

The Effect of Project-Based Learning (PBL) Method on Improving Students' Writing Ability

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Abstract

Education plays a crucial role in shaping intelligent, moral and responsible individuals. The project-based learning (PBL) model emerges as an innovative approach that focuses not only on knowledge transfer, but also the development of students' critical skills, creativity and collaboration. This study aims to analyze the effect of PBL on students' writing ability compared to conventional learning methods. Through a literature study, the data sources obtained show that PBL increases students' engagement, confidence, and in-depth understanding of the material. Students are actively involved in project planning and implementation, which allows them to apply knowledge in a real context, resulting in a more meaningful learning experience. The findings confirm the importance of PBL as an effective method in improving students' writing skills, as well as providing recommendations for educators to integrate PBL in the educational curriculum to create a generation that is ready to face global challenges.

Keywords: *Improved Learning Outcomes; Project Based Learning (PBL); Writing Skills*

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Introduction

Education is one of the most important ways to shape people into intelligent, moral and responsible individuals. In the education process, individuals can develop attitudes, knowledge, and skills optimally. Education is not only seen as a transfer of knowledge, but also as a process of forming one's character and personality (Subaidi et.al., 2024). According to Law No. 20/2003 on the National Education System, education is defined as a conscious and planned effort to create a conducive learning atmosphere and an effective learning process. Learners are encouraged to actively develop their potential. An effective education process enables learners to have the spiritual and religious strength, self-control, good personality, and intelligence needed to compete in everyday life (Ramli & Prianto, 2019). Education also plays a role in shaping noble morals and skills that are relevant to the needs of society, nation and state (Martin & Simanjourang, 2022). In an ever-evolving world, education is an important means to equip individuals with knowledge and skills that can be used in various aspects of life, including in facing global challenges. With quality education, future generations are expected to become agents of change who are able to contribute positively to society and the environment around them, as well as carry out their social responsibilities as good citizens. Investment in quality education is crucial for the development of superior and competitive human resources.

Education has a very important role in helping learners develop themselves, which includes developing all the potential, skills, and characteristics of individuals in a more positive direction, both for themselves and for the surrounding community. The education process is not just about transferring knowledge, values or skills, but also about exploring and optimizing what already exists naturally in learners, including those aspects that have been actualized and those that are still in the potential stage



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(AR & Ismail, 2024; Hasan et.al., 2023). In the context of effective education, learners should not be seen as empty containers that need to be filled with information from outside, but rather as individuals who already have a variety of varied abilities, both developed and still in the process of growth (Mahadi, 2021).

Educators have a responsibility to identify and develop this potential in appropriate ways, creating learning environments that support exploration and experimentation (Ansyah, 2023). Diverse teaching methods, such as project-based learning or collaborative learning, can help students actively engage in the learning process, so that they can develop critical thinking skills, creativity, and communication abilities needed in everyday life (Hanipah, 2023; Wardano, 2023). In addition, education also serves to foster a sense of social and moral responsibility among learners. Equipping learners with comprehensive knowledge and skills, as well as ethical values and care for the environment can create individuals who are not only academically intelligent, but also contribute positively to society. This holistic education focuses on character development and social awareness, so that students can understand their role in the community and the wider world. Education should be designed to encourage a sense of responsibility and caring, so that students can become active and responsible agents of change in an effort to create a better society. Education is an invaluable tool in shaping future generations who are able to face global challenges and play an active role in creating constructive change in the world.

The project-based learning model is an innovative approach to education that places students at the center of the learning process, with the main objective of developing important skills such as independence, critical thinking and cooperation. Students are given the freedom to plan and manage their learning activities independently, which helps them to be more proactive and responsible for the learning process. According to Sumarmi (2012), students are directly involved in project activities that are relevant to real situations, so that they can relate the knowledge learned to their daily experiences. In this model, students are required to not only passively receive material, but also play an active role in designing, managing, and completing projects that require research, problem solving, and application of concepts that have been learned (Buda et.al., 2022). This encourages students to think more deeply, find creative solutions, and develop 21st century skills, such as critical thinking, creativity, collaboration, and communication (Ginanjari et.al., 2021). The collaboration that occurs during the project helps students hone their ability to work together and learn from different perspectives, while communication skills are key at every stage of the project (Lase, 2019). This model also encourages students' creativity in finding innovative solutions to challenges faced. Overall, the project-based learning model provides a more in-depth and holistic learning experience, and prepares students to become independent, creative, and collaborative individuals who are ready to face future challenges (Ediana et.al., 2023).

The traditional teacher-centered learning model, where the teacher is the only source of knowledge and has dominant control over the teaching and learning process, must now be abandoned. A shift to a more active and independent learning approach is needed, where students are directly involved in the learning process. In active learning models, students are encouraged to participate, collaborate and interact with peers, so that they can construct their own knowledge through experience. This approach not only increases students' motivation and interest, but also helps them develop critical and creative thinking skills. The role of the teacher also transforms from a lord of information to a facilitator who supports students in their learning journey (Hertina, 2020). Teachers create a conducive learning environment, provide guidance, and encourage exploration and inquiry. Students are expected to be independent learners, able to take initiative, and take responsibility for their own learning. The implementation of this student-centered learning model is in line with modern cognitive principles, which emphasize the importance of deep understanding, emotional involvement, and context relevance in the learning process. The hope is that students will not only acquire knowledge, but also develop a positive attitude towards learning and the ability to adapt to changes in the environment.

An approach that is considered effective in improving student learning outcomes in biology subjects is project-based learning. This learning model involves students in a project that is part of the learning process (Fina et.al., 2023). The project can be done individually or in groups and implemented within a certain period of time collaboratively, resulting in a product that will be displayed and presented. Project implementation is carried out in an innovative and unique way, and focuses on solving problems that are relevant to students' lives. Project-based learning is one of the learner-centered instructional methods.

Project-based learning model emerged from the perspective of constructivism that refers to contextual learning (Khamdi, 2007). Therefore, project-based learning is a method that applies the concept of contextual learning, where students actively take part in solving problems, making decisions, conducting research, presenting results, and compiling documents. It is designed to be applied to complex problems that require students to investigate and understand the topic at hand.

Project-based learning is a proven effective educational approach, focusing on the development of creative thinking, problem-solving skills, and social interaction between students and their peers (Sholeh et.al., 2024). In this model, students are encouraged to collaborate, share ideas and work together in creating and applying their newly acquired knowledge. This learning process occurs in an active context where students are directly involved in relevant and applicable learning activities. This approach also involves scientific dialog with supervisors who act as researchers, providing guidance and support in the investigation process (Setiyaningsih & Subrata, 2023). In this interaction, students not only learn from direct instruction, but also through in-depth discussion, feedback and reflection. The activities carried out in project-based learning allow students to dig for information, explore new ideas, and apply knowledge in real situations, thus helping them understand concepts more deeply. Students also learn to think critically and creatively, and develop communication and collaboration skills that are essential in the real world. Thus, project-based learning not only facilitates mastery of subject matter, but also prepares students to face complex challenges in daily life and future professional environments.

Student activeness in project-based learning model is a very important aspect, because this approach does not only place students as passive recipients of material, but also requires them to be directly and actively involved in the entire learning process (Fuadiy & Al Fauz, 2023). Students are given the responsibility to design, manage and complete projects that require in-depth research, critical analysis and the ability to solve complex problems. This involves students in a challenging stage of learning where they are encouraged to think deeply, examine assumptions, and find creative solutions to real challenges faced in the project. Thus, students not only learn to understand the material, but are also trained to develop critical and innovative thinking skills that are indispensable in dealing with real-world problems.

The practical experience that students gain through this project is much more meaningful than just learning theory in the classroom. Students get the opportunity to apply the concepts they have learned in real and relevant situations, so that their understanding of the material is not only theoretical, but also becomes more solid and deep because it is directly connected to daily practices and experiences. Students' involvement in the entire project implementation process allows them to develop skills such as time management, teamwork, and adaptability to changes or obstacles that arise during the project (Wardani, 2023). This process trains students to set priorities, manage time effectively, and work together with other team members to achieve a common goal. The ability to adapt becomes important when students are faced with unexpected situations or problems that require quick and creative solutions. This experience teaches students to be flexible, responsive and able to adjust to changing conditions, which are valuable skills in everyday life and the world of work. These skills not only support success in the project, but also provide a solid foundation for students' future personal and professional development. All of this provides a more dynamic and contextualized learning experience, and prepares students to be better prepared for future challenges in both academic and professional life. This active involvement also helps build students' confidence in dealing with complex tasks, so that they are increasingly trained to think independently and take responsibility for their work.

The project-based learning model has significant advantages in improving learning outcomes and student motivation. This approach is not only able to improve academic achievement, but also allows students to gain a deeper understanding of the material studied (Jusita, 2019). Students' involvement in relevant and challenging projects encourages them to explore concepts in more depth, so that learning becomes more meaningful and less rote. Projects often require research, collaboration and problem solving, which directly enhance students' critical thinking skills. Project-based learning tasks have a positive impact on student motivation, understanding and performance. Students' participation in the project makes them feel in control of their learning, which increases their confidence and interest in the material. Project activities are often more interesting and fun, so students are motivated to contribute actively in groups. The project-based learning model also provides an opportunity for students to see concrete results of their hard work, which can strengthen intrinsic motivation and provide its own satisfaction. In this context, collaboration between students is an important element as working together in groups helps them learn from each other, share ideas and

overcome challenges together. This collaborative process improves students' social and communication skills, which are also important for their personal and professional development. Overall, the project-based learning model provides a comprehensive and well-rounded learning experience, which not only focuses on academic outcomes, but also develops students' motivation and positive attitude towards learning.

The project-based learning (PJBL) model has been proven to be an effective approach in creating immersive and relevant learning experiences for learners (Emira & Hindun, 2023). According to Rais (2010), PPA integrates contextual learning with complex activities, so learners are given the freedom to plan and manage their own learning activities. In this approach, students collaborate to carry out projects, which not only allow them to produce tangible products, but also apply the knowledge they have learned in the context of everyday life. This process strengthens their understanding of the concepts taught and provides hands-on experience that enriches learning. Another advantage of PJBL, as stated by Hosnan (2014), lies in increasing the active involvement of learners in the learning process. Directly involved in projects, students are encouraged to develop skills in processing information and available resources. They learn to solve problems, adapt to new situations, and think critically, which becomes very important in an ever-evolving world.

The ability to work together in groups is a crucial aspect of PPA as students need to support each other, share ideas and complete tasks collaboratively. This process also encourages students to improve communication skills, both in conveying ideas and in receiving feedback from their peers. Based on these observations and analysis, the researcher concluded that PJBL is a learning model that requires students to be active in exploring and developing their abilities to produce useful results. The students not only learn writing theory, but also practice writing skills in the context of a real project. The researcher argues that the ability of PJBL can significantly improve students' explanatory text writing skills. In the process of creating explanatory texts, students are trained to construct logical arguments, formulate ideas clearly, and present information systematically. This activity allows students to conduct in-depth research, collect data, and compile informative reports. The implementation of PPA not only has a positive impact on improving writing skills, but also prepares students for real-world challenges, while equipping them with the ability to organize thoughts, present ideas in a structured manner, and understand the importance of effective communication. Collaborative experiences in PPA also help students develop social and emotional skills, such as empathy, tolerance and the ability to work in teams. The implementation of project-based learning methods in the curriculum is highly recommended to improve students' academic abilities while equipping them with the necessary skills in the modern era.

The purpose of this study is to compare the achievement of learners' learning outcomes in writing skills between the group using the project-based learning (PJBL) model and the group applying conventional learning. This research focuses on identifying the extent of the effectiveness of the PPA model in improving students' writing skills compared to the more common traditional approach. In line with these objectives, research conducted by Janah, Wikanengsih, and Fauziya (2018) revealed a significant difference between the class that applied the PJBL model and the class that applied the conventional learning method, indicating that the project-based learning model not only had a positive impact on student engagement, but also improved their ability to write explanatory texts. The benefits of this research are very important to improve the achievement of students' learning outcomes, especially in the aspect of writing skills, because the application of the PPA model encourages students to actively participate in a challenging and interesting learning process, dig for information, collaborate with classmates, and develop critical thinking in composing texts. This study also aims to provide recommendations to educators about the importance of applying the PJBL method in writing learning so that students not only master the theory, but are also able to apply their writing skills in a real and meaningful context. The results of this study are expected to contribute to the development of more effective teaching methods and improve the quality of education in the field of writing skills in schools, so that the application of project-based learning models can be a very valuable alternative in achieving better educational goals

Methodology

This research aims to analyze the effect of project-based learning method on improving students' writing skills using literature study approach. This method was chosen because it allows researchers to collect and analyze various findings from previous studies, so as to provide a comprehensive picture of

the effectiveness of project-based learning methods in the context of teaching writing. The data sources used consisted of peer-reviewed journal articles, dissertations, relevant theses, and books that discuss the theory and practice of project-based learning methods, with an emphasis on research accessed through Google Scholar. In selecting the sources, the researcher applied certain criteria, namely focusing on studies that investigate the effect of project-based learning methods on students' writing skills, published within the last 10 years to ensure relevance, and covering a range of educational contexts from primary school to higher education.

The data collection process involved recording key information from each source, including title, author, year of publication, and summary of findings, to facilitate analysis. Data analysis was conducted through content analysis technique, where the researcher grouped the findings based on categories, such as improvement in writing skills, aspects improved through project-based learning method, and different learning contexts. The researcher will also synthesize the various studies analyzed to illustrate the overall effect of project-based learning method on students' writing skills, as well as identify any research gaps. To ensure validity and reliability, this research uses reliable sources and triangulates by comparing results from various sources. The results of the analysis will be presented in narrative and tabular form, with emphasis on key findings and implications for educational practice. This research is expected to explore the effectiveness of project-based learning methods and enrich the understanding of teaching practices that can support the development of students' writing skills more effectively, while providing recommendations for educators and researchers in the field of education.

Results and Discussion

This study shows that the project-based learning (PBL) method has a positive effect on improving students' writing skills. After the implementation of this method, students showed better ability in expressing ideas and thoughts in writing. Observations during the learning process noted that students were more actively involved in group discussions and more confident in expressing their opinions. This engagement reflects students' enthusiasm in carrying out writing activities, such as designing and compiling project reports. This method not only allows students to learn writing theory, but also apply it in a real and relevant context, which encourages them to conduct research, design projects, and compile reports (Ramadhan, 2021).

The application of project-based learning methods has proven effective in increasing students' motivation and interest in the material being taught. Cooperation in groups provides opportunities for students to share ideas and provide feedback, which enriches the learning experience. The reflection process after completing the project is also an important part of learning, where students are asked to reflect on the experience, discuss challenges and plan improvements. The results show a significant improvement in students' writing ability, the success of PBL is influenced by teacher support, provision of adequate resources, and parental involvement. The implementation of the PBL method must be done holistically by taking into account the context and needs of students so that optimal results can be achieved (Harapit, 2018). This research indicates that the project-based learning method can be an effective strategy to improve students' writing skills and prepare them for future academic and professional challenges.

The following are the results and discussion of research on "The Effect of Project-Based Learning Method (PBL) on Improving Students' Writing Ability" in paragraph form.

The results showed that the project-based learning (PBL) method had a positive effect on improving students' writing skills. Based on the literature review, various previous studies, such as the one conducted by Thomas (2000), indicated that PBL provides students with the opportunity to learn in a more involved and practical way, thus deepening their understanding of the material and improving writing skills. Research by Blumenfeld et al. (1991) found that students who followed project-based learning showed significant improvement in writing skills compared to traditional methods. PBL encourages students to engage in projects that require research, writing, and presentation, aspects that are crucial in the development of writing skills. Krajcik and Blumenfeld (2006) emphasized that well-designed projects can increase students' motivation, giving them the opportunity to practice writing in a more real and meaningful context. In addition, a study by Liu (2017) showed that students who learn through PBL tend to be more motivated and engaged in the learning process, thanks to greater control over their learning and the vision of tangible results from their efforts, which increases confidence in writing.

In the theoretical context, PBL is grounded in the theory of constructivism, which states that learning is more effective when students are actively engaged. Piaget (1973) also emphasized the importance of direct experience in the learning process. PBL provides opportunities for students to not only receive information, but also construct their own knowledge through relevant and meaningful activities. In addition, the collaboration aspect in PBL improves students' social and communication skills, as stated by Johnson and Johnson (1994). Group discussions and feedback from peers allow students to refine and improve their writing. The focus on practical skills, such as research, organizing ideas, and editing, is also an advantage of PBL. In the project, students are required to think critically and creatively, which is in line with Garrison and Anderson's (2003) findings on the importance of critical thinking skills in project-based learning. Therefore, the implications of this study suggest that educators need to integrate the PBL method in the language learning curriculum. This will not only improve students' writing ability, but also their social and communication skills, which are highly relevant in the context of 21st century education. Thus, further research is recommended to explore various PBL models and approaches that can be applied in different contexts.

Furthermore, to achieve optimal results from the implementation of PBL, it is also important to focus on the implementation of real projects that can further enhance students' connectedness to the writing task (Suswati, 2021). The application of real projects in project-based learning (PBL) is very effective in improving students' connectedness to the writing task. Projects that are relevant to daily life allow students to see firsthand how writing skills can be applied in real contexts and benefit them. When students engage in projects related to their interests or experiences, they feel more motivated and excited to participate in the writing process. The sense of ownership over their work creates the drive to produce better and higher quality writing. With real-life related projects, students can understand that what they write is not just an assignment, but also a way to convey their ideas and perspectives to others. This connection encourages them to invest more in the creative process, which has a positive impact on the end result. In addition, students who feel emotionally connected to the material tend to be more open to feedback, which allows them to make constructive revisions. Thus, real projects play an important role in creating a more immersive and meaningful learning experience for students.

Furthermore, real projects provide opportunities for students to express their ideas and personal experiences, making their writing more authentic and meaningful. When students are able to put their thoughts and feelings into their writing, the results become more vivid and colorful, making them appealing to readers. By connecting learning materials with the real world, students can better understand the purpose and benefits of the writing skills they learn in class. It also helps them develop critical thinking skills, as they need to analyze information and choose the best way to present it. When they see the relevance between their writing and real-life situations, students tend to put more effort into the revision and refinement of their work. This process teaches them that writing is part of a broader communication process, which involves customization based on context and audience. With diverse learning experiences, students can improve their overall writing ability. Therefore, the application of real projects in PBL not only improves writing ability, but also equips students with relevant and applicable skills for their future.

In line with this approach, the feedback process in PBL also plays an important role in supporting students' overall learning experience. The feedback process in project-based learning (PBL) is highly relevant to constructivist learning theory, which emphasizes the importance of social interaction and reflection in the learning process (Firman et.al., 2021). In the context of PBL, students get feedback from teachers and peers regularly throughout the project. This feedback includes constructive criticism that helps students identify strengths and weaknesses in their writing. With clear feedback, students feel more motivated to revise. This revision process allows them to improve their structure, grammar, and word choice, making their writing better. In addition, revision also gives students the opportunity to think critically about the choices they make in their writing. This develops reflective skills, which are important in the learning process. Thus, continuous feedback contributes significantly to improving the final quality of students' written work.

In addition to improving the quality of writing, the feedback and revision process also helps students build confidence in their writing abilities, in line with Bandura's self-efficacy theory which states that individuals' beliefs in their abilities affect their performance. When students receive positive feedback, they feel valued and are more courageous to express their ideas in their writing. This process creates a supportive environment, where students feel safe to experiment with new writing styles and

approaches. Revisions made based on feedback encourage students to see their writing as a work that can continue to evolve. Thus, students focus not only on the end result, but also on the creative process behind the writing. This helps them understand that writing is a journey that involves continuous learning. Through this cycle of feedback and revision, students can make meaningful progress in their writing skills, resulting in more mature and quality work.

The feedback and revision process also contributes to the development of students' better communication skills, as they learn to listen and respond constructively to criticism. In this context, students not only learn to write, but also to collaborate and interact effectively with peers and teachers. This is in line with research showing that good communication skills are essential in academic and professional environments. In addition, the feedback provided allows students to develop a deeper understanding of their audience, resulting in more relevant and impactful writing. When students realize that their writing can influence others, they will be more motivated to refine their writing style and content.

Furthermore, this process teaches students the importance of perseverance and discipline in writing. By understanding that revision is part of the creative process, students become better prepared for the challenges that arise during writing. This builds a growth mindset, where they believe that writing skills can continue to improve with effort and time. In addition, the experience of receiving and giving feedback also prepares students for real-world situations, where feedback is an integral part of the collaborative process. Overall, the implementation of feedback and revision not only improves the quality of writing, but also equips students with important skills that will be beneficial in their future education and careers. As such, creating a supportive environment for feedback and revision should be a priority in writing instruction

Conclusion

Furthermore, this process teaches students the importance of perseverance and discipline in writing. By understanding that revision is part of the creative process, students become better prepared for the challenges that arise during writing. This builds a growth mindset, where they believe that writing skills can continue to improve with effort and time. In addition, the experience of receiving and giving feedback also prepares students for real-world situations, where feedback is an integral part of the collaborative process. Overall, the implementation of feedback and revision not only improves the quality of writing, but also equips students with important skills that will be beneficial in their future education and careers. Thus, creating a supportive environment for feedback and revision should be a priority in writing instruction.

References

- Ansyah, Y. A. (2023). Upaya Meningkatkan Minat dan Prestasi Belajar Siswa Kelas IV Sekolah Dasar pada Pembelajaran IPA Menggunakan Strategi PjBL (Project-Based Learning). *Jurnal Ilmu Manajemen Dan Pendidikan (JIMPIAN)*, 3(1), 43–52. <https://doi.org/10.30872/jimpian.v3i1.2225>
- AR, A. S. H., & Ismail, I. (2024). Menggali Peran Filsafat Pendidikan Dalam Membentuk Pemikiran Kritis Di Era Teknologi. *JUPEIS: Jurnal Pendidikan dan Ilmu Sosial*, 3(1), 27-34. <https://doi.org/10.57218/jupeis.Vol3.Iss1.969>
- Buda, C. H., Wardani, N. S., & Prasetyo, A. K. (2022). Pengembangan Problem and Project Based Learning Pasca Covid-19 terhadap Kolaborasi Peserta Didik. *Scaffolding: Jurnal Pendidikan Islam Dan Multikulturalisme*, 4(3), 90–105. <https://doi.org/10.37680/scaffolding.v4i3.1793>
- Ediana, D., Andriani, N., Ilmi, A. R. M., Rinovian, R., & Zulfikhar, R. (2023). Pembelajaran Berbasis Proyek Melalui Aplikasi dan Platform WEB: Kajian Literatur Terhadap Pengembangan Keterampilan Holistik Siswa. *Jurnal Review Pendidikan Dan Pengajaran (JRPP)*, 6(3), 860-866. <https://doi.org/10.31004/jrpp.v6i3.19498>
- Emira Hayatina Ramadhan, & Hindun Hindun. (2023). Penerapan Model Pembelajaran Berbasis Proyek untuk Membantu Siswa Berpikir Kreatif. *Protasis: Jurnal Bahasa, Sastra, Budaya, Dan Pengajarannya*, 2(2), 43–54. <https://doi.org/10.55606/protasis.v2i2.98>
- Firman, M., Juliati, J., Septiana, T., & Sudirman, I. M. (2021). Mengembangkan Model Pembelajaran Berbasis Proyek: Memotivasi Siswa Melalui Pembelajaran Aktif Dan Kolaboratif. *Community Development Journal: Jurnal Pengabdian Masyarakat*, 2(3), 1300-1306.
- Fuadiy, M. R., & Al Fauz, M. F. (2023). Implikasi Pembelajaran Berbasis Proyek Dalam Meningkatkan Prestasi Belajar Siswa: Studi Kasus Di Madrasah Ibtidaiyah Al Islah Tiudan Kabupaten

- Tulungagung. Al-Muaddib: *Jurnal Kajian Ilmu Kependidikan*, 5(2), 340-352. <https://doi.org/10.46773/muaddib.v5i2.953>
- Ginanjar, H., Septiana, T., Ginanjar, D., & Agustin, S. (2021). Keberhasilan Implementasi Pembelajaran Berbasis Proyek: Faktor-faktor Kunci dalam Proses Pembelajaran. *Jurnal Pendidikan Tambusai*, 5(2).
- Harapit, S. (2018). Peranan problem based learning (pbl) terhadap kemampuan pemecahan masalah dan motivasi belajar peserta didik. *Jurnal Pendidikan Tambusai*, 2(2), 912-917.
- Hasan, M., Nasution, N., Sofyan, S., Guampe, F. A., Rahmah, N., Mendo, A. Y., Elpisah, E., Musthan, Z., Sulistyowati, R., Kamaruddin, C. A., Ratnah, R., Sartika, S. B., Suarlin, S., Astuty, S., Khasanah, U., Supatminingsih, T., Tahir, T., Hasyim, S. H., Ahmad, M. I. S., Handayani, A. A., & Atirah, A. (2023). Pendidikan Dan Sumber Daya Manusia: Menggagas Peran Pendidikan Dalam Membentuk Modal Manusia. Penerbit Tahta Media. Retrieved from <http://tahtamedia.co.id/index.php/issj/article/view/322>
- Hertina, M. (2020). Peran guru sebagai fasilitator bagi siswa kelas i di sd negeri 53 bengkulu selatan (Doctoral dissertation, IAIN Bengkulu).
- Jusita, M. L. (2019). Implementasi model pembelajaran berbasis proyek (project based learning) untuk meningkatkan aktivitas dan hasil belajar siswa. *Jurnal Teori dan Praksis Pembelajaran IPS*, 4(2), 90-95. <http://dx.doi.org/10.17977/um022v4i22019p90>
- Lase, D. (2019). Pendidikan di era revolusi industri 4.0. *SUNDERMANN: Jurnal Ilmiah Teologi, Pendidikan, Sains, Humaniora dan Kebudayaan*, 12(2), 28-43. <https://doi.org/10.36588/sundermann.v1i1.18>
- Mahadi, U. (2021). Komunikasi pendidikan (urgensi komunikasi efektif dalam proses pembelajaran). *JOPPAS: Journal of Public Policy and Administration Silampari*, 2(2), 80-90. <https://doi.org/10.31539/joppa.v2i2.2385>
- Martin, R., & Simanjorang, M. M. (2022). Pentingnya peranan kurikulum yang sesuai dalam pendidikan di indonesia. *Prosiding Pendidikan Dasar*, 1(1), 125-134.
- R., F., Aminu, N., & Adri, D. (2023). Peran Guru Sebagai Fasilitator Dalam Pembelajaran Bagi Siswa Sd Negeri 71 Buton. *JEC (Jurnal Edukasi Cendekia)*, 7(1), 32-42. <https://doi.org/10.35326/jec.v7i1.3475>
- Ramadhan, I. (2021). Penggunaan Metode Problem Based Learning dalam meningkatkan keaktifan belajar siswa pada kelas XI IPS 1. *Cetta: Jurnal Ilmu Pendidikan*, 4(3), 358-369. <https://doi.org/10.37329/cetta.v4i3.1352>
- Setiyaningsih, S., & Subrata, H. (2023). Penerapan Problem Based Learning Terpadu Paradigma Konstruktivisme Vygotsky Pada Kurikulum Merdeka Belajar. *Jurnal Ilmiah Mandala Education*, 9(2). <https://doi.org/10.58258/jime.v9i2.5051>
- Sholeh, M. I., Tasya, D. A., Syafi'i, A., Rosyidi, H., Arifin, Z., & binti Ab Rahman, S. F. (2024). Penerapan Pembelajaran Berbasis Proyek (Pjbl) Dalam Meningkatkan Kemampuan Berpikir Kritis Siswa. *Jurnal Tinta: Jurnal Ilmu Keguruan dan Pendidikan*, 6(2), 158-176.
- Sri Hanipah. (2023). Analisis Kurikulum Merdeka Belajar Dalam Memfasilitasi Pembelajaran Abad Ke-21 Pada Siswa Menengah Atas. *Jurnal Bintang Pendidikan Indonesia*, 1(2), 264-275. <https://doi.org/10.55606/jubpi.v1i2.1860>
- Subaidi, S., Mahnun, N., & Arsyad, J. (2024). Implementation of Islamic Education in Strengthening the Social Care Character of Students at Madrasah Aliyah. *AL-ISHLAH: Jurnal Pendidikan*, 16(2), 1166-1177. <https://doi.org/10.35445/alishlah.v16i2.5034>
- Suswati, U. (2021). Penerapan Problem Based Learning (PBL) meningkatkan hasil belajar kimia. *TEACHING: Jurnal Inovasi Keguruan Dan Ilmu Pendidikan*, 1(3), 127-136. <https://doi.org/10.51878/teaching.v1i3.444>
- Wardani, D. A. W. (2023). Problem based learning: membuka peluang kolaborasi dan pengembangan skill siswa. *Jawa Dwipa*, 4(1), 1-17