

Merdeka Teaching Platform: Integration of Technology in Teacher Professional Education and Skills Development

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Abstrak

Masalah khusus yang dihadapi dalam konteks Pendidikan Profesi Guru adalah keterbatasan dalam mengintegrasikan teknologi ke dalam kurikulum yang ada. Banyak guru masih mengalami kesulitan dalam memanfaatkan teknologi secara optimal dalam proses pembelajaran, terutama di daerah dengan infrastruktur teknologi yang kurang memadai. Platform ini bertujuan untuk meningkatkan kualitas pendidikan dan kemampuan profesional guru; namun demikian, platform ini juga menghadapi tantangan dalam integrasi teknologi ke dalam kurikulum yang ada. Penelitian ini bertujuan untuk mengeksplorasi penggunaan platform Merdeka Mengajar dalam meningkatkan keterampilan guru di IAIN Sultan Amai Gorontalo serta mengidentifikasi strategi untuk mengatasi hambatan dalam integrasi teknologi. Metode penelitian ini menggunakan pendekatan kualitatif dan desain studi kasus, penelitian ini melibatkan dosen dan mahasiswa PPG angkatan 2024. Data dikumpulkan melalui analisis dokumen di platform Learning Management System (LMS) dan menggunakan skala Likert untuk mengukur persepsi pengguna. Hasil menunjukkan bahwa mayoritas mahasiswa berada dalam kategori "Baik" dan "Sangat Baik" dalam penggunaan platform. Kriteria seperti "Rumusan pemanfaatan teknologi informasi" dan "Kelengkapan dokumen" mencapai nilai tertinggi (4.00 dengan 100%), sementara "Model pembelajaran" menunjukkan nilai terendah (3.56 dengan 89.0%). Temuan ini mengindikasikan kebutuhan untuk meningkatkan aspek pembelajaran dan memberikan pelatihan lebih lanjut bagi guru. Penelitian menyimpulkan bahwa Platform Merdeka Mengajar memiliki potensi signifikan untuk meningkatkan kualitas pendidikan melalui pengembangan profesional guru. Namun, tantangan dalam adopsi teknologi dan kurangnya pelatihan mendalam harus diatasi untuk memaksimalkan manfaatnya. Rekomendasi termasuk penguatan dukungan teknis dan pengembangan strategi integrasi yang lebih efektif, sehingga guru dan siswa dapat siap menghadapi tantangan di era digital yang terus berkembang.

Kata Kunci: Platform Merdeka Mengajar, Integrasi Teknologi, Pendidikan Profesi Guru, Pengembangan Keterampilan

Abstract

A special problem faced in the context of Teacher Professional Education is the limitation in integrating technology into the existing curriculum. Many teachers still experience difficulties in utilizing technology optimally in the learning process, especially in areas with inadequate technological infrastructure. The platform aims to improve the quality of education and teachers' professional abilities; However, the platform also faces challenges in integrating technology into

existing curricula. This study aims to explore the use of the Merdeka Teaching platform in improving teacher skills at IAIN Sultan Amai Gorontalo and identify strategies to overcome obstacles in technology integration. This research method uses a qualitative approach and case study design, this research involves lecturers and PPG students of the class of 2024. The data was collected through document analysis on the Learning Management System (LMS) platform and used the Likert scale to measure user perception. The results showed that the majority of students were in the "Good" and "Very Good" categories in the use of the platform. Criteria such as "Formulation of information technology utilization" and "Document completeness" achieved the highest score (4.00 with 100%), while "Learning model" showed the lowest score (3.56 with 89.0%). These findings indicate the need to improve aspects of learning and provide further training for teachers. The research concluded that the Bajwa Merdeka Teaching Platform has significant potential to improve the quality of education through teacher professional development. However, challenges in the adoption of the technology and a lack of in-depth training must be overcome to maximize its benefits. Recommendations include strengthening technical support and developing more effective integration strategies, so that teachers and students can be prepared for the challenges of the ever-evolving digital era.

