



A SYSTEMATIC REVIEW OF PROJECT-BASED LEARNING IMPLEMENTATION IN THE MERDEKA CURRICULUM

TINJAUAN SISTEMATIS IMPLEMENTASI PEMBELAJARAN BERBASIS PROYEK DALAM KURIKULUM MERDEKA

Fitri Shofi Nur Iman¹, Annisa Fauziah²

English Education Department, UIN Sultan Maulana Hasanuddin Banten

Email : 231230096.fitri@uinbanten.ac.id¹, 231230085.annisa@uinbanten.ac.id²

Article Info

Article history :

Received : 01-12-2025

Revised : 03-12-2025

Accepted : 05-12-2025

Pulished : 09-12-2025

Abstrak

Penerapan Kurikulum Merdeka menekankan pembelajaran yang fleksibel, kontekstual, dan berpusat pada peserta didik dengan tujuan mengembangkan kompetensi abad ke-21 dan mewujudkan Profil Pelajar Pancasila. Pembelajaran Berbasis Proyek (PjBL) merupakan salah satu pendekatan yang direkomendasikan dalam kurikulum ini karena memberikan kesempatan bagi peserta didik untuk belajar melalui proyek autentik yang melibatkan kolaborasi, kreativitas, dan pemecahan masalah secara langsung. Penelitian ini bertujuan untuk mengkaji efektivitas penerapan PjBL dalam Kurikulum Merdeka dan mengidentifikasi manfaat serta kendala yang terdapat pada berbagai jenjang pendidikan di Indonesia. Metode yang digunakan adalah Tinjauan Pustaka Sistematis (TPS) mengikuti pedoman PRISMA melalui pencarian artikel pada basis data Google Scholar, Eric, dan Mendeley, kemudian memilih 15 artikel terbitan tahun 2020–2025 yang memenuhi kriteria inklusi. Hasil penelitian menunjukkan bahwa PjBL mampu meningkatkan keterlibatan peserta didik pada ranah kognitif, afektif, dan psikomotorik, serta mendukung pengembangan karakter, komunikasi, keterampilan berpikir kritis, dan kreativitas. Namun, implementasinya masih menghadapi tantangan seperti keterbatasan fasilitas, kesiapan guru sebagai fasilitator, manajemen waktu proyek, dan kesulitan dalam penilaian autentik. Oleh karena itu, PjBL memiliki potensi besar dalam mendukung keberhasilan Kurikulum Merdeka dan perlu diperkuat melalui pelatihan guru dan penyediaan fasilitas pendukung yang memadai agar implementasinya merata dan berkelanjutan.

Kata Kunci: Pembelajaran Berbasis Proyek, Kurikulum Merdeka

Abstract

The implementation of the Merdeka Curriculum emphasizes flexible, contextual, and learner-centered learning with the aim of developing 21st-century competencies and realizing the Pancasila Student Profile. Project-Based Learning (PjBL) is one of the approaches recommended in this curriculum because it provides opportunities for students to learn through authentic projects that involve collaboration, creativity, and direct problem solving. This study aims to review the effectiveness of PjBL implementation in the Merdeka Curriculum and identify the benefits and obstacles found at various levels of education in Indonesia. The method used is a Systematic Literature Review (SLR) following the PRISMA guidelines through searching articles in the Google Scholar, Eric, and Mendeley databases, then selecting 15 articles published in 2020–2025 that meet the inclusion criteria. The results of the study show that PjBL is able to increase student engagement in the cognitive, affective, and psychomotor domains, as well as support character development, communication, critical thinking skills, and creativity. However, its implementation still faces challenges such as limited facilities, teacher readiness as facilitators, project time management, and difficulties in authentic assessment. Therefore, PjBL has great potential in supporting the success of the Merdeka Curriculum and needs to



be strengthened through teacher training and the provision of adequate supporting facilities so that its implementation is equitable and sustainable.

Keywords: Project-Based Learning, Merdeka Curriculum

INTRODUCTION

The Merdeka Curriculum's restructuring of Indonesian education is a calculated move to raise learning standards and meet 21st-century expectations. This curriculum places a strong emphasis on developing students' character as learners based on Pancasila ideals, diversified instruction, and flexibility in the learning process. In order to prepare students for dealing with global dynamics, these initiatives aim to make sure that education is not just centered on academic success but also on their social, emotional, and spiritual competencies (Sunaryati et al., 2023).

