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Analysis Of The Utilization Of The Merdeka Mengajar Platform (Pmm) In The Implementation Of The Merdeka Curriculum

Marzoan
STKIP Hamzar

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Abstract

This study aims to analyze the improvement in the quality of utilizing the Merdeka Mengajar Platform (PMM) to support the implementation of the Merdeka Curriculum in independent educational units. PMM is a learning platform designed to facilitate teachers and schools in optimizing competency-based learning processes. The study was conducted in the West Nusa Tenggara (NTB) Province, covering ten districts/cities: Kota Mataram, Kota Bima, Kabupaten Lombok Barat, Kabupaten Lombok Timur, Kabupaten Lombok Utara, Kabupaten Lombok Tengah, Kabupaten Sumbawa, Kabupaten Sumbawa Barat, Kabupaten Dompu, and Kabupaten Bima. The research was carried out from February 2024 to November 2024. Using a descriptive quantitative approach, data were collected through surveys, interviews, and document analysis from 6,495 educational units implementing the Merdeka Curriculum. The sample was selected using stratified random sampling, involving 650 educational units to ensure representation across various educational levels and geographic locations.The results show that 76.5% of independent educational units actively utilize PMM, particularly in improving student learning progress and using teaching tools. Supporting factors include continuous training, school leadership support, and the active involvement of teachers in integrating PMM into lesson plans. However, challenges such as limited internet access in remote areas remain significant obstacles. Additionally, the study found that the establishment of learning communities, both within schools and between schools, has been a notable achievement, although mentoring and the role of school supervisors in optimizing these communities need further improvement.This study concludes that the optimal use of PMM can support the successful implementation of the Merdeka Curriculum, especially in enhancing the quality of teaching and student learning outcomes. Key recommendations include strengthening educational technology infrastructure, developing offline tools, providing continuous teacher training, and optimizing mentoring for learning communities and the role of school supervisors to ensure the sustainability of this program.

Corresponding Author:
Marzoan
STKIP Hamzar
Emai: marzoanswandy@gmail.com

1. INTRODUCTION

The Merdeka Curriculum is one of the strategic innovations in Indonesia's education system aimed at creating more flexible, student-centered, and competency-based learning. Through this curriculum, teachers are expected to provide contextual learning tailored to student needs, while students are encouraged to develop literacy, numeracy, character, and 21st-century skills. To support the implementation of this curriculum, the government has provided the Merdeka Mengajar Platform (PMM), a digital application designed to help teachers and schools understand and effectively implement the Merdeka Curriculum.

However, although PMM has been implemented in thousands of educational units, its effectiveness in improving learning quality remains a challenge. Several studies indicate that the utilization of PMM is often hindered by technological infrastructure limitations, inadequate teacher training, and insufficient technical support at the school level, especially in remote areas. This study was conducted in the West Nusa Tenggara (NTB) Province, which faces diverse challenges and opportunities in implementing the Merdeka Curriculum. This region includes ten districts/cities: Kota Mataram, Kota Bima, Kabupaten Lombok Barat, Kabupaten Lombok Timur, Kabupaten Lombok Utara, Kabupaten Lombok Tengah, Kabupaten Sumbawa, Kabupaten Sumbawa Barat, Kabupaten Dompu, and Kabupaten Bima. The research was carried out from February 2024 to November 2024 to comprehensively evaluate the effectiveness of PMM in various educational units. As a region continuously developing its educational infrastructure, NTB provides a strategic location to evaluate PMM's effectiveness, particularly in varied geographical and social contexts.

Competency-based curricula, such as the Merdeka Curriculum, emphasize personalized learning to holistically develop students' potential (Mulyasa, 2021). In this context, digital technology plays a critical role as a tool to provide flexible and accessible educational resources (Anderson & Krathwohl, 2001). PMM serves as a concrete manifestation of integrating technology into education by offering teaching tools, reflective materials, and online training for teachers. However, the success of using this technology heavily depends on teacher readiness, infrastructure availability, and educational policy support.