Keywords: Free Teaching Platform, Integration of Technology, Teacher Professional Education, Skills Development,

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INTRODUCTION

In the last ten years, significant advances in information and communication technology have opened up many new opportunities, especially in the field of education. In Indonesia, the urgent need for education reform is driving the development of the Merdeka Teaching platform, which is designed to improve the quality of education through technology integration. (Saa, 2024) This platform plays an important role in helping teachers improve their professional abilities and implement more creative and effective teaching methods. (Vasiliev and Eremeeva, 2023) With the ability to access the latest resources, Merdeka teaching is a vital tool for educators at IAIN Sultan Amai Gorontalo in improving the quality of learning and educational standards. (Citra S. Hasan, Herson Anwar, 2022)

A special problem faced in the context of Teacher Professional Education is the limitation in integrating technology into the existing curriculum. Many teachers still experience difficulties in utilizing technology optimally in the learning process, especially in areas with inadequate technological infrastructure. (Permatasari, Fitriani and Faridah, 2024) The digital divide and limited access to digital devices are significant challenges, especially in remote areas. This shows the need for further research to understand how the Merdeka Teaching platform can be more effectively implemented in this context. (Pratama and Rahmadani, 2024)

Gap in previous studies shows that although there are many studies on the positive impact of the Merdeka Teaching platform, there has not been a thorough analysis of its long-term effects on the quality of vocational education graduates. (Yoto *et al.*, 2024) Existing research focuses more on teacher motivation and teaching performance, but less on how interactions within the educator community on these platforms affect teaching methods in the classroom. (Supianto *et al.*, 2024) Therefore, this research will fill this gap

by exploring the integration of technology in teacher professional education at IAIN Sultan Amai Gorontalo.

The novelty of this study lies in its focus on teacher skill development through the Merdeka Teaching platform and how this can improve the overall quality of vocational education. (Wayan Sumandya, Wayan Widana and Nugraha, 2022) The research will also highlight how collaboration between teachers on the platform can create teaching methods that are more efficient and relevant to the needs of the industry today. (Yulianto *et al.*, 2024)

The significance of this research is very important, because the results are expected to provide insight into the potential of the Independent Teaching platform in improving the quality of education at IAIN Sultan Amai Gorontalo. By identifying existing challenges and opportunities, this research can be the basis for the development of better policies and strategies in the implementation of technology in education.

The specific purpose of this study is to explore how the Merdeka Teaching platform can be used to improve teacher skills at IAIN Sultan Amai Gorontalo and to identify various strategies that can be adopted to overcome existing barriers in technology integration. Thus, this research is expected to provide practical recommendations for the development of teacher professional education that is more effective and adaptive to the needs of the times.

RESEARCH METHODS

This study uses a qualitative approach to deeply understand the influence of the Merdeka Teaching platform on teacher needs and development and identify the obstacles faced in its implementation in Teacher Professional Education IAIN Sultan Amai Gorontalo. This approach was chosen because of its ability to capture the complexity of experiences, perceptions, and contextual situations experienced by research subjects in real life. (Ugwu, Chinyere, N; Eze Val, 2017) The design of this research is a case study, focusing on PPG lecturers and PPG students in the 2024 class of Islamic Religious Education (PAI) discipline.

The research subjects consist of PPG lecturers and PPG students of the class of 2024 who are involved in the use of the Merdeka Teaching platform. The data collection technique is carried out through the analysis of documents on the Learning Management System (LMS) Space platform. By analyzing these documents, researchers can obtain relevant information about the use of the platform as well as the interactions that take place within it.

The data analysis technique uses a Likert scale of 1-4, which consists of the categories of Very Good, Good, Less, and Very Poor. (Pimentel, 2010) The use of this scale allows researchers to measure the perception and experience of research subjects towards the Merdeka Teaching platform in a more systematic and measurable manner. This analysis will help in identifying the strengths and weaknesses of the platform in the context of teacher professional education with 20 indicators.

