, pelatihan berkelanjutan untuk guru, dan strategi inklusif yang mendukung semua siswa tanpa memperdalam kesenjangan pendidikan. Temuan ini diharapkan dapat membantu pembuat kebijakan dan praktisi pendidikan dalam merancang intervensi yang lebih efektif untuk mendukung DL di masa depan.

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1. INTRODUCTION

The COVID-19 pandemic has had a significant impact on various aspects of life, including the education sector. (Rokhani, 2020) (Andiyanto, n.d.). This decision led to a sudden shift from face-to-face learning to distance learning (DL), a transition that was unprecedented in scale and speed. This policy creates new challenges for the education

* Corresponding Author: First Author: sulmiah@unm.ac.id

system, especially in the context of basic education which is an important foundation for students' academic and social development (Nisa et al., 2022; Anisa et al., 2021).

Distance learning forces teachers and students to adapt to technology they may have never used before. Additionally, not all students have the same access to the devices and internet connections needed for online learning, so gaps in education can further widen social and economic divisions. Therefore, it is important for governments and educational institutions to find inclusive and sustainable solutions to ensure that every student continues to have equal access to quality education. This sudden change demands adaptive and effective policies to support distance learning. Basic education has a key role in forming students' basic abilities, such as reading, writing and arithmetic, as well as social and emotional skills. Therefore, the successful implementation of DL at this level is very important. However, this transition also raises various challenges, such as gaps in access to technology, readiness of teachers and students in use digital platforms, as well as the support needed from parents (Rahmadi, 2023) (Nuraini & Hendra, 2024). This situation reinforces the importance of research to understand how distance learning policies affect student achievement in elementary schools during the pandemic.

The problems that arise as a result of the sudden transition to DL are complex and varied. Students, especially at the elementary school level, face various challenges that affect their learning process. These challenges include unequal access to technological devices and the internet, lack of direct interaction with teachers and classmates, as well as changes in teaching methods that students and parents may not be familiar with (Suprapno, n.d.) (Parrisca, 2023). The additional burden that teachers and parents must bear in supporting children's learning at home is also a major concern. For example, an elementary school student may not have adequate internet access or technological devices to participate in online learning, so they have difficulty attending virtual lessons. In addition, parents must also learn how to support their children's learning at home while carrying out their own work and household responsibilities. All of this shows how important the role of education is in overcoming challenges during the pandemic.

In this context, the specific impact of distance learning policies on student learning achievement is the main focus of this research. Learning achievement is measured through students' academic abilities, cognitive skills, and social and emotional development. This research seeks to identify the extent to which distance learning policies influence elementary school students' learning achievement during the COVID-19 pandemic. By identifying the challenges and factors that influence learning achievement, it is hoped that this research can provide useful insights for policy makers and educational practitioners in designing more effective strategies in the future. In addition, this research also seeks to identify differences in the impact of DL policies based on demographic factors such as socio-economic background, access to technology, and support from family. By investigating these factors, it is hoped that this research can provide a comprehensive picture of the effectiveness of DL policies and identify areas that require improvement. It is hoped that the results of this research can provide concrete recommendations for policy makers, educators and parents in optimizing the implementation of DL in the future. Furthermore, this research also aims to highlight the importance of holistic support in the distance learning process, which involves collaboration between schools, families and communities.

Existing literature regarding distance learning and its impact on student achievement shows mixed and sometimes contradictory results. Most previous research has focused more on secondary education and higher education, while studies examining the impact of DL on basic education are still limited. In addition, much existing research has not fully considered

the specific factors that influence student achievement at the elementary level, such as parental support, technology readiness, and teacher involvement.

This research aims to investigate in depth the impact of distance learning policies on student achievement at the elementary school level during the COVID-19 pandemic. The main aim of this research is to provide a better understanding of the effectiveness of distance learning policies in supporting student academic achievement, as well as to identify factors that influence learning outcomes in the context of distance learning. With a deeper understanding of this, it is hoped that this research will make a significant contribution to the scientific literature on education in times of crisis and help develop more effective education policies in the future.

2. METHOD

This research uses a Systematic Literature Review (SLR) design to evaluate the impact of distance learning policies on student achievement in elementary schools during the COVID-19 pandemic. This method involves steps to identify, review, evaluate, and interpret all relevant research. With the SLR method, researchers carry out a systematic review and identification of journals, following established procedures. To complete this study, researchers collected journal articles using the keywords "Distance Learning during the Pandemic," "Learning achievement," or a combination of both. Data was collected by documenting all relevant articles in this literature review. A total of 28 accredited national journal articles and international articles closely related to these keywords were obtained from Google Scholar with the help of the Publish and Perish application. Data from these articles are presented in table form which includes the author's name, year of publication, journal name, and research results. The selected articles had similar research topics, and each article was analyzed and summarized. The results of the analysis are then compiled into a comprehensive discussion in this article.