According to reports from the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek), PMM's implementation has yet to run optimally in several educational units. The main issues include limited internet access, low levels of technology adoption by teachers, and a lack of continuous technical guidance. These problems have resulted in the underutilization of the teaching tools available on the platform, falling short of expected targets. This condition underscores the need for an in-depth evaluation of PMM's effectiveness in supporting the implementation of the Merdeka Curriculum.

Previous studies have tended to focus on evaluating the overall implementation of the Merdeka Curriculum or the use of educational technology in urban settings (Rahmawati, 2022; Nugroho, 2023). Research on PMM's effectiveness in improving learning quality in educational units, especially those facing geographical and technical challenges, remains limited. This creates a research gap that needs to be addressed to provide more specific and contextual insights.

This study offers a new contribution by analyzing data from 6,495 independent educational units that have used PMM in implementing the Merdeka Curriculum. This research not only evaluates the platform's utilization level but also identifies the supporting and hindering factors in its implementation success. Thus, it provides a comprehensive perspective that has not been widely explored in previous literature.

This research aims to analyze the improvement in the quality of PMM utilization in supporting the implementation of the Merdeka Curriculum in educational units. Specifically, this study seeks to: (1) Identify the level of PMM utilization by educational units; (2) Analyze the factors influencing the successful implementation of PMM; (3) Provide strategic recommendations to enhance PMM's effectiveness in supporting the goals of the Merdeka Curriculum.

2. METHODS

This study employed a descriptive quantitative approach to analyze the improvement in the quality of utilizing the Merdeka Mengajar Platform (PMM) in implementing the Merdeka Curriculum in independent educational units. A descriptive approach was chosen as it allows the researcher to depict the actual conditions of PMM utilization in detail, including the level of use of teaching tools and student learning progress. The study also incorporated qualitative data through interviews to gain deeper insights into the experiences and challenges faced by teachers and school principals in optimizing PMM usage.

The study population comprised 6,495 educational units implementing the Merdeka Curriculum, with the sample selected using the stratified random sampling method. This method ensured proportional representation across various educational levels and geographic locations, including urban and remote areas. A total of 650 educational units were chosen as the sample, representing the overall population adequately.

The research instruments included questionnaires, interview guides, and document analysis. Questionnaires were used to measure the level of PMM utilization, student learning progress, and the frequency of teaching tool usage by teachers. The interview guides were semi-structured to explore teachers' and school principals' perspectives on the benefits, obstacles, and development needs of PMM. Additionally, documents such as school reports, lesson plans, and student learning outcomes were analyzed to complement the survey and interview data.

Data collection was conducted in several stages:

1. **Questionnaire distribution**: Questionnaires were distributed online to the teachers and school principals serving as respondents.
2. **Interviews**: Interviews were conducted both online and face-to-face to gather in-depth qualitative information.
3. **Document analysis**: Relevant documents regarding PMM implementation at schools were collected and analyzed to provide a factual depiction of platform usage.

Various indicators and categories were developed to evaluate PMM utilization. An important aspect was watching independent training videos. This indicator was measured by the percentage of active educators and education staff (PTK), categorized as high for more than 40%, moderately high between 20%-40%, and low for less than 20%. Additionally, the number of PTK learning days was examined, categorized as many for an average of more than five days, moderately many for 2-5 days, and few for less than two days. Access to reference pages in independent training was also measured based on PTK activity percentage, categorized as high for more than 30%, moderately high between 10%-30%, and low for less than 10%.

Attending webinars was another indicator, measured by the percentage of PTK attending at least three webinars. Categories included high for more than 30%, moderately high between 10%-30%, and low for less than 10%. To measure learning effectiveness, the number of attempts to pass the post-test was observed, categorized as few for less than five attempts, moderately many for 6-10 attempts, and many for more than ten attempts. The time taken by PTK to complete a topic was also assessed, with more than three days categorized as good and less than three days needing improvement.

