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### Application of Technology in the Learning Process of Elementary School Teachers at SD Inpres Malakantu

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#### ABSTRACT

This study aims to improve the quality of teaching in elementary schools through the use of technology, with a focus on developing students' digital skills. A descriptive qualitative method was used with two teachers as research subjects at SD Inpres Malakantu. The results of the study showed a lack of use of technology in learning, with the main teaching materials still being books. The researcher provided examples of multimedia-based learning media, especially using the slide master feature in Microsoft PowerPoint, Canva, and Google Classroom. This study found that the limitations of teachers' technical skills can be overcome through the development of skills using technology. The integration of technology in elementary schools is considered to be able to increase student engagement and the quality of learning. The use of technology at SD Inpres Malakantu was identified as a solution to challenges in delivering learning materials. Research recommendations include strengthening teacher technology skills training, full support from schools and the government in integrating technology into the curriculum, and further research to understand the long-term impact of technology implementation on student achievement and their learning experiences.

#### INTRODUCTION

Education is an important need for every individual. In fact, the government itself has set a 12-year or more compulsory education for every citizen as regulated by law, especially in Indonesia (Hasanah & Jabar, 2017). However, since the COVID-19 pandemic, the world of education has changed worldwide in facing specific challenges that add complexity to their strategies in the world of education (Mogaji et al., 2022), including in utilizing technology. Technology in the 4.0 era is developing rapidly and advancing rapidly. With the existence of technology along with the development of science, it is used as a tool to carry out learning activities and get everything quickly, including in finding teaching materials (Maritsa et al., 2021).

Technology has the potential to cause significant changes in human life and the entire existing civilization (Rohman et al., 2024). Technological progress has become something that is

unavoidable in the journey of life, along with the development of science.(Jamun, 2018). The impact of technology on the world of education is very large, so the education sector should be open to the integration of this technology.(Sudarsana et al., 2018). Educational technology is defined as a complex and integrated process, involving people, procedures, ideas, equipment, and organizations to analyze, find solutions, implement, evaluate, and manage problem solving that covers all aspects of human learning.(Jamun, 2018). The application of information and communication technology in the world of education has the potential to improve the quality of learning.(Sudarsana et al., 2018). A serious problem facing the education sector from primary to tertiary level is the issue of quality, which can be addressed through the Educational Technology approach.(Jamun, 2018).

However, the application of technology in education has significant positive and negative impacts (Mokalu et al., 2022). Although technology allows teachers to provide more concrete explanations of material, dependence on technology also has certain consequences. This impact has a significant impact on education practitioners, both practitioners and educators, as seen in the lack of direct interaction between students, and the lack of understanding of technology among some parents and teachers (Mokalu et al., 2022). Changes in the learning system, without proper preparation, bring obstacles and challenges at all levels, including at the primary education level.

In this context, students' ability to memorize information becomes crucial, where students' brains are faced with the task of remembering and storing various information from educators.(Ulfa, 2020). The use of technology in the learning process includes the provision of online teaching materials, demonstration materials or simulations, and distance learning through open schools. The provision of online teaching materials makes it easier for teachers and students to access materials that are not available conventionally.(Anggraeny et al., 2020). Although learning has moved to the digital era, further attention is needed to the learning model to remain effective.

Several studies have been conducted on the educational context, especially in Indonesia (Anggraeny et al., 2020; Hasanah & Jabar, 2017; Khairunnisa & Aziz, 2021; Rohman et al., 2024). For example, research by Khairunnisa & Aziz (2021) which found that virtual learning in Mathematics lessons has a positive impact on the learning and teaching process. However, this study did not explore the learning system carried out in the classroom. Then research by Anggraeny et al. (2020) found that, the teaching and learning process in elementary schools will be interesting if using an interactive learning system. However, this study only focuses on certain areas. Therefore, this study aims to expand the understanding and literature on the development of technology in the world of education, especially in Indonesia, so that it can be seen from various perspectives.

The standard indicator of the application of technology in the learning process used is the ability of teachers to measure the improvement of their technological skills through training and certification (Yurinda & Widyasari, 2022). The measurement of this indicator covers the extent to which technology is integrated into daily learning plans. The use of technology in the learning process will be explored in various forms, including the provision of online teaching materials, teaching aids or simulations, and distance learning through the open school concept (Syahrani et al., 2021). The provision of online teaching materials is expected to make it easier for educators or students to access materials that are not available conventionally (Meilana & Aslam, 2022). Even though the learning system has changed into the digital era, the learning model remains an aspect that needs attention.

This research was conducted in Indonesia, specifically at SD Inpres Malakantu. This study aims to see the focus on learning models is also a relevant aspect, especially in facing the transition of the learning system to the digital era. In addition, this study also aims to identify the influence of technology on the learning process, improve teachers' technological skills, and analyze the integration of technology in daily learning plans. Through a deeper understanding of the implementation of technology in the education sector, this study aims to provide comprehensive and relevant insights to support the development of education in Indonesia.

