Merdeka Mengajar Platform: A Digital Innovation in Education

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Abstract :

Digital transformation in education brings opportunities and challenges for educators in Indonesia, especially in integrating technology into learning practices. As an innovative step, the *Merdeka Mengajar* Platform (PMM) is here to improve teacher competence and support the implementation of the *Merdeka* Curriculum. This study examines the use of PMM at UPT SDN 144 Gresik, especially in helping teachers prepare interactive and student-centered learning plans. Using a qualitative approach with descriptive methods, data was obtained through interviews, observations, and document analysis. The results of the study indicate that PMM is effective in improving the quality of teaching and professional competence of teachers, despite obstacles such as limited infrastructure, outdated devices, slow internet connections, and difficulties in adapting to digital technology for senior teachers. This study provides practical insights into strategies to overcome these obstacles, such as improving infrastructure, more targeted training, and developing offline features to support areas with limited internet access. With these findings, PMM shows its potential in driving a more innovative and inclusive educational transformation, in line with the vision of improving the quality of education in Indonesia.

Keywords: *Merdeka Mengajar Platform, Merdeka Curriculum, Digital Innovation*

Abstrak :

Transformasi digital dalam dunia pendidikan membawa peluang sekaligus tantangan bagi para pendidik di Indonesia, terutama dalam mengintegrasikan teknologi ke dalam praktik pembelajaran. Sebagai salah satu langkah inovatif, Platform *Merdeka Mengajar* (PMM) hadir untuk meningkatkan kompetensi guru dan mendukung pelaksanaan Kurikulum *Merdeka*. Penelitian ini mengkaji pemanfaatan PMM di UPT SDN 144 Gresik, khususnya dalam membantu guru menyusun rencana pembelajaran yang interaktif dan berpusat pada siswa. Menggunakan pendekatan kualitatif dengan metode deskriptif, data diperoleh melalui wawancara, observasi, dan analisis dokumen. Hasil penelitian menunjukkan bahwa PMM efektif dalam meningkatkan kualitas pengajaran dan kompetensi profesional guru, meskipun terdapat kendala seperti keterbatasan infrastruktur, perangkat yang usang, koneksi internet yang lambat, serta kesulitan adaptasi bagi guru senior terhadap teknologi digital. Penelitian ini memberikan wawasan praktis terkait strategi untuk mengatasi kendala tersebut, seperti peningkatan infrastruktur, pelatihan yang lebih terarah, dan pengembangan fitur offline untuk mendukung daerah dengan akses internet terbatas. Dengan temuan ini, PMM menunjukkan potensinya dalam mendorong transformasi pendidikan yang lebih inovatif dan inklusif, selaras dengan visi peningkatan kualitas pendidikan di Indonesia.

Kata Kunci: *Platform Merdeka Mengajar, Kurikulum Merdeka, Inovasi Digital*

INTRODUCTION

The rapid development of information and communication technology in recent years has brought significant changes in various areas of human life. Technology is now an important element that not only influences the way humans interact but also opens up new opportunities in education. Individuals who are able to master technology have great potential to become leaders and innovators in an increasingly competitive society.[1]

However, even though technology has disrupted many aspects of life, not everyone has the same opportunity to access it. The lag in mastering technology can create a wider social gap. In the context of education, this is a major challenge, especially in developing countries like Indonesia. The education system needs a transformation that can bridge the gap in order to meet the needs of future generations.[2]

Education is the main pillar in facing the digitalization era. Based on Law Number 20 of 2003 article 3 concerning the National Education System, education in Indonesia aims to develop students' potential to become individuals who are faithful, pious, knowledgeable, independent, and have skills that are relevant to the needs of the times.[3] Unfortunately, the challenges in realizing this goal are becoming more complex as technology advances and learning patterns change due to the COVID-19 pandemic.[4]

The COVID-19 pandemic has drastically changed the face of education. The online learning system implemented during the pandemic has brought major challenges, especially for students and teachers in areas with limited internet access and technological infrastructure.[5] Lack of experience in using digital devices hinders effective learning processes. As a result, the level of literacy and numeracy of students in Indonesia has decreased significantly, as reflected in the results of the Programme for International Student Assessment (PISA).[6]

To address these challenges, the Ministry of Education, Culture, Research, and Technology launched the *Merdeka* Curriculum. This curriculum is designed to provide schools with flexibility in designing student-centered learning, as well as supporting character development and basic competencies. One of the important innovations supporting the implementation of this curriculum is the *Merdeka Mengajar* Platform (PMM), which was introduced in 2022.[7]

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[6] "View of PERAN TEKNOLOGI 5G DALAM MENDORONG INOVASI PEMBELAJARAN," accessed December 21, 2024, https://journal.universitaspahlawan.ac.id/index.php/jrpp/article/view/25562/17827.