3. RESULT AND DISCUSSION

1) Background to the Emergence of Distance Learning Policies

The COVID-19 pandemic that hit the world in early 2020 forced many countries to close schools and educational institutions to reduce the spread of the virus. To maintain the continuity of the teaching and learning process, many countries, including Indonesia, are implementing Distance Learning (DL) policies. DL is a learning method in which students and teachers interact indirectly through information and communication technology, such as video conferencing, e-learning platforms, and social media. The main aim of this policy is to ensure that education continues even without physical presence in the classroom, as well as to protect the health of students and teachers from the risk of virus transmission (Hodges et al., 2020).

Implementation of DL varies in various countries and regions, depending on the readiness of technological infrastructure, government policies, and socio-economic conditions of society. In developed countries such as the United States and Finland, DL is supported by better digital infrastructure and broad access to technological tools, so that the transition to online learning can be carried out relatively smoothly (Kuhfeld et al., 2020). In

the United States, for example, many schools were already using digital platforms before the pandemic, so they were able to quickly adapt to the online learning model. In contrast, in developing countries like Indonesia, many schools and students face technical obstacles such as limited internet access, lack of electronic devices, and a lack of digital skills among both teachers and students (World Bank, 2020).

In Indonesia, DL policies are based on various regulations and guidelines issued by the Ministry of Education and Culture (Kemendikbud). One important regulation is Circular Letter Number 4 of 2020 concerning the Implementation of Education Policies in the Emergency Period for the Spread of COVID-19, which provides guidance to schools for implementing online learning (Ministry of Education and Culture, 2020). This policy includes various initiatives to support technology access for students, including the provision of free internet quota and the use of educational TV programs. Apart from that, Minister of Education and Culture Regulation Number 719/P/2020 concerning Guidelines for Implementing Curriculum in Education Units in Special Conditions also provides flexibility for schools to adapt the curriculum according to their respective conditions (Ministry of Education and Culture, 2020).

The DL approach is also driven by various educational theories which emphasize the importance of flexibility in the learning process. Connectivism theory, proposed by Siemens (2005), emphasizes that learning in the digital era must enable access to widespread information and flexible interaction between teachers and students. DL provides the opportunity for students to learn at their own pace and access learning resources from various digital media. However, the effectiveness of DL is highly dependent on the quality of the content provided, active involvement of students, and support from parents and the school community.

For example, the implementation of DL in Finland shows how a planned approach and strong support can produce positive results. The Finnish government provides technological devices to students in need and trains teachers in the use of digital platforms. In addition, schools in Finland are used to flexible learning methods, so the transition to DL is not too difficult. On the other hand, in Indonesia, although the government has made efforts to provide access to technology and training for teachers, challenges such as limited infrastructure and the digital divide are still the main obstacles in implementing DL (UNICEF, 2020).

Overall, the DL policy during the COVID-19 pandemic is a crucial response to an unprecedented global emergency situation. Despite facing various challenges, this policy also opens up opportunities for innovation in education and wider use of technology. With proper evaluation and ongoing support, DL can continue to be developed as an integral part of a more flexible and adaptive education system in the future.

2) The Influence of Distance Learning (DL) on Learning Performance

The COVID-19 pandemic has brought drastic changes in learning methods, forcing schools around the world to switch to distance learning (DL). The impact of these changes on student academic achievement has been the subject of numerous quantitative and qualitative studies. Quantitative analysis shows that there are variations in the impact of distance learning on student academic achievement. The study by Kuhfeld et al. (2020) in the United States found that, in general, students experienced a decline in academic achievement, especially in mathematics and reading, compared to the pre-pandemic period.

This study used standardized test result data compared between the school year before and during the pandemic, showing a significant decline in test scores.

On the other hand, qualitative analysis provides deeper insight into the experiences of students and teachers during the implementation of DL. According to research by Bubb and Jones (2020), many students find it difficult to stay focused and motivated when studying from home, which has a negative impact on their achievement. Some factors that are often mentioned include a lack of direct interaction with teachers and peers, a non-conducive learning environment at home, and limited access to technology. However, this research also found that there was a small number of students who actually experienced an increase in academic achievement during DL, especially those who had good independent learning skills and adequate support from their families.

A comparison of student achievement before and during the pandemic reveals significant differences. Before the pandemic, most students participated in face-to-face learning which provided a clear structure and routine. However, during the pandemic, the shift to DL changed this dynamic drastically. According to a study in Indonesia by the Ministry of Education and Culture (2020), many students experienced difficulties in adapting to DL, which was reflected in decreasing grades and increasing absenteeism. Students who previously performed well in a face-to-face environment may find that they cannot access the same resources or do not get the support they need to succeed in a distance learning environment.