## RESEARCH METHOD

This research applies a descriptive qualitative method, which is characterized by its focus on exploring social phenomena and developing a specific understanding of a problem (Wada et al., 2024). Qualitative methods are non-statistical methods that provide interpretations based on layout theories in an effort to solve existing problems (Afrianti et al., 2017). Two teachers at SD Inpres Malakantu, Tanambulava District, Sigi Regency, Central Sulawesi Province, were selected as research subjects to assess their level of ability in using digital teaching media tools. The tools used in the study involved computers or laptops, projectors, interactive layers of educational software, digital storage devices, and network equipment. The main objective of this study was to investigate and analyze teachers' ability in adopting digital teaching media tools in the educational environment.

## RESULT AND DISCUSSION

### Results

To start the interview, the researcher prepared various questions and tools used in the study. This interview included open-ended questions at the beginning and follow-up questions, so it was flexible. In addition, an investigation was also conducted to understand the extent of the teacher's ability to use technology. Based on the interview results, two teachers were obtained at SD Inpres Malakantu, Tanambulava District, Sigi Regency, Central Sulawesi Province. The first informant stated that:

*"The use of media and technology in learning is still lacking at SD Inpres Malakantu. Many teachers have limitations in using technological teaching media, we try to be more flexible and creative in using technology. If the internet condition is unstable, I have offline resources that can be used as an alternative. I also try to create a learning plan that does not depend on internet access"*

(Informant 1, results of an interview with a teacher at Malakantu Inpres Elementary School)

On the other hand, the second informant also said that:

*"In my opinion, educational technology has an important role in supporting the learning process. Technology helps students understand learning concepts and increases their enthusiasm for learning."*

(Informant 2, results of interview with teachers at Malakantu Inpres Elementary School)

Furthermore, he also stated:

*"I think the use of technology in elementary schools is still low, where most teachers still rely on conventional methods such as textbooks." One of the biggest challenges is the limited access to slow or unstable internet, which hinders the use of online resources in learning.*

(Informant 2, results of interview with teachers at Malakantu Inpres Elementary School)

Based on the interview results, it shows that the use of media and technology in learning at SD Inpres Malakantu still faces obstacles, especially related to the limited capabilities of teachers. Although there are efforts to improve capabilities through examples of multimedia-based learning media, further efforts are still needed to optimize the integration of technology in the learning process. The perspective of the informant (in this case the teacher who teaches) emphasizes the importance of the role of ICT in supporting the progress of learning and the quality of teachers in the digital era.

By understanding the results of these interviews, schools can develop more effective strategies to overcome challenges and maximize the benefits of using technology in learning. Steps such as improving technology infrastructure, providing technology training, and improving cooperation between teachers and school IT staff to help improve the effectiveness of technology implementation in learning at SD Inpres Malakantu.

### Discussion

Research at SD Inpres Malakantu revealed that the use of media and technology in learning is still lacking, due to the limited ability of teachers to use technological teaching media. In this study, two teachers at SD Inpres Malakantu were investigated to assess their ability to utilize digital teaching media tools. Various examples of multimedia-based learning media were given to the teachers during the study, with a focus on developing their skills in using the slide master feature in Microsoft PowerPoint, Canva, and Google Classroom. This study aims to provide an interesting and interactive alternative in presenting learning materials, as well as contributing positively to overcoming the limitations of technology use at SD Inpres Malakantu.

Educational technology plays an important role in the world of education, helping students understand learning concepts and increasing their enthusiasm for learning (Sappaile et al., 2023). Based on the research results, there is low utilization of technology in elementary schools, with the majority of teachers still relying on conventional methods such as textbooks. Learning media is defined as a tool that helps explain material and raises students' learning motivation (Mayasari et al., 2021).

Supporting previous research, technological developments also have an impact on teachers (Mokalu et al., 2022). Therefore, this study shows that, to improve the quality of elementary school students in the use of technology must also involve the role of parents and teachers at school. By involving both parties, the use of technology in elementary education environments will be more optimal. Therefore, it is necessary to identify concrete strategies and efforts that can be applied by parents and teachers to provide maximum support in the development of students' technological skills.

The development of learning media continues to be in accordance with needs, and in using technological teaching media, achieving learning objectives remains the main focus of teachers (Sitorus & Santoso, 2022). This study shows that teachers' ability to utilize information and communication technology (ICT) can affect the progress of learning and student learning outcomes. The integration of digital devices in the learning process also has a major impact on teacher quality and student motivation (Silvester et al., 2023).

The use of ICT as a learning medium makes a major contribution to the world of education, facilitating teachers in improving their teaching skills and demonstrating creativity and skills in presenting materials. The selection of learning media that motivates students and is communicative in classroom learning is the main responsibility of the teacher. The scope of Educational Technology not only impacts the school context, but also covers the entire context of community life by developing and using various resources.

## **CONCLUSION**

The study emphasized the limitations of teachers' technical skills in optimizing media and learning technology at SD Inpres Malakantu. Technology integration in elementary schools is considered to have the potential to increase student engagement and overall learning quality. Teacher skill development, especially in using the slide master feature on certain platforms, has been shown to be effective in improving learning quality. The use of technology at SD Inpres Malakantu was identified as a solution to challenges in delivering learning materials. Therefore, it requires strengthening of teacher technology skills training, full support from schools and the government in integrating technology into the curriculum, and further research to understand the long-term impact of technology implementation on student achievement and learning experiences.

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