[7] "View of PERAN TEKNOLOGI INFORMASI DAN KOMUNIKASI DALAM MENINGKATKAN

PMM is designed as a digital platform that provides various resources and tools for teachers to plan, implement, and evaluate learning. With features such as independent training, teaching tools, and student assessments, PMM is an innovative solution to improve educator competence and learning quality. This platform not only supports pioneering schools, but can also be accessed by all schools in Indonesia, so that the potential for educational transformation becomes more inclusive.[8]

This study aims to evaluate the implementation of PMM at UPT SDN 144 Gresik, one of the pioneering schools in Indonesia. The focus of the study includes exploring the effectiveness of using PMM in supporting the Independent Curriculum, identifying technical and non-technical problems faced by teachers, and formulating practical recommendations to optimize the use of this platform. Until now, there has been no research that specifically evaluates the implementation of PMM at the elementary school level, so this study makes a significant contribution both theoretically and practically to the development of education in Indonesia.

Previous research has revealed various challenges and solutions related to digital literacy and the implementation of technology in education. Jusua (2024) highlighted the low digital literacy of educators as a major obstacle to online learning,[9] while Rahma et al. (2024) showed inadequate infrastructure as a significant obstacle to technology implementation in elementary schools.[10] Siregar et al. (2024) underlined the importance of technology in supporting the flexibility of the Independent Curriculum.[11] Meanwhile, Sauri et al. (2024) emphasized the need for continuous training to improve teacher competence in utilizing digital platforms.[12] Dewi et al. (2024) highlighted the impact of the pandemic on basic education and the need for innovative solutions to address access gaps.[13] In contrast to these studies, this study focuses on evaluating the specific implementation of the *Merdeka Mengajar* Platform (PMM) in elementary schools to support the *Merdeka* Curriculum, thus providing a new contribution in the form of data-based recommendations to improve the effectiveness of PMM.

Based on several studies, this study focuses more on the implementation of PMM at the elementary school level, an area that has been relatively under-explored in previous literature. This study adopts a holistic approach that connects the evaluation of digital platforms with the specific context of elementary schools,

KREATIVITAS BELAJAR SISWA DI SMAN 2 KAHAYAN TENGAH KABUPATEN PULANG PISAU," accessed December 21, 2024, https://jurnal.undhirabali.ac.id/index.php/jutik/article/view/3444/3816.

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[13] Susana Eka Dewi, Anang Santoso, and Radeni Sukma Indra Dewi, "Analisis Penggunaan Platform *Merdeka Mengajar* Pendukung Optimalisasi Merdeka Belajar Jenjang Sekolah Dasar," *Al-Madrasah: Jurnal Pendidikan Madrasah Ibtidaiyah* 8, no. 1 (January 29, 2024): 350, https://doi.org/10.35931/am.v8i1.3096.

making it have scientific novelty value. In addition, this study offers an in-depth analysis of the technical and non-technical challenges in the use of PMM, and provides data-based recommendations to improve the effectiveness of the implementation of the *Merdeka* Curriculum. Thus, this study is expected to provide not only theoretical contributions but also practical guidance for policymakers, educators, and other stakeholders in encouraging educational transformation in the digital era.

RESEARCH METHOD

This research uses a qualitative approach with descriptive methods to understand social phenomena from the perspective of participants, with a focus on the process, not the results.[14] Data collection techniques used include interviews, observations, and documentation. This research is based on the post-positivism understanding, aiming to reveal the truth about reality through human experience. Data analysis is carried out in three stages: data reduction, data presentation in a structured form, and drawing conclusions that are validated through triangulation to ensure data credibility.[15] This approach allows research to explore in-depth information regarding the use of the *Merdeka* Belajar Platform (PMM) in the learning process, especially among teachers and principals.