The factors that contribute to increasing or decreasing learning achievement during DL vary greatly. According to self-motivation theory (Ryan & Deci, 2000), students' ability to stay motivated in unstructured learning environments is strongly influenced by their basic needs for autonomy, competence, and relatedness. Students who have access to adequate digital devices and a supportive learning environment at home are more likely to stay motivated and succeed in DL. Conversely, students who experience technological distractions or an unsupportive home environment tend to experience a decline in academic achievement.

For example, a case study from a school in an urban area in Jakarta showed that students who had stable internet access and adequate devices showed better academic performance during DL compared to students who had to share devices with other family members or who had access to limited internet (Hidayat et al., 2020). Apart from that, parental support is also a key factor. Students whose parents are actively involved in their learning process tend to show better achievement, as found in research by Putra and Widodo (2020).

The influence of distance learning on student achievement is complex and influenced by various internal and external factors. Although there are significant challenges in implementing DL, findings from various studies show that with the right support and adequate adjustments, DL can provide positive outcomes for some students. Further research is needed to identify the most effective strategies in supporting students during this transition and ensuring that no student is left behind.

3) Education Gaps due to Distance Learning (DL)

The COVID-19 pandemic has forced the global education system to adapt to distance learning (DL), which has exacerbated gaps in access to technology and the internet among students. The analysis shows that students from lower socio-economic backgrounds are more likely to experience limited access to digital devices and stable internet connections.

According to a report from UNESCO (2020), more than 40% of students worldwide do not have access to the internet at home, while around 50% of students do not have adequate digital devices for online learning. In Indonesia, a Ministry of Education and Culture survey (2020) revealed that many students in rural and remote areas have to face major obstacles in accessing DL, including a lack of technological infrastructure and high internet costs.

This gap in access to technology and the internet has a significant impact on learning outcomes and student participation in DL. According to the digital equality theory proposed by van Dijk (2005), unequal access to technology can deepen educational gaps because students who do not have adequate access tend to lag behind in academic achievement. The study by Kuhfeld et al. (2020) shows that students who do not have stable internet access or adequate devices experience a significant decline in academic achievement during DL compared to their peers who have better access. Apart from that, this gap also has an impact on the level of student participation in online learning activities, with many students being absent or not actively participating due to technical obstacles.

To address this gap, various efforts have been made by the government and non-governmental organizations. The Indonesian government, through the Ministry of Education and Culture, has launched various initiatives to increase technology access for students. One of these initiatives is the free internet quota assistance program for students and teachers, which aims to ease the burden of internet costs during the pandemic (Ministry of Education and Culture, 2020). Apart from that, the government is also working with telecommunications companies to expand internet coverage to remote areas. Non-governmental organizations also play an active role in addressing this gap. For example, UNICEF works with various institutions to provide learning devices such as tablets and laptops to students in need, as well as providing digital skills training for teachers and parents (UNICEF, 2020).

As a concrete example, in Jakarta, an initiative called "Teaching Campus" involves students in helping students in disadvantaged areas to access and understand online learning materials. This program not only provides digital devices but also provides direct guidance to students, so that they can participate in DL more effectively. Programs like this demonstrate the importance of collaboration between governments, educational institutions and non-governmental organizations in addressing gaps in access to technology and ensuring that all students have equal opportunities to learn during the pandemic.

4) Psychosocial Impact of Distance Learning (DL) on Students

Distance Learning (DL) implemented during the COVID-19 pandemic has brought significant changes to student motivation and involvement in the learning process. Based on the self-determination theory proposed by Ryan and Deci (2000), students' intrinsic motivation is strongly influenced by three basic needs: autonomy, competence, and connectedness. DL, for all its limitations on physical and social interaction, often fails to meet these needs, which has a negative impact on student motivation and engagement. The study by Yang et al. (2020) shows that many students experience a decrease in learning motivation during DL because they feel isolated and do not get direct feedback from the teacher.

The psychological impact of DL is also a major concern. Social isolation, stress and anxiety are some of the problems that many students report during online learning. According to a study by Loades et al. (2020), social isolation exacerbated by physical restrictions during the pandemic increases the risk of anxiety and depression among children and adolescents. Students who usually actively participate in school activities now feel

isolated due to lack of social interaction with peers. In addition, academic pressure and technical challenges in participating in DL also contribute to increasing stress levels among students (Lee, 2020).

To support students' mental and social well-being during DL, a comprehensive and sustainable strategy is needed. One approach that can be implemented is increasing social interaction through digital platforms. According to the social support theory proposed by Cohen and Wills (1985), adequate social support can reduce the negative impact of stress and improve psychological well-being. Schools can organize group discussion sessions, online extracurricular activities, and regular meetings between students and teachers to build a sense of community and togetherness. For example, several schools in Finland have successfully implemented online peer mentoring programs, where senior students help junior students in the learning process and adapting to DL (UNICEF, 2020).

