

IMPROVING STUDENTS' DIGITAL LITERACY THROUGH PROJECT-BASED LEARNING AT MTS MUHAMMADIYAH ENREKANG

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ABSTRACT

Improving digital literacy among students is a top priority in the current era of information technology. However, at MTs Muhammadiyah Enrekang, even though technology has been applied in learning, the level of digital literacy of students is still relatively low. This study aims to examine the effectiveness of the implementation of project-based learning (PBL) in improving students' digital literacy at the school. The urgency of this study lies in the urgent need to improve students' digital skills so that they are better prepared to face challenges in the digital world. This study uses a descriptive qualitative approach with data collection through observation, in-depth interviews with teachers and students, and documentation. The results of the study indicate that the implementation of PBL can improve students' digital skills, including the ability to search for information online, process data using digital applications, and produce technology-based products. The projects provided allow students to learn practically and collaboratively, which strengthens their ability to use technology. However, the main obstacle found was the limited technological devices that resulted in disparities in digital skills among students. This study provides important benefits for educators and education policies, by offering an approach that can be applied in schools with limited facilities. In addition, this study also proposes the need for training for teachers to optimize the use of technology in supporting project-based learning.

Keywords: *Digital literacy, project-based learning, digital skills, educational technology.*

INTRODUCTION

Improving digital literacy among students is one of the main issues in education in the 21st century (Sena Kurniawan & Yuni Siti Sarah, 2023). Digital literacy includes not only the ability to access information from various digital sources, but also the ability to analyze, verify, and communicate effectively using technology (Rizaldi et al., 2020). In an era increasingly dominated by information technology, digital literacy is an important skill that can support students in various aspects of their lives, both in education, work, and social life (Murtadho et al., 2023). The government and educational institutions are also increasingly emphasizing the importance of digital literacy as part of the core competencies that students must have at MTs Muhammadiyah Enrekang, although there have been efforts to integrate technology into learning, there are still challenges in improving students' digital literacy (Risdianto & Apiri, 2022). With the right approach, such as project-based learning (PBL), it is hoped that it can improve students' ability to utilize technology effectively and deeply (Risdianto & Apiri, 2022). Project-based learning provides opportunities for students to learn practically and contextually, and allows them to develop digital skills that are relevant to the needs of the modern world (Sinaga et al., 2023).

Based on data obtained through direct observation and interviews with teachers at MTs Muhammadiyah Enrekang, it can be concluded that although technology has been used in learning, the level of students' digital literacy is still relatively low (Aliyah & Sapitri, 2024). The data obtained shows that more than 60% of students are not yet fully able to use digital devices for independent learning purposes. For example, only about 40% of students are able to search for information effectively using search engines on the internet, and only about 30% can process data using word processing or spreadsheet applications. This reflects that although students are often exposed to technology, they do not yet have sufficient digital skills to optimally utilize technology in the context of learning (Banowati et al., 2019). In addition, the learning process at MTs Muhammadiyah Enrekang still largely relies on conventional methods, with the use of technology limited

to only a few subjects. Therefore, it is important to implement methods that can maximize the use of technology in learning and improve students' digital literacy skills (Banowati et al., 2019).

Previous studies have shown that project-based learning can have a positive impact on improving students' digital skills. For example, research conducted by (Fadriati et al., 2023) revealed that the implementation of project-based learning in high schools can improve students' ability to use information and communication technology (ICT). Project-based learning allows students to be directly involved in a project that requires them to actively use technology, such as searching for information, collaborating through digital platforms, and producing digital products. Another study by (Risdianto & Apiri, 2022) also found that the project-based learning approach not only improves students' technical skills but also helps them develop critical thinking skills, creativity, and problem-solving skills. In the context of MTs Muhammadiyah Enrekang, the implementation of project-based learning involving technology is expected to overcome existing deficiencies and have a positive impact on improving students' digital literacy, which will be the main tool in supporting the achievement of more effective and relevant learning objectives.

This study has novelty in several important aspects. First, this study focuses on the application of project-based learning to improve students' digital literacy at MTs Muhammadiyah Enrekang, which is an educational institution in an area with limited technological facilities (Fami et al., 2023). Most previous studies have been conducted in schools with more complete technological facilities and in big cities, so not many have studied the application of this method in schools with limited facilities such as MTs Muhammadiyah Enrekang (Sinaga et al., 2023). Therefore, this study will fill this gap by exploring how project-based learning can be implemented effectively even with limited digital devices. In addition, this study will not only measure the impact of project-based learning on students' digital literacy, but also examine other aspects such as collaboration

skills, creativity, and problem-solving abilities that develop along with the use of technology in learning (Haryani, 2023).

The benefits of this study are very significant for various parties involved in the world of education, especially at MTs Muhammadiyah Enrekang. First, the results of this study are expected to provide insight to educators regarding the effectiveness of implementing project-based learning in improving students' digital literacy. Thus, teachers can develop learning methods that are more innovative and relevant to the needs of students in the digital era. In addition, this study will also contribute to educational policies at the school and regional levels in designing programs that support the improvement of digital literacy (Jaya, 2024). Furthermore, this study can be a reference in developing a technology-based curriculum that is more integrated and in accordance with the local context. It is hoped that the results of this study will not only provide direct benefits to students at MTs Muhammadiyah Enrekang, but can also contribute to efforts to improve the quality of education in other schools in the region that have similar challenges. Thus, this study will have a broader impact in creating a generation that is ready to face the challenges of the digital world in the future (Swandi et al., 2023).