To ensure the validity of the findings, this study will also apply triangulation of sources and methods, namely by comparing and checking the consistency of information obtained through the analysis of documents and data from research subjects. Feedback from respondents will be asked to validate the researcher's interpretation of the data that has been collected. This qualitative research method is expected to provide rich and in-depth insights into the dynamics of the implementation of the Merdeka Teaching platform at IAIN Sultan Amai Gorontalo, as well as produce practical and implementable recommendations to overcome existing obstacles.

RESULTS AND DISCUSSION**Table 1.** Acquisition of Values and Percentage of Implementation of the Independent Teaching Platform

Student	Total Score	Persentase (%)	Likert Scale Criteria
Mah-2	79	98,75	Excellent
Mah-3	78	97,50	Excellent
Mah-9	77	96,25	Excellent
Mah-10	76	95,00	Excellent
Mah-1	75	93,75	Good
Mah-8	75	93,75	Good
Mah-12	75	93,75	Good
Mah-14	75	93,75	Good
Mah-5	74	92,50	Good
Mah-6	74	92,50	Good
Mah-11	74	92,50	Good
Mah-15	73	91,25	Good
Mah-4	71	88,75	Less
Mah-7	71	88,75	Less
Mah-16	71	88,75	Less

1. Student Performance Distribution

Very Good: There are 4 students (Mah-2, Mah-3, Mah-9, Mah-10) who are in the "Very Good" category with a total score above 76 and a percentage above 95%. This shows that they have an excellent understanding and high ability to meet the assessed criteria. Good: Most students (Mah-1, Mah-5, Mah-6, Mah-8, Mah-11, Mah-12, Mah-14, Mah-15) fall into the "Good" category with a total score between 73 and 75. This shows that they are meeting expectations well, although there is room for improvement in some aspects. Less: Three students (Mah-4, Mah-7, Mah-16) were in the "Less" category with a total score below 72. This reflects that they may face challenges in understanding the material or application of the criteria being assessed.

2. Aspects of Strengths and Weaknesses

Strengths: Students who received the "Very Good" category demonstrated consistent abilities in various criteria, such as technology utilization, material presentation, and learning assessment. This indicates that they have mastered effective learning methods and are able to apply them well. Weaknesses: Students in the "Lacking" category indicate that there are several aspects that need to be improved. For example, they may be lacking in learning preparation or unable to structure the steps of learning activities effectively. This may indicate the need for additional support, such as training or mentoring.

3. Recommendations for Improvement

Training and Mentoring: Students who fall into the "Lacking" category need to receive further training to improve their understanding of effective teaching materials and techniques. Mentoring programs can help provide the necessary guidance. Engagement in Discussions: Increasing student engagement in group discussions or study forums can help them understand different perspectives and improve their critical skills. Constructive Feedback: Providing clear and constructive feedback to all students, especially those in the "Good" and "Poor" categories, can help them identify areas that need improvement.

Overall, the analysis showed that most students showed good performance in meeting the assessed criteria. However, there are some that need more attention to improve their

understanding and skills. With the right support, it is hoped that all students can achieve a higher level of mastery of teaching materials and methods.

Table 2. Results of Teaching Practice Based on Platform Promotes Learning

No	Criterion	Total Score	Average	Persentase (%)
1	Identitas sekolah/madrasah	63	3.94	98.5
2	Rumusan Kompetensi Awal	59	3.69	92.3
3	Penyajian Aspek P5-PPRA dalam modul ajar	63	3.94	98.5
4	Sarana dan Prasarana yang digunakan	60	3.75	93.8
5	Target peserta didik menjadi fokus dan orientasi pembelajaran	61	3.81	95.3
6	Model pembelajaran	57	3.56	89.0
7	Rumusan tujuan pembelajaran mencerminkan hal-hal penting	60	3.75	93.8
8	Rumusan tujuan pembelajaran terkait dengan pemahaman bermakna	63	3.94	98.5
9	Pertanyaan pemantik	63	3.94	98.5
10	Rumusan persiapan pembelajaran	60	3.75	93.8
11	Langkah-langkah kegiatan pembelajaran	60	3.75	93.8
12	Rumusan langkah pengembangan kemampuan berpikir kritis, kreatif, reflektif dan PK	60	3.75	93.8
13	Rumusan pemanfaatan teknologi informasi dan komunikasi berbasis aplikasi	64	4.00	100.0
14	Asesmen pembelajaran yang bermuatan variasi asesmen	63	3.94	98.5
15	Rumusan langkah pengayaan dan remedial	61	3.81	95.3
16	Rumusan pelaksanaan pembelajaran berdasarkan prinsip kurikulum merdeka	64	4.00	100.0
17	Kelengkapan dokumen lembar kerja peserta didik	64	4.00	100.0
18	Bahan bacaan yang relevan dan aktual	63	3.94	98.5
19	Dokumen glosarium yang memuat peristilahan konsep relevan	63	3.94	98.5
20	Daftar pustaka yang memadai	61	3.81	95.3

The data in the table above shows that 1) Best Criteria: The criteria "Formulation of application-based information and communication technology utilization", "Formulation of learning implementation based on the principle of independent curriculum", and "Completeness of student worksheet documents" have the highest average (4.00) and a percentage of 100%. This shows that students are very satisfied with these aspects. 2) Lowest Criteria: The "Learning model" criterion has the lowest average (3.56) with a percentage of 89.0%, indicating that there is room for improvement in this area. 3) Stable Criteria: Other criteria show a fairly high average, ranging from 3.69 to 3.94, which shows that overall, students feel positive about the learning criteria.

Descriptive analysis shows that students give good assessments of learning criteria. However, attention needs to be paid to the criteria of "Learning model" to improve the

quality of learning in the future. Recommendations for further development can be focused on less satisfactory aspects based on the results of this analysis.

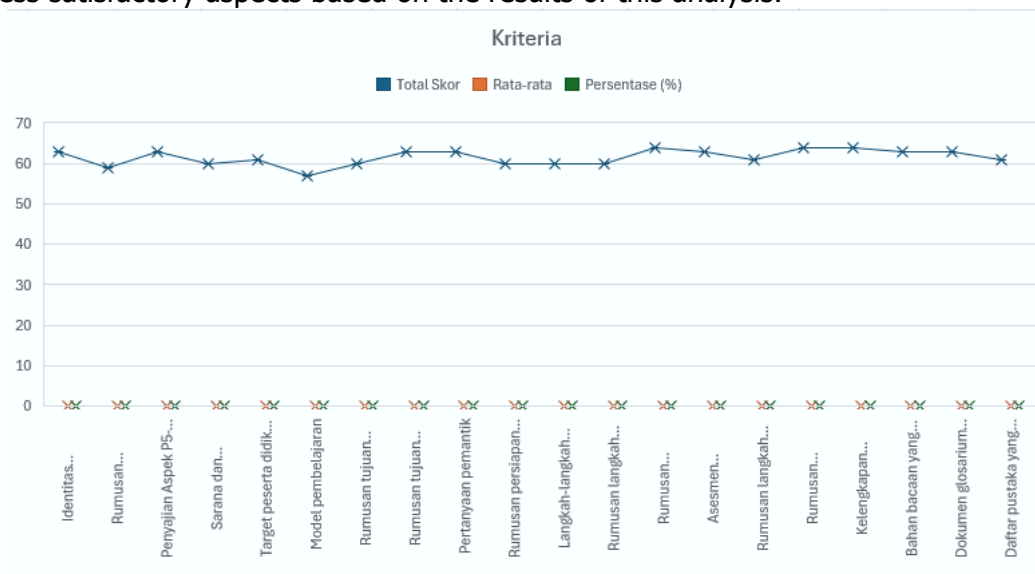


Diagram: 1 Teaching Practice Criteria

Criteria with the Highest Average: found in "Formulation of application-based information and communication technology utilization" (4.00), "Formulation of learning implementation based on the principles of independent curriculum" (4.00), "Completeness of student worksheet documents" (4.00), while the criteria with the Lowest Average, found in "Learning model" (3.56). Overall, students gave a positive assessment of the learning criteria. However, the "Learning model" indicates areas that need more attention. However, improvements in the aspect of "Learning model" and further development in the criteria are already good.

1. Independent Teaching Platform: Technology Integration in Teacher Professional Education and Skill Development

Improving the quality of education is highly dependent on the professional development of teachers. In the 2024 PPG IAIN Sultan Amai Gorontalo PAI Class, which consists of 16 teachers, the Independent Teaching Platform plays an important role in integrating technology in education. The platform provides a range of resources, including learning materials, online courses, and access to a community of teachers, allowing teachers to improve their knowledge and skills.

By utilizing Merdeka Mengajar, teachers have the opportunity to develop professional skills. Access to a wide range of educational resources allows them to expand their teaching abilities and provide quality education. Based on Andragogi's theory (Malik, 2008), the Independent Teaching Platform is designed to meet the practical learning needs of teachers. The content is relevant to daily teaching practices, so teachers can learn and apply new concepts directly. As stated by Mr. Sudarjat:

"Certainly this PMM is very useful. Recently, there was a module on teaching strategies for students with diverse learning styles. It helps me improve teaching in classrooms that have students from different backgrounds."

From the point of view of connectivity theory by George Siemens (Siemens and Conole, 2011), digital learning is driven by access and sharing of information. The Merdeka Teaching platform connects teachers with other educators, enriching the learning experience through

knowledge exchange. However, while it offers many opportunities, the platform also faces some obstacles. Some teachers have difficulty adapting to new technologies and integrating materials from the platform into existing curricula. This shows the need for technical support and training for teachers to make the most of the platform.

This study found that the use of the Independent Teaching Platform by 16 teachers in the 2024 PAI Class of PPG IAIN Sultan Amai Gorontalo was faced with various obstacles. These obstacles include the difficulty of adopting technology and incorporating content from the platform into the curriculum. These findings emphasize the need for support facilities and ongoing training programs to ensure teachers can maximize the benefits of the Independent Teaching Platform.



Figure 1 MBKM Field Experience Practicum

The Continuous Professional Development (CPD) model emphasizes the importance of education and continuous professional improvement for educators (Wolde, 2021). The Merdeka Teaching platform, with its constantly updated learning resources and vibrant community of teachers, provides extensive facilities for CPD. (Kasprabowo, 2019) To take full advantage of this potential, strong collaboration between educational institutions, platform managers, and teachers is needed. This is important to overcome existing challenges, including technical constraints and curriculum integration. (Kamarudin and Mat Noor, 2024)

The integration of platforms like Merdeka Teaching, which offers up-to-date learning materials and an active community of educators, is critical to optimizing CPD. However, to achieve the maximum impact of these resources, a well-coordinated approach involving schools, platform managers, and educators is needed. This collaboration is important to overcome obstacles, such as technological constraints and the integration of platform materials into existing curricula. (Syahrir *et al.*, 2024)

The conclusion of this study shows that the Independent Teaching Platform has significant potential to support teachers' professional development, especially in the 2024 PPG IAIN Sultan Amai Gorontalo PAI Class. This potential can be maximized through coordinated efforts that include ongoing support, technical training, and effective curriculum integration strategies. With a holistic approach and commitment to overcome the challenges faced, the use of the Independent Teaching Platform can be more effective, making a significant contribution to improving the quality of teacher professional education. Through continuous professional development focused on industry needs, teacher professional education can achieve better outcomes, not only for students, but also for the education ecosystem and industry as a whole.

1. Technology Integration Through the Independent Teaching Platform

The integration of technology in teacher professional education has become a major issue in modern education discussions, given the importance of the role of technology in preparing teachers to face the demands of the ever-changing job market. This study investigates the use of the Independent Teaching Platform as a tool for technology

integration in the 2024 PPG IAIN Sultan Amai Gorontalo PAI Class. This research shows how the platform functions as a driver in accelerating the adoption of digital learning practices among educators. By leveraging the various resources such as learning videos, simulations, and interactive tools offered by the platform, teachers can enrich teaching materials and update their teaching methodologies, ultimately increasing student engagement and understanding. (Rivaldi *et al.*, 2024)



Figure 2 TPACK Practicum

The implementation of the Independent Teaching Platform not only contributes to the improvement of digital literacy among teachers and students, but also supports collaboration and knowledge exchange between members of the education community. This makes the curriculum more responsive and open to the latest technological innovations. The findings of this study emphasize the significant role of digital technology in creating a more dynamic and connected learning environment, which encourages connectivity-based learning, as stated by George Siemens (Hakim and Abidin, 2024), who states that effective learning occurs through networking and collaboration.

This study shows that the use of the Merdeka Teaching Platform has contributed to the development of the professional capacity of educators, especially in the context of digital skills required for the teaching and learning process. (Mariana *et al.*, 2023) In addition, the platform enriches collaboration and the exchange of ideas within the educational environment, allowing for a more flexible and responsive curriculum approach to changes and technological advancements. (Otaya, 2023) The integration of technology in education through this digital platform supports the concept of connectivity which emphasizes the importance of connectivity and collaboration in learning. (Febrianto Hakeu1, Arten Mobonggi, 2024)

Through the lens of the Technological Pedagogical Content Knowledge (TPACK) framework (Munir and Purwanto, 2024), this study highlights the importance of teachers' expertise in effectively combining technology with educational practices. (Sri Handayani1, Muhammad Hussin, 2023) In this context, the Merdeka Teaching Platform has emerged as an essential tool that improves teachers' understanding of pedagogy, content, and technology, as well as expanding their capacity to present diverse and in-depth learning experiences in vocational classrooms that continue to adapt to the digital era. The TPACK framework was used to evaluate the benefits of this platform for teachers, highlighting the support provided towards the harmonious integration of technology, pedagogy, and content. (Mobonggi *et al.*, 2024)

However, despite the many advantages offered by the Merdeka Teaching platform, this study also identifies some of the challenges faced, such as the limitations of technology infrastructure and the need for more in-depth teacher training to optimize technology integration. These findings demonstrate the need for targeted investment as well as effective strategies to address these barriers, with the aim of supporting inclusive and sustainable learning. Referring to the recommendations of Selwyn's (Sri Handayani1, Muhammad Hussin, 2023) research, this study emphasizes the importance of a holistic approach to the integration of educational technology, in order to ensure access and

utilization of the full potential of digital learning innovation for all students and teachers. (Buhungo *et al.*, 2024)

In conclusion, technology integration through the Independent Teaching Platform in the 2024 PPG IAIN Sultan Amai Gorontalo PAI Class provides important insights into the potential and challenges in the implementation of technology-based teacher professional education. By ensuring ongoing support and overcoming infrastructure and training constraints, teacher professional education can leverage technology to improve teaching and learning processes, as well as equip students with the relevant skills needed to adapt to the future of work.

CONCLUSION

The results of the assessment showed that most of the students had good performance, with 4 students in the "Very Good" category and 11 students in the "Good" category. Only 3 students are in the "Less" category. This reflects a good understanding of the criteria assessed, although there are some students who need additional support to improve their understanding. The criteria "Formulation of application-based information and communication technology utilization", "Formulation of learning implementation based on the principles of the independent curriculum", and "Completeness of student worksheet documents" received the highest average (4.00) and a percentage of 100%. However, the "Learning model" criterion shows the lowest average (3.56), which indicates that there needs to be improvement in this area to improve the quality of learning.

The Merdeka Teaching platform serves as an important tool for teachers' professional development, providing relevant resources and supporting practical learning. Despite the many benefits, there are challenges in adopting new technologies, which indicates the need for training and technical support for teachers to maximize the use of the platform. Research shows that the use of the Merdeka Teaching Platform has increased digital literacy and collaboration among educators. However, there are still challenges related to technological infrastructure and the need for more in-depth training. Therefore, it is important to implement a coordinated strategy and support continuous professional development for teachers so that technology can be effectively integrated into the learning process.