In this regard, the primary method suggested for implementing the Merdeka Curriculum is Project-Based Learning (PBL). PBL helps students deal with real-world issues, carry out research, work together, and create tangible goods that can be used or presented. Because students actively create knowledge through real-world experiences, learning becomes more meaningful (Indraprasta & Pawiro, 2023).

Research indicates that PBL adoption directly promotes character development at the elementary school level. For instance, entrepreneurship projects with a market day theme teach students about diversity, culture, teamwork, and making ethical decisions in authentic social settings (Sunaryati et al., 2023). Such initiatives support the Merdeka Curriculum's goal of developing pupils into socially conscious, environmentally conscious adults.

Additionally, PBL innovates language instruction, particularly in English. Students are encouraged to practice speaking in situations that are more applicable to their daily life using social media or digital initiatives (Rahmawati & Kusumaningtyas, 2024). Students are encouraged to actively communicate their ideas and gain confidence in their language use by creating content like podcasts, vlogs, and presentation videos. Students' motivation and teamwork increase as a result of this more engaging and communicative learning environment.

Furthermore, PBL's technology integration is a crucial way to foster digital literacy, which is a crucial Merdeka Curriculum capability. In order to create creative learning products, students are taught how to handle data, conduct information searches, and use digital features (Rahmawati & Kusumaningtyas, 2024). With increased access to educational materials, learning is no longer restricted to the classroom and enables students to freely investigate knowledge in a variety of settings, including online learning environments.

Project-based integrated learning has been shown to be effective in enhancing conceptual knowledge and numeracy problem-solving abilities in mathematics education. By combining in-person and virtual learning, this approach enables students to get a deeper comprehension of subjects through real-world projects (Yahya & Barat, 2023). Because mathematical concepts are connected to easier-to-understand real-world situations, this method not only greatly enhances learning results but also increases students' enthusiasm and engagement.

However, there are still a lot of obstacles in the way of PBL implementation in different schools. Teachers encounter challenges include inadequate technology infrastructure, time



management issues, and inconsistent student enthusiasm throughout the project (Rahmawati & Kusumaningtyas, 2024). Because project assessment necessitates a thorough review of both the process and the output, which not all educators have fully mastered, challenges in creating authentic assessments are also a significant concern.

Although there have been significant breakthroughs in the adoption of PBL in a number of educational units, its implementation strategy still needs to be improved in order for all students to benefit equally. The success of PBL in the Merdeka Curriculum is still impacted by teacher preparedness, technology assistance, and students' capacity for autonomous project management, as demonstrated by earlier research findings (Sunaryati et al., 2023). Furthermore, true assessment, which calls for the evaluation of both the learning process and the final result, frequently presents difficulties in the field, requiring educators to become more proficient in creating thorough evaluations. This circumstance highlights the need for a more thorough investigation of PBL implementation's efficacy and associated challenges. In order to give a more thorough scientific analysis as a foundation for developing a better Project-Based Learning strategy within the framework of the Merdeka Curriculum, this study was created as a systematic review. In order to give a more thorough scientific analysis as a foundation for developing a better Project-Based Learning strategy within the framework of the Merdeka Curriculum, this study was created as a systematic review. In keeping with this goal, the following two research topics were the main emphasis of this study:

- R1. To what extent does Project-Based Learning help Indonesian schools execute the Merdeka Curriculum at different educational levels?
- R2. What are the primary obstacles to implementing Project-Based Learning in the Merdeka Curriculum, and what remedies have been suggested by earlier research?

LITERATURE REVIEW

Project-Based Learning

Project-Based Learning (PBL) is a constructivist instructional approach that positions students at the center of the learning process through project activities requiring creativity, independence, and problem-solving skills. In modern education, PBL is regarded as a relevant strategy for enhancing higher-order thinking because students are involved in designing, developing, and presenting project outcomes based on real-world situations. The first article emphasizes that this model (Dyah et al., 2023), indicating that PBL not only focuses on content mastery but also encourages the development of essential skills such as time management, interpersonal communication, collaborative abilities, and the generation of original ideas. Furthermore, PBL provides opportunities for students to apply knowledge directly, allowing them to construct deeper and more meaningful understanding of the concepts being learned.