METHOD

This study uses a descriptive qualitative approach, which aims to describe in depth and comprehensively the phenomenon of increasing students' digital literacy through project-based learning at MTs Muhammadiyah Enrekang. The qualitative approach was chosen because this study focuses on understanding and analyzing the process and meaning contained in the application of project-based learning methods to improve students' digital literacy. This study does not only look at numbers or statistics, but rather prioritizes understanding how project-based learning is implemented, how the interaction between students and technology in the context of learning takes place, and how the experiences and perceptions of students and teachers are related to improving digital literacy during the

learning process. Thus, this approach allows for richer and deeper information regarding the implementation and impact of the methods applied.

Data collection techniques in this study include observation, interviews, and documentation. Observations were carried out to directly see the implementation of project-based learning in the classes involved in the study. Researchers will observe how the learning process is carried out, including the use of technology by students and their interactions with the projects being worked on. In-depth interviews were conducted with teachers involved in project-based learning and several students who were participants to explore their perceptions regarding the effectiveness of project-based learning in improving their digital skills. In addition, documentation in the form of lesson implementation plans (RPP), project assignments given, and project products produced by students will be analyzed to provide a more comprehensive picture of the implementation and results of project-based learning. The collected data will be analyzed using qualitative data analysis techniques with an inductive approach to find patterns, themes, and meanings that emerge from the observed learning process.

Data analysis in this study was carried out by organizing, compiling, and interpreting data obtained from various sources. After data collection, the first step that will be taken is to transcribe the interview results and record the observation results. Furthermore, the researcher will categorize the data based on themes that are relevant to the focus of the study, such as the use of technology, student involvement in the project, and the impact on improving digital literacy. This analysis process will lead to a deeper understanding of the application of project-based learning in the context of MTs Muhammadiyah Enrekang and how this method can contribute to improving students' digital skills. The results of this analysis are expected to provide a clear picture of the effectiveness of project-based learning in improving digital literacy in school environments that have limited technological facilities.

DISCUSSIONS

The results of the study showed that the implementation of project-based learning (PBL) at MTs Muhammadiyah Enrekang had a significant impact on improving students' digital literacy. During the learning process, students were directly involved in various projects that utilized technology as the main means to search for information, process data, and present their work in digital form. In the observations conducted, it was seen that around 75% of students experienced a significant increase in their ability to search for information online and utilize various digital platforms to complete their tasks. For example, in one of the projects that required students to search for online references and compile multimedia-based reports, students succeeded in integrating various digital sources well. In fact, almost 80% of students were able to use word processing applications, spreadsheets, and presentation tools to produce more creative and informative products, which showed a significant increase in their technological skills. The projects provided allowed students to learn practically, solve problems independently, and collaborate in teams. This provided hands-on experience in using digital tools and introduced them to the wider world of technology. Most students also expressed that they felt more confident in using digital devices after participating in project-based learning. This shows that project-based learning methods can encourage students to be more active and motivated in developing their digital skills.

Meanwhile, although the results obtained by most students are quite positive, there are several challenges that need to be considered. One of them is the limited technological devices in schools which are the main barrier to the implementation of project-based learning. Although students can use their personal devices, not all students have equal access to technology, so that a digital capability gap appears between them. Some students who have personal devices can access and process information more easily, while students who do not have devices must rely on limited facilities, which risks hindering their learning process. In addition, some students have difficulty in utilizing digital applications

optimally, especially when faced with tasks that require the use of more complex software or digital tools, such as data processing or design applications. This shows that although digital literacy has increased, there are certain technical aspects that still need to be strengthened. Therefore, although project-based learning has had a positive impact, limited devices and unequal access to technology are obstacles that need to be solved so that all students can optimize their potential in digital learning.

From interviews with teachers involved in project-based learning, it was found that teachers also felt significant benefits from implementing this method. Teachers reported that project-based learning made students more active, creative, and more easily involved in the teaching and learning process. They could collaborate with their friends in teams, share ideas, and solve problems together, which strengthened students' social and collaborative skills. Teachers also found it easier to integrate technology into the curriculum, although they had to adapt to the limitations of the available devices. However, teachers also expressed that they still needed further training in terms of using technology, in order to maximize the use of technology in project-based learning. Some teachers felt the need to acquire additional skills related to how to use more diverse software or digital platforms to support student learning activities, so that they could be more efficient in guiding students during the project.

In terms of project documentation, the final products produced by students showed an increase in quality. Many students successfully produced digital-based projects in the form of multimedia presentations, videos, and spreadsheet-based reports, indicating that they were able to utilize digital tools to complete tasks more creatively and in a structured manner. However, some students still had difficulty using applications for data processing or creating presentations, indicating that there were differences in the level of digital skills among students. However, overall, the increase in technology skills obtained by students during the project-based learning process was quite significant, and this indicates that

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project-based learning can be an effective approach to improving students' digital literacy in environments with limited facilities such as MTs Muhammadiyah Enrekang.\

CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that project-based learning (PBL) at MTs Muhammadiyah Enrekang can significantly improve students' digital literacy despite limited technological facilities at the school. Through the implementation of PBL, students showed increased skills in searching for information online, processing data using digital devices, and producing technology-based products such as multimedia presentations and digital reports. In addition, PBL also encourages students to be more creative, active, and collaborative in the learning process. However, the gap in access to digital devices among students is a major challenge, which has an impact on the diversity of digital skills possessed by students. Therefore, to ensure that project-based learning can run optimally, a solution is needed to equalize access to technology among students and provide further training for teachers so that they can integrate technology more effectively in learning. Overall, project-based learning has proven to be an effective approach in improving students' digital literacy, which can be adapted in schools with limited facilities, as long as there are efforts to overcome these challenges.

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CONFLICT OF INTEREST

I, as a researcher, hereby declare that there is no conflict of interest, whether financial, professional, or personal, that may influence the process, results, or reporting of this research. The research was conducted by upholding the principles of transparency, integrity, and research ethics.

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