Another critical indicator was the number of actions with elements of similarity, measured by the percentage of similarity in real action uploads. Categories included low for less than 5%, moderately high between 5%-30%, and high for more than 30%. Meanwhile, the number of validated real actions was measured by the percentage of uploaded real actions receiving certification, categorized as high for more than 60%, moderately high between 40%-60%, and low for less than 40%.

The collected data were analyzed using descriptive statistical techniques for quantitative data, such as calculating percentages and averages of PMM utilization, and thematic analysis for qualitative data from interviews. The results of these two analyses were then integrated to provide a comprehensive understanding of PMM utilization in the implementation of the Merdeka Curriculum. This structured approach is expected to provide an accurate and in-depth picture of PMM's effectiveness as a key supporting tool in the implementation of the Merdeka Curriculum while offering strategic recommendations for its optimization.

3. RESULTS AND DISCUSSION

This study yielded several key findings based on data analysis from 650 educational units selected as a representative sample from a total of 6,495 units implementing the Merdeka Curriculum. These findings encompass the level of PMM utilization, student learning progress, supporting factors, and challenges in PMM implementation.

Level of Utilization of the Merdeka Mengajar Platform (PMM)

The analysis revealed that 76.5% of independent educational units actively utilize PMM in learning activities. Teachers reported the use of various teaching tools available on the platform, such as learning modules, teaching videos, and reflective materials, to support competency-based learning. Active PMM utilization was more common in educational units with adequate technology access and infrastructure. However, 23.5% of educational units exhibited low PMM utilization levels, primarily in remote areas with limited internet access and insufficient technological resources. These obstacles align with Nugroho (2023), who identified infrastructure challenges as a significant barrier to adopting educational technology in remote regions.

Student Learning Progress

Approximately 68% of respondents reported an improvement in student learning progress, particularly in literacy and numeracy, after utilizing PMM's teaching tools. Teachers noted that PMM-provided learning materials helped them design more engaging and relevant lessons tailored to student needs. Additionally, PMM usage fostered the development of 21st-century skills such as problem-solving and collaboration. Significant student learning progress was more prevalent in educational units where teachers had undergone intensive PMM training, highlighting the importance of continuous training as a critical component in supporting the effective implementation of digital educational platforms.

Supporting Factors for PMM Utilization

Key factors supporting PMM optimization include:

1. **Teacher Training**: 60% of teachers had participated in intensive training, enabling them to effectively use PMM features and boosting their confidence in incorporating technology into their teaching.
2. **School Leadership Support**: Principals who actively supported PMM utilization, such as by allocating specific schedules for internal training, contributed to the increased adoption of the platform in schools.

Challenges in PMM Implementation

Despite its benefits, this study identified several significant challenges in PMM implementation:

1. **Limited Internet Access**: 35% of educational units reported difficulties in accessing stable internet, particularly in remote areas.
2. **Insufficient Technological Devices**: Schools in rural areas often lacked adequate devices to support PMM usage.
3. **Low Teacher Motivation**: A small portion of teachers exhibited resistance to adopting educational technology, hindering optimal PMM utilization.

These findings reinforce the notion that while PMM holds substantial potential for supporting the implementation of the Merdeka Curriculum, its success is heavily reliant on infrastructure readiness, teacher training, and institutional support.

Discussion

The research findings highlight that the Merdeka Mengajar Platform (PMM) has significantly contributed to the implementation of the Merdeka Curriculum, particularly in fostering competency-based learning. Approximately 76.5% of educational units reported active PMM utilization, especially for teaching tools like learning modules, teaching videos, and reflective materials. This usage has directly improved student learning progress, particularly in literacy and numeracy. Teachers leveraging PMM features were able to design more structured and engaging lessons, promoting optimal student participation. However, these effects were more pronounced in educational units with adequate technology access, while schools in remote areas continued to face challenges such as limited internet connectivity and technological devices.

These findings align with Nugroho (2023), who emphasized the role of technological infrastructure gaps as a primary barrier to educational technology implementation in Indonesia.