Additionally, it is important to provide access to counseling services and psychological support for students in need. Schools can work with psychologists or counselors to provide online counseling sessions that can be accessed by students and parents. According to a study by Holmes et al. (2020), early intervention through counseling and psychological support can help students overcome stress and anxiety, and improve their mental well-being during the pandemic.

The "Friends of Learning" program was launched in several schools in Jakarta. This program provides online counseling sessions, group discussions, and various social activities aimed at supporting students' mental and social well-being during DL. This program also involves parents in the process, providing them with training on how to support their children during DL (Kemendikbud, 2020).

5) Policy Recommendations for Distance Learning (DL)

Distance Learning (DL) implemented during the COVID-19 pandemic has brought various challenges and opportunities to the global education system. Based on research findings, there are several recommendations to increase the effectiveness of DL. First, it is important to ensure adequate technological infrastructure is ready. A study by Anderson and Perrin (2020) shows that stable access to digital devices and the internet is a key prerequisite for the success of DL. Therefore, governments need to invest in improving digital infrastructure, especially in underserved areas, to ensure all students have equal access to technology. In addition, training and professional development for teachers is also a key component to increasing the effectiveness of DL. According to Darling-Hammond et al. (2020), teachers who receive appropriate training on the use of technology and online learning methods are better able to manage online classes and provide effective learning. Ongoing training programs for teachers should be a priority, with a focus on digital skills and pedagogy relevant to DL.

To support the implementation of DL, collaboration between the government, schools and related parties is very important. The government needs to develop policies that support curriculum flexibility and adaptive assessment methods. According to change management theory (Kotter, 1996), effective change in the education system requires the involvement of all stakeholders and clear communication about the goals and process of change. Schools can serve as community centers that provide resources and support for students and their families. Additionally, partnerships with the private sector and non-

governmental organizations can help provide devices and internet access to students in need (UNICEF, 2020).

Strategies to mitigate the negative impacts of DL also need to be implemented to ensure the continuity of quality education for all students. One of the main strategies is to provide psychosocial support for students and teachers. According to Loades et al. (2020), mental and emotional support is very important to reduce stress and anxiety caused by social isolation and distance learning challenges. Schools can provide online counseling services and peer support programs to help students deal with psychological stress. In addition, it is important to develop more interactive and engaging learning methods to increase student engagement. According to student engagement theory (Fredricks, Blumenfeld, & Paris, 2004), high engagement in learning correlates with better academic outcomes. The use of technology such as gamification, project-based learning, and online discussions can help increase student interest and participation in DL. For example, schools in Singapore have successfully implemented interactive learning platforms, which enable students to collaborate and actively participate in online learning activities (Koh, 2020).

In South Korea, their government has developed a "Digital New Deal" program that focuses on improving digital infrastructure and digital skills training for teachers and students. The program includes providing digital devices to students from low-income families and developing high-quality digital learning content. This program shows how investments in technology and training can increase the effectiveness of DL and ensure that all students have equal access to quality education (Kwon, 2020).

4. CONCLUSION

Conclusion

- 1) The COVID-19 pandemic forced the implementation of distance learning policies globally as a response to the physical closure of schools. Infrastructure readiness, technological accessibility, and digital capabilities of educators and students are key factors that influence the effectiveness of DL.
- 2) DL shows varying results on student learning achievement. In many cases, especially in developing countries like Indonesia, students experience a decline in achievement due to various obstacles such as limited internet access and digital devices, as well as a lack of direct interaction that supports the learning process.
- 3) DL widens the educational gap between students who have access to technology and those who do not. Students from disadvantaged families or who live in remote areas are most affected by this shortage.
- 4) DL creates psychosocial challenges, reducing students' motivation and involvement in learning. Isolation from peers and lack of direct support from teachers exacerbates these problems.

Suggestion

- 1) The government must increase investment in digital infrastructure and ensure that every student has access to adequate devices and internet connectivity. This includes subsidies or assistance programs for devices and internet for students in need.
- 2) Providing ongoing training to teachers on online learning techniques and methods is essential. Teachers need to be equipped with the skills to use various digital platforms and to manage virtual classrooms effectively.
- 3) Schools and educational institutions must provide counseling and psychosocial support services for students and teachers. This could include regular counseling

sessions, activities that promote mental health and extracurricular activities conducted online.

- 4) Curriculum adaptation that takes into account the challenges and limitations of DL is important. This includes integrating more learning resources that can be accessed offline and assessment methods that are adaptive to student conditions.
- 5) The government must encourage collaboration between the public, private sectors and non-governmental organizations to provide the resources and support necessary for effective implementation of DL.

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