RESULT AND DISCUSSION

The *Merdeka Mengajar* (PMM) Platform is an educational technology innovation designed to support the implementation of the *Merdeka* Curriculum. As part of the digital transformation in the world of education, PMM provides various features and resources that help teachers in preparing lesson plans, managing teaching materials, and conducting evaluations. At UPT SDN 144 Gresik, the implementation of PMM has introduced a new approach to the teaching and learning process, which focuses on developing student competencies holistically.

However, the implementation of PMM in the field presents various dynamics. On the one hand, many teachers are enthusiastic about the potential of PMM to improve the quality of learning. On the other hand, challenges in terms of technology adaptation, limited infrastructure, and the need for in-depth training are obstacles that must be faced. With this background, this discussion will describe in detail the use of PMM at UPT SDN 144 Gresik and the problems that accompany it to provide a more comprehensive picture of the benefits and challenges of implementing this platform.

Use of the Independent Teaching Platform (PMM) at UPT SDN 144 Gresik

The use of the *Merdeka Mengajar* (PMM) Platform at UPT SDN 144 Gresik shows teachers' enthusiasm for educational technology innovation. Teachers feel great benefits from PMM, especially in terms of easy access to various teaching materials such as learning videos, modules, and interactive quizzes. The user-friendly interface is also one of the positive aspects that makes it easier for teachers to adapt to this platform.[16]

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"When we first tried the Merdeka Mengajar (PMM) Platform, I and many of the teachers felt confused, especially in terms of navigation and use of the various features that were available. Actually, this is normal, considering that the Merdeka Mengajar (PMM) Platform is a new platform with various digital components such as learning models, access to materials and evaluations that are different from previous methods. Initially, we had to get used to it, both in terms of accessing content and managing time to adjust to the rhythm of the Merdeka Mengajar (PMM) Platform" Mr. DO.

Although initially many teachers felt confused in understanding the navigation of the features, the adaptation process went well after they received basic training. Teachers who were more familiar with technology showed faster ability in utilizing PMM effectively. This was reflected in their increased creativity in compiling more dynamic and relevant learning plans with the *Merdeka* Curriculum.[17]

PMM also supports project-based learning, which is one of the key points in the *Merdeka* Curriculum. Teachers can use this feature to teach students through a contextual approach that involves collaborative problem solving. The digital evaluation feature helps teachers to monitor student progress in a more structured way, so they can provide more targeted feedback.[18]

"One of the positive aspects of the Merdeka Mengajar (PMM) Platform is the opportunity for professional development. Through this platform, we can take part in various online trainings that support teaching skills. I personally feel that the Merdeka Mengajar (PMM) Platform provides an opportunity for us to continue learning and innovating. We can share best teaching practices with other teachers and explore the Merdeka Belajar curriculum flexibly." Mr. MBU.

Teachers feel motivated to use PMM because the platform provides online training that supports their skill development. The training provides practical guidance that helps them understand how to utilize PMM's key features, such as managing teaching materials and evaluating students. With ongoing training, teachers' ability to use technology to support learning continues to improve.[19] In addition, PMM opens up opportunities for collaboration between teachers through the sharing of materials and experiences. Teachers can exchange ideas and effective teaching strategies, thus encouraging innovation in teaching methods. This collaboration strengthens the sense of togetherness among teachers and creates a more inclusive learning environment.[20] However, the use of PMM is not only limited to providing teaching materials. This platform also provides insight into the differentiation learning approach, where teachers can adjust their teaching methods to the needs and abilities of students. With this feature, teachers can create a more personalized and meaningful learning experience for students.[21]

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"Many teachers feel challenged when they first use the Merdeka Mengajar (PMM) Platform. The main challenge faced is the significant difference between the conventional teaching methods they have been implementing and the digital approach offered by PMM." Mrs. TS and Mr. DK

PMM also helps teachers integrate technology into traditional teaching methods. Teachers who previously used conventional approaches are beginning to feel the benefits of digitalizing learning. They are becoming more confident in adopting technology to improve the effectiveness of teaching in the classroom.[22] Support from the principal and local education office also plays an important role in the successful use of PMM. Internal training and supporting facilities such as computer labs provide opportunities for teachers to practice the use of PMM directly.[23] Although challenges remain, teachers' experiences in using PMM show the platform's great potential to improve the quality of learning. With adequate support, PMM can be an effective tool for integrating technology into education in accordance with the principles of the *Merdeka* Curriculum.[24]

Problems of Using the Independent Teaching Platform (PMM) at UPT SDN 144 Gresik

Although PMM offers various conveniences, the implementation of this platform at UPT SDN 144 Gresik is not free from a number of problems. One of the main obstacles is the limited technology infrastructure. Much of the hardware used by teachers and students is outdated and does not support the latest features of PMM. In addition, slow internet connections, especially in remote areas, often hinder access to learning materials.[25]

"Many teachers find it difficult to leave conventional learning methods and switch to the technology-based approach offered by PMM. This is because the training provided is not in-depth enough, so that many innovative features of PMM are not fully understood by teachers. This challenge is increasingly seen in senior teachers who have limited mastery of technology. As a result, the digital-based learning process does not run optimally, and teachers tend to return to using the old methods that they are more proficient in." Mrs. S (Headmaster).

Senior teachers who are less familiar with technology also face major challenges in adopting PMM. They take longer to understand the navigation of features and how to use them optimally. This slows down their adaptation process to new technology.[26] The training provided often does not cover the in-depth needs of teachers regarding the use of advanced PMM features. Many teachers feel that the training only focuses on a basic introduction to the platform and does not provide

(PMM) Untuk Meningkatkan Kompetensi Guru Di Sekolah Menengah Kejuruan," *Jurnal Ilmu Manajemen Dan Pendidikan* 3 (December 31, 2023): 113–22, https://doi.org/10.30872/jimpian.v3ise.2929.

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enough understanding of how to integrate PMM with their lesson plans.[27] Technical barriers such as login difficulties, slow platform response, and hardware incompatibility are also common issues. Teachers often have to find solutions themselves or ask for help from colleagues, which is not always efficient.[28] The high administrative workload also reduces the time teachers have to learn and use PMM optimally. Teachers feel burdened with additional tasks that come with the implementation of this learning technology.[29]

> *"Several important needs to ensure that the Merdeka Mengajar Platform (PMM) can run better in schools. One of the main aspects that needs to be improved is the technology infrastructure. Hardware, such as computers and tablets, as well as faster and more stable internet networks are needed to support all users, both teachers and students. Limited devices and slow internet connections often hinder the smooth running of the PMM-based learning process."* Mrs. TS

In addition, students from families with economic constraints also face problems in accessing PMM. Their inability to have personal devices makes them completely dependent on school facilities, which are limited in number.[30]

> *"I emphasize the importance of advanced training that focuses on specific PMM features. This training is needed so that teachers can deeply understand how the platform works, including how to manage teaching materials, utilize evaluation tools, and analyze student data. With more targeted training, teachers are expected to be able to maximize the potential of PMM to improve the quality of learning."* Mrs. TS.

Technical support in schools is also still inadequate. Teachers often do not have direct access to technical support teams who can help them overcome technological obstacles. This hinders the smooth use of PMM in the classroom.[31]

> *"This is especially important for schools that still have limited technology. In addition, he suggested that the policy for using PMM be made more flexible. For example, providing offline versions of learning materials would be very helpful for schools in remote areas with limited internet access."* Mrs. TS.

To address these issues, schools and governments need to work together to improve technology infrastructure, provide advanced training, and provide more intensive technical support. In addition, developing offline features in PMM can be a solution to overcome limited internet access in remote areas.[32] By addressing these issues, PMM has great potential to become an effective tool in supporting technology-based learning throughout Indonesia. Collaboration between the

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government, schools, and PMM developers is essential to create an inclusive and sustainable education ecosystem.[33]

CONCLUSION

The use of the *Merdeka Mengajar* (PMM) Platform at UPT SDN 144 Gresik has supported the implementation of the *Merdeka* Curriculum through features such as independent training, teaching tools, student assessments, and teacher communities that facilitate learning planning based on student needs. PMM has a positive impact on improving teacher professional competence, encouraging creativity in preparing learning plans, and supporting the implementation of an interactive and relevant *Merdeka* Curriculum. However, its use is still constrained by limited technological infrastructure, varying teacher digital literacy, and uneven training. To optimize the potential of PMM, it is necessary to improve infrastructure, provide advanced training, and develop offline features to overcome limited internet access in remote areas. By overcoming these challenges, PMM can be a very effective tool in supporting technology-based educational transformation in Indonesia.

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