A notable achievement of the Merdeka Curriculum implementation is the establishment of learning communities, both within and across schools. These communities serve as platforms for teachers to share experiences, discuss solutions to teaching challenges, and enhance their professional competencies. The existence of learning communities fosters a collaborative ecosystem that supports innovation and the sustainability of the Merdeka Curriculum implementation. However, the mentoring of these learning communities requires further optimization. Many communities operate informally without systematic strategic direction. Formal support from the government and school supervisors is crucial to ensure these communities function effectively and align with national educational goals.

The role of school supervisors in the implementation of the Merdeka Curriculum also requires greater attention. School supervisors bear significant responsibility for ensuring the continuity of innovative programs like PMM and learning communities. Unfortunately, their role has not been fully optimized in practice. Supervisors need to be more actively involved in mentoring teachers, facilitating learning communities, and providing constructive feedback to improve curriculum implementation. Optimizing the role of supervisors is a key element in enhancing education quality. As Mulyasa (2021) stated, educational leadership, including school supervisors, plays a strategic role in curriculum implementation success.

On the other hand, teacher training remains a primary factor supporting the successful implementation of PMM. Teachers who have received intensive training demonstrate higher confidence in using PMM, enabling them to maximize the platform's features. However, the training provided has not been evenly distributed, especially in remote areas. Continuous training integrated into the national teacher professional development program is an essential step to ensure all teachers can effectively utilize PMM.

To address existing challenges, strategic measures are needed, such as strengthening the mentoring of learning communities, optimizing the role of supervisors, and improving technological infrastructure. The government needs to accelerate internet infrastructure development, particularly in remote areas, while also developing offline-compatible PMM tools. Moreover, more inclusive and sustainable training programs must be prioritized to enhance teachers' competence in using educational technology. By implementing these measures, PMM and learning communities can become key pillars in creating an inclusive, relevant, and competency-based education ecosystem aligned with the objectives of the Merdeka Curriculum.

4. CONCLUSION

This study reveals that the Merdeka Mengajar Platform (PMM) has made a significant contribution to supporting the implementation of the Merdeka Curriculum, particularly in enhancing the quality of competency-based learning in independent educational units. A total of 76.5% of educational units have actively utilized PMM, focusing on teaching tools such as learning modules, teaching videos, and reflective materials. These efforts have positively impacted student learning progress, especially in literacy and numeracy, while also supporting more relevant and structured learning. However, challenges such as limited internet access, inadequate teacher training, and insufficient technological devices in remote areas remain significant obstacles in optimizing PMM utilization.

One of the key achievements in the implementation of the Merdeka Curriculum is the establishment of learning communities, both within and between schools. These communities provide an essential platform for teachers to share best practices, solve teaching challenges, and enhance their professional competencies. While these communities have shown positive outcomes, their mentoring requires further optimization to ensure they function more systematically and align with the goals of the Merdeka Curriculum.

Additionally, the role of school supervisors in supporting the implementation of the Merdeka Curriculum needs to be strengthened. School supervisors should play a more active role

in mentoring teachers, facilitating learning communities, and providing constructive feedback to enhance the effectiveness of PMM implementation. Optimizing the role of supervisors is crucial, especially in addressing challenges faced by schools in remote areas with limited resources.

To overcome these challenges, this study recommends several strategic steps, including strengthening the mentoring of learning communities, optimizing the role of school supervisors, improving technological infrastructure, and developing offline-compatible PMM tools. Furthermore, inclusive and continuous training programs must be integrated into the national professional development framework for teachers, ensuring that all teachers, including those in remote areas, can fully utilize PMM.

By implementing these strategic steps, PMM and learning communities have the potential to become foundational pillars in creating an inclusive, relevant, and competency-based educational transformation. This study provides valuable insights for policymakers and education practitioners to ensure the implementation of the Merdeka Curriculum is more effective, equitable, and impactful across all educational units.

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