Within the implementation of the Merdeka Curriculum, PBL has proven effective in facilitating contextual learning that promotes critical and reflective thinking. Through project activities, students are not merely completing assignments; they are evaluating information, analyzing learning sources, and connecting knowledge to both local and national contexts. This is supported by the second article, which states that PBL enables students (Purwanta, 2025). Thus, PBL acts as a medium for developing critical literacy, strengthening analytical abilities, and



enhancing the relevance of learning to real-life situations. This approach helps students understand social, cultural, and historical issues more comprehensively, allowing them to build intellectual sensitivity and reflective thinking in accordance with 21st-century competency demands.

Theoretically, PBL is classified as an inquiry-based approach that emphasizes investigative, exploratory, and collaborative processes to create meaningful learning experiences that can be transferred to various real-life contexts. PBL is designed to expose students to authentic challenges that require them to integrate academic, social, and emotional skills in a balanced manner. The third article describes PBL (Inquiry-, n.d.). This statement highlights that PBL is not limited to producing a final product; it also facilitates the development of character, learning identity, collaborative competence, and social awareness. With its flexible and experience-oriented structure, PBL provides an environment that supports students in decision-making, emotional regulation, effective interaction, and the development of critical thinking skills needed to navigate real-world challenges.

Merdeka Curriculum

The Merdeka Curriculum is a framework for learning that allows educators and schools to create instructional strategies that are appropriate for students' needs, interests, and developmental stages. This curriculum now prioritizes the development of critical skills including reading, numeracy, creativity, and character rather than just finishing the course material. Teachers are given the freedom to modify their teaching methods in order to help students become autonomous, active learners who can take charge of their own education (Educatio, 2024).

The Merdeka Curriculum highlights the significance of enhancing the Pancasila Student Profile, which encompasses the qualities of faithfulness, global diversity, cooperation, independence, creativity, and critical thinking. Learning is intended to be contextual and meaningful through authentic experiences that foster critical thinking, problem-solving, and teamwork. This strategy is consistent with the learner-centered learning concept, which views educators as facilitators who help students develop their potential so they may compete in the present globalization and technological revolution (Zidan, 2023).

In addition, the Merdeka Curriculum is an attempt to revive education following the COVID-19 pandemic. In order to reduce learning loss, learning outcomes are simplified and diagnostic tests are used to guarantee that every student is given the opportunity to learn in accordance with their starting ability. This curriculum is anticipated to be able to enhance learning quality in a sustainable way and address the intricate issues of the future educational landscape through adaptive planning and bolstering the professionalism of educators (Wardani, 2023).

Project-Based Learning (PjBL) as a Pedagogical Foundation in the Merdeka Curriculum

Project-Based Learning (PjBL) is a method of instruction that aligns with the goals of the Merdeka Curriculum because it gives students the freedom to learn, promotes active engagement, and aids in the development of understanding via hands-on experience in completing real projects. Students participate in phases of IPAS learning in elementary schools, which have been shown to enhance their critical thinking abilities and sense of responsibility. These phases include problem identification, planning, experimenting, and publication of project outcomes. Additionally, since students learn to cooperate, communicate, and adjust to the demands of project-based learning, PjBL facilitates the integration of 21st-century skills (Rokhimawan et al., 2023).



In addition to boosting cognitive engagement at the secondary level, PjBL strengthens affective elements including motivation, interest, and self-assurance in actively participating in the learning process. Students feel more purposeful and that they have a significant role in the projects they are working on when the projects are created with real-life applicability. According to research, when the project design permits investigation, students are more engaged in offering suggestions, posing inquiries, and finishing assignments responsibly. Additionally, group collaboration dynamics aid in the development of students' communication skills, which are a crucial component of the Merdeka Curriculum (Nugroho et al., 2025).

The effectiveness of PjBL implementation in a madrasah setting is largely dependent on the evaluation method teachers employ to gauge students' competency accomplishment in terms of both process and final output. The development of attitudes, character, and religious values—all of which are genuinely aspects of religious education—becomes less evident in the assessment when educators concentrate solely on the project's outcomes. This condition demonstrates that in order to fully document and support all Merdeka learning outcomes, particularly in the affective domain, PjBL deployment must be followed by the creation of more thorough and formative evaluation tools (Rahman, 2024).