BIBLIOGRAPHY

- Buhungo, R.A. *et al.* (2024) 'Implementasi Kurikulum Merdeka Belajar Dalam Menguatkan Kompetensi Spritual Siswa Di Sdn 09 Paguat Kabupaten Pohuwato', *Pekerti: Journal Pendidikan Islam dan Budi Pekerti*, 6(1), pp. 37–46. Available at: <https://doi.org/10.58194/pekerti.v6i1.4459>.
- Citra S. Hasan, Herson Anwar, A.N. (2022) 'Pelaksanaan Pembelajaran Matematika dalam Kurikulum Merdeka Mandiri Berubah di SDN 2 Limboto', *Irfani: jurnal pendidikan islam*, 18(November), pp. 126–134. Available at: <https://journal.iaingorontalo.ac.id/index.php/ir/article/view/2149>.
- Febrianto Hakeu¹, Arten Mobonggi, A.M. (2024) 'Instructional System Design Dalam Penyusunan Bahan Ajar Pendidikan Agama Islam Di MA Miftahul Huda Gorontalo Utara', *AL-ULUM JURNAL PENDIDIKAN ISLAM*, 5(2), pp. 381–394. Available at: <https://doi.org/https://doi.org/10.56114/al-ulum.v5i2.11475>.
- Hakim, M.N. and Abidin, A.A. (2024) 'Platform Merdeka Mengajar: Integrasi Teknologi

- dalam Pendidikan Vokasi dan Pengembangan Guru', *Kharisma: Jurnal Administrasi dan Manajemen Pendidikan*, 3(1), pp. 68–82. Available at: <https://doi.org/10.59373/kharisma.v3i1.47>.
- Kamarudin, M.Z. and Mat Noor, M.S.A. (2024) 'Teacher's Practice in Digital Inquiry-based Science Learning in a Primary School', *Journal of Science of Learning and Innovations*, 1, pp. 1–28. Available at: <https://doi.org/10.1163/29497736-bja00004>.
- Kasprabowo, T. (2019) 'Perceptions and the Implementation of Continuing Professional Development Through Innovation Among English Teachers', *Dinamika Bahasa dan Budaya*, 14(1), pp. 63–72. Available at: <https://doi.org/10.35315/bb.v14i1.6718>.
- Malik, H.K. (2008) 'Teori Belajar Andragogi Dan Aplikasinya Dalam Pembelajaran', *Inovasi*, 5(2), p. 1.
- Mariana, A. *et al.* (2023) *The Effect of Communication and Work Motivation on the Achievement of Non-Permanent Lecturer Performance in the Technological Digital Era*. Atlantis Press SARL. Available at: https://doi.org/10.2991/978-2-38476-142-5_3.
- Mobonggi, A. *et al.* (2024) 'The Principal's Managerial Influence on Mover Teachers in the Implementation of the Independent Curriculum', *TEM Journal*, 13(3), pp. 2177–2185. Available at: <https://doi.org/10.18421/tem133-45>.
- Munir, S. and Purwanto, S. (2024) 'Utilizing Technological Pedagogic Content Knowledge (TPACK) To Improve Digital Economic Literacy', (3), pp. 20–35.
- Otaya, L.G. (2023) 'Estimasi Kemampuan Berpikir Kritis Mahasiswa Pendidikan Profesi Guru (Ppg) Bagi Guru Madrasah Dan Pendidikan Agama Islam Pada Modul Evaluasi Pembelajaran', *Irfani*, 19(1), pp. 49–66. Available at: <https://doi.org/10.30603/ir.v19i1.3503>.
- Permatasari, A., Fitriani, A. and Faridah, L. (2024) 'The Role of Technology in Inclusive Education : Challenges and Opportunities in Developing Countries', 03(02), pp. 854–861. Available at: <https://doi.org/10.55299/ijere.v3i2.1132>.
- Pimentel, J.L. (2010) 'A Note on the Usage of Likert Scaling for Research Data Analysis. USM R&D Journal, vol. 18, (2), 2010. ISSN 0302-7937.', *USM R&D Journal*, 18(2), pp. 109–112. Available at: <https://www.mendeley.com/search/?page=1&query=%09J.L..Pimentel. A Note on the Usage of Likert Scaling for Research Data Analysis. USM R%26D Journal%2C vol. 18%2C %282%29%2C 2010. ISSN 0302-7937.&sortBy=relevance>.
- Pratama, N.R. and Rahmadani, R. (2024) 'Economic Literacy and Human Development through Technology-Based Economic Education for Generation Z Students', 5(4), pp. 656–671.
- Rivaldi, R. *et al.* (2024) 'Model Implementasi Kurikulum Dalam Pembelajaran Dan Implikasinya Terhadap Kepesertadidikan (Berbasis Moderasi Beragama)', *Journal on Education*, 6(4), pp. 21706–21715. Available at: <https://doi.org/10.31004/joe.v6i4.6106>.
- Saa, S. (2024) 'Merdeka Curriculum: Adaptation of Indonesian Education Policy in the Digital Era and Global Challenges', *Revista de Gestao Social e Ambiental*, 18(3), pp. 1–24. Available at: <https://doi.org/10.24857/rgsa.v18n3-168>.
- Siemens, G. and Conole, G. (2011) 'Editorial', *International Review of Research in Open and Distance Learning*, 12(3). Available at: <https://doi.org/10.19173/irrodl.v12i3.994>.
- Sri Handayani1, Muhammad Hussin, H.N. (2023) 'Technological Pedagogical Content Knowledge (TPACK) Model in teaching: A Review and Bibliometric Analysis', *Pegem Journal of Education and Instruction*, 13(3), pp. 176–190. Available at: <https://doi.org/10.47750/pegegog.13.03.19>.
- Supianto *et al.* (2024) 'Exploring teacher acceptance of the merdeka curriculum in Indonesia: A diffusion of innovation analysis', *Multidisciplinary Science Journal*, 6(12).

- Available at: <https://doi.org/10.31893/multiscience.2024267>.
- Syahrir, S. *et al.* (2024) 'The Implementation of Merdeka Curriculum to Realize Indonesia Golden Generation: A Systematic Literature Review', *AL-ISHLAH: Jurnal Pendidikan*, 16(2), pp. 1434–1450. Available at: <https://doi.org/10.35445/alishlah.v16i2.4872>.
- Ugwu, Chinyere, N; Eze Val, H.U. (2017) 'International Digital Organization for Scientific Research IDOSR', *Idosr Journal of Science and Technology*, 3(1), pp. 37–46. Available at: www.idosr.orgAsuketal.
- Vasiliev, A.. and Eremeeva, G.. (2023) 'The Use of Artificial intelligence in Education (Literature Review)', *Indonesian Journal of Primary Education*, 100(1), pp. 141–144. Available at: <https://doi.org/10.18411/trnio-08-2023-39>.
- Wayan Sumandya, I., Wayan Widana, I. and Nugraha, S. (2022) 'The Skills of High School Mathematic Teachers in Utilizing the Merdeka Belajar Platform How to Cite', *IRJE /Indonesian Research Journal in Education/ /Vol, Vol.6(2)*, pp. 455–464. Available at: <https://doi.org/10.22437/irje>.
- Wolde, B.D. (2021) 'The role of continuous professional development in improving secondary school teachers' teaching and learning competencies to deliver quality education in Ethiopia: A case of secondary school', *Qualitative Report*, 26(5), pp. 1345–1363. Available at: <https://doi.org/10.46743/2160-3715/2021.3650>.
- Yoto *et al.* (2024) 'The role of industry to unlock the potential of the Merdeka curriculum for vocational school', *Cogent Education*, 11(1), p. Available at: <https://doi.org/10.1080/2331186X.2024.2335820>.
- Yulianto, D.E. *et al.* (2024) 'Exploration of the Independent Curriculum : Information Technology Collaboration in Multidisciplinary Learning in Situbondo Regency Elementary Schools', 16, pp. 5757–5769. Available at: <https://doi.org/10.35445/alishlah.v16i4.5552>.