Empirical Insights and Implementation Challenges of PjBL in the Merdeka Curriculum

Through learning stages like project planning, group work, process monitoring, and product presentation and evaluation, PjBL's implementation has offered a more contextual and relevant learning experience. In their role as facilitators, teachers make sure that projects stay in line with learning objectives and offer assistance to students who run into problems. Students are driven to pursue the objectives outlined by the Merdeka Curriculum, particularly those pertaining to creativity, communication, and problem solving, and they become more independent and proficient in teamwork in such a supportive learning environment (Rokhimawan et al., 2023).

The study evidence that is now available, but still demonstrates limits when evaluating the efficacy of PjBL deployment on a large scale. The results are not yet entirely representative across schools and regions because the majority of research were carried out over comparatively short time periods and with a small number of pupils. Furthermore, the implementation of PjBL, which is anticipated to enhance the Pancasila student profile, including the traits of independence and cooperation, has not yet been thoroughly examined in the learning outcome assessments that educators employ (Nugroho et al., 2025).

The availability of learning resources and teacher preparedness present further implementation obstacles. Many educators are still getting used to their new job as facilitators, which calls for close supervision and strong project management abilities. Other challenges include time constraints for project implementation, variations in student skill levels across groups, and challenges in creating assessment rubrics that appropriately assess procedures and attitudes. Despite being a part of the same curriculum and having similar learning objectives, PjBL outcomes are not always consistent, which can be explained by these different challenges (Rahman, 2024).

METHODS

The method used in this study was a Systematic Literature Review (SLR) to identify, evaluate, and synthesize studies discussing the implementation of Project-Based Learning (PjBL)



in the Merdeka Curriculum. This study followed the PRISMA guidelines as a framework to ensure a systematic, transparent, and replicable search process (Moher et al., 2009). SLR was chosen because it provides a structured, comprehensive, and scientifically accountable literature review process. The keywords used in the search included “Project-Based Learning,” “PjBL,” “Merdeka Curriculum,” and “PjBL implementation,” which were searched through databases such as Google Scholar and Mendeley. This study covers articles published between 2020 and 2025 to align with the period of development and implementation of the Independent Curriculum. The data used is secondary data from published scientific articles, so it does not involve direct data collection from participants. Only articles that meet the inclusion and exclusion criteria were analyzed to ensure their relevance and academic quality.

Procedure

The author made an initial search using a list of keywords related to PjBL and the Merdeka Curriculum. All articles found were then subjected to a gradual selection process based on the PRISMA model: a) Identification, which involved collecting all articles that appeared according to the keywords and produced many studies related to the application of PjBL in the context of Indonesian education; b) Screening, which involved eliminating duplicate articles and articles that did not clearly discuss PjBL or were not related to the Merdeka Curriculum; c) Eligibility, which involved reading the abstracts and contents of the articles in more depth to ensure that the research actually discussed the practices, effectiveness, challenges, or opportunities for implementing PjBL in the Merdeka Curriculum; and d) Inclusion, which involved only including articles that were truly relevant to the implementation of PjBL in the Merdeka Curriculum as final data for analysis.

Study Slection Criteria

This study applied inclusion and exclusion criteria to ensure the quality and relevance of the literature reviewed. The inclusion criteria included journal articles published between 2020 and 2025, available in full text, written in Indonesian or English, and containing empirical research results on the application of PjBL in the Merdeka Curriculum. In addition, articles must include discussions on PjBL implementation strategies, student learning outcomes, and the impact of its implementation in schools. Meanwhile, exclusion criteria include articles that do not clearly discuss PjBL, are not related to the Merdeka Curriculum, only highlight perceptions without presenting implementation results, and articles that are not accessible in full text. The application of these criteria aims to ensure that the articles analyzed are truly relevant to the research objectives.

Instrument(s)

The instruments in this study were scientific articles that had passed the selection process based on predetermined criteria. There were no primary data collection instruments such as interviews or questionnaires because SLR is a study in which all data is sourced from previous publications. Each article was analyzed thoroughly to obtain information about the characteristics of the research, the stages of PjBL implementation, the learning outcomes obtained by students in cognitive, affective, psychomotor, and character aspects, the role of teachers during the project-based learning process, as well as the supporting factors and obstacles that arose during its implementation. The data obtained was then categorized and analyzed thematically to obtain a



comprehensive picture of the patterns of implementation and effectiveness of PjBL in the Merdeka Curriculum.

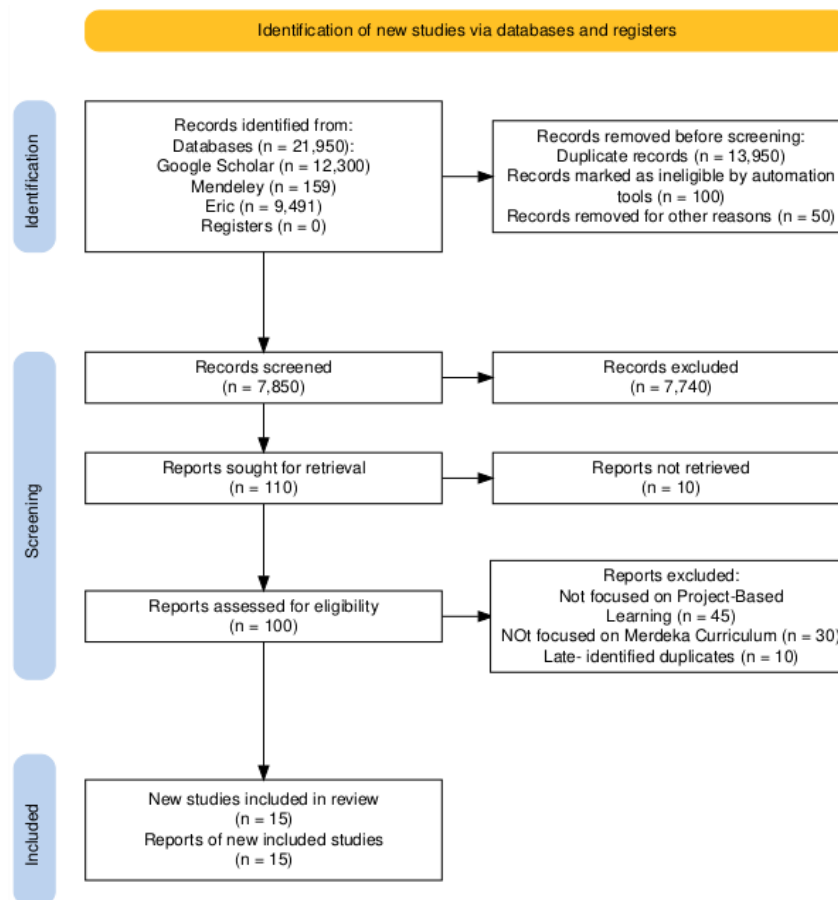


Figure 1. PRISMA Flowchart of the selection Process.

RESULT/FINDING AND DISCUSSION

Tabel 1. Summary of Findings from Selected Final Studies

No	Authors/Year/ Country	Main Characteristic	Study Design/ Measuring	Findings
1	Rahmawati & Kusumaningtyas (2024, Indonesia)	This study involved Grade 10 vocational students completing Instagram-based speaking projects.	Qualitative descriptive; interviews, observation, documentation; Miles & Huberman analysis.	PjBL's introduction boosted students' confidence and involvement in finishing speaking assignments on Instagram. As they learned, students developed more inventive and cooperative digital content. Additionally, teachers saw that students were participating more actively. However, facilities, inconsistent motivation, and time restrictions continued to hinder execution.
2	Fitriyani, Sunaryati & Surya (2023, Indonesia)	Grade 6 elementary students participating in a	Qualitative descriptive; interviews,	It has been demonstrated that the Market Day project improves students' communication, responsibility, and cultural understanding. When it comes to



		Market Day project.	observation, documentation.	planning and executing project activities, students are now more autonomous. Throughout the process, teachers have noticed an improvement in teamwork and problem-solving abilities. All things considered, PjBL successfully promotes character development in accordance with the Merdeka Curriculum.
3	Mujiburrahman et al. (2022, Indonesia)	This study involved teachers from various regions participating in a national PjBL webinar.	Community service activity; webinar with material session and discussions; evaluation of teacher understanding.	Teachers' comprehension of the Merdeka Curriculum's PjBL stages and ideas was effectively enhanced by the webinar. Teachers were given more precise instructions on how to create project-based learning. Additionally, participants reported feeling more confident when using PjBL in the classroom. Nonetheless, some educators continue to struggle with a lack of educational resources.
4	Nurhidayah & Yahya (2023, Indonesia)	This study involved 65 Grade 8 students divided into an experimental and control group.	Quasi-experimental; pre-test & post-test; N-gain analysis with SPSS.	Compared to the control group, students who engaged in project-based blended learning had better learning results in mathematics. Their comprehension of the subject matter and problem-solving skills increased. In line with the Merdeka Curriculum's tenets, this model also encourages self-directed learning. Technical difficulties did occur, but they did not lessen learning's overall efficacy.
5	Nugroho, Hikmawaty & Juwita (2025), Indonesia	32 SMA students in Tangerang; focus on engagement (cognitive, affective, psychomotor)	Mixed-method; questionnaire + interviews	Students' engagement in cognitive, emotional, and psychomotor domains is greatly increased when PjBL is used. Students become more motivated, more adept at collaborating in groups, and more proactive in asking questions. Because the project promotes direct involvement and creativity, the learning process feels more significant. However, during execution, issues like group collaboration, self-confidence, and time management still come up.
6	Rahman, Remiswal & Khadijah	Madrasah students & teachers;	Descriptive quantitative;	PjBL-based assessment promotes more active participation and enhances students' comprehension



	(2024), Indonesia	evaluation of PjBL for PAI subject	questionnaire + documentation	of PAI content. During project work, students exhibit improved critical thinking and teamwork abilities. Additionally, educators discover that learning becomes more relevant and interactive. Its implementation is still hampered by a lack of funding and teacher preparation.
7	Irfan et al. (2023), Indonesia	Elementary school; PjBL in IPAS learning	Qualitative case study; observation, interview, documentation	Six syntactic phases are used to apply PjBL in IPAS learning, which has been shown to boost student engagement, creativity, and curiosity. Students discuss, try to solve difficulties on their own or in groups, and delve further into concepts. Because learning promotes practical abilities and firsthand experience rather than just cognitive qualities, it feels more important. During project activities, teachers watch how students' communication and teamwork abilities grow. In general, PjBL contributes to IPAS learning that is more applicable, participatory, and compliant with the requirements of the Merdeka Curriculum.
8	Rosanawati et al. (2025), Indonesia	35 Grade XI students; integration of PjBL with local- based learning	Qualitative descriptive; interviews + classroom observations	When studying local history, the PjBL-based Among approach enhances students' critical thinking abilities. Students are more daring when it comes to researching topics, having group discussions, and compiling project outcomes. Because it connects historical information to the local context, learning becomes more engaging. However, a significant barrier is still the scarcity of material resources and technological infrastructure.
9	Sari et al. (2023), Indonesia	36 university students; literary criticism class under MBKM	Descriptive qualitative; observation & questionnaires	Students' creative thinking abilities are strengthened by PjBL in terms of fluency, flexibility, originality, and elaboration. In literary criticism, students are more capable of coming up with a variety of concepts and analyses. Additionally, the project process helps them become more independent in their



				comprehension of literature. The problem is that some pupils still struggle to arrange their thoughts into a logical framework.
10	Pratami et al. (2024), Indonesia	42 preschool teachers; workshop to strengthen PjBL competence	Community service project; pre–post questionnaire	PAUD teachers' comprehension of project planning and execution procedures is enhanced by PjBL training. Teachers are more equipped to provide activities that are exploration-based and child-centered. The pre-post results, which demonstrate a deeper comprehension, clearly demonstrate this improvement in knowledge. Teachers still require additional support, though, especially when it comes to evaluating and modifying projects based on the developmental stages of the students.
11	Dewi & Arifin (2024), Indonesia	Biology learning in Merdeka Curriculum; focus on 4C skills (critical, creativity, communication, collaboration)	Quantitative descriptive; classroom observation	PjBL promotes better teamwork, communication, and student participation in group projects and debates in biology classes. During the project inquiry process, students are more engaged in sharing their thoughts. Stronger mentoring tactics are necessary, nevertheless, because creativity and the capacity to create novel items are still subpar.
12	Hakim et al. (2024), Indonesia	SMK PK context; P5BK (project) used as learning approach to shape Pancasila Profile	Qualitative descriptive; interview, observation, documentation	In the context of vocational learning, the P5BK project's implementation has helped students acquire qualities including teamwork, responsibility, and discipline. Throughout the project, students started to exhibit more positive attitude shifts. However, because educators and educational institutions are still adjusting to the regular and structural implementation of PjBL, the Pancasila Student Profile is currently being achieved gradually.
13	Purwanti et al. (2025), Indonesia	MI pilot school applying P5 P2RA; themes: local wisdom, sustainability, entrepreneurship	Descriptive qualitative; interviews, observation, documentation	Through activities related to religious principles and local knowledge, character-based project implementation (P2RA) improves students' social empathy, environmental awareness, and self-confidence.



				Additionally, from the planning phase through reflection, PjBL fosters greater innovation and accountability in project product completion.
14	Rahman et al. (2024), Indonesia	PAI learning evaluation using PjBL at Madrasah level	Descriptive quantitative; questionnaire & documentation	While promoting active engagement in group cooperation, project-based evaluation enhances students' comprehension of religious content. Pupils gain greater drive and the ability to use PAI principles in practical settings. To maximize the quality of project assessments, however, teacher preparedness, assessment curricula, and supporting facilities continue to be significant obstacles.
15	Ndari et al. (2023), Indonesia	Case study at SD Muhammadiyah; discusses readiness to apply Merdeka Curriculum	Qualitative case study; interviews & observations	There are still issues with teacher preparedness when it comes to the shift to flexible learning in primary schools, like PjBL. Project-based learning has not been successfully implemented since teaching methods are still teacher-centered. For instructors to effectively manage project activities and authentic assessments, more training and direction are required.

As a result students actively participate in the planning and completion of projects, the study's findings demonstrate that the Merdeka Curriculum's use of Project-Based Learning (PjBL) has consistently been able to increase student engagement in cognitive, affective, and psychomotor aspects (Nugroho et al., 2025). Furthermore, it has been demonstrated that project-based learning increases students' self-assurance and inventiveness when creating digital content while learning English (Rahmawati & Kusumaningtyas, 2024)

Through the Market Day entrepreneurial project, PjBL greatly strengthens character and the Pancasila Student Profile at the elementary school level, including cooperation, responsibility, and an awareness of diversity (Sunaryati et al., 2023). Through experimental activities and group collaboration, students in the IPAS context also shown a gain in curiosity, communication skills, and problem-solving abilities (Rokhimawan et al., 2023). When compared to traditional classes, PjBL improved mathematics learning outcomes, especially problem-solving abilities in the project-based blended learning approach (Yahya & Barat, 2023). Because students are required to create project outputs based on analysis and local context, PjBL enhances critical thinking and creativity in history and literacy instruction (Dyah et al., 2023; Purwanta, 2025).

Teachers' comprehension of PjBL grammar can be enhanced by training and mentoring, which not only benefits students but also better equips them to create learner-centered instruction



(Pratami et al., 2024) This demonstrates that improving teacher abilities is essential to encouraging the effective integration of PjBL into the Merdeka Curriculum in classrooms.

However, there are still a lot of obstacles in the way of PjBL implementation, including inadequate facilities, unprepared teachers as facilitators, time management issues with projects, and challenges with authentic assessment, which necessitates the simultaneous evaluation of processes and products (Ndari & Mahmudah, 2023; Rahman, 2024). Due to these challenges, PjBL adoption in different educational institutions has been unevenly effective.

All things considered, PjBL has great potential to promote the Merdeka Curriculum's tenets, which place an emphasis on adaptability, contextual learning opportunities, and 21st-century competencies. To enable the sustainable application of PjBL at all educational levels, however, better infrastructure support, thorough assessment design, and enhanced teacher abilities are still necessary for optimal implementation (Hakim et al., 2024; Purwanti et al., 2025)

CONCLUSION

The application of Project-Based Learning (PjBL) in the Merdeka Curriculum consistently improves the learning process and outcomes of students at various educational levels in Indonesia, according to the findings of a systematic review. In addition to fostering character attributes consistent with the Pancasila Student Profile, such as independence, cooperation, responsibility, and creativity in completing learning projects, PjBL has been shown to boost student involvement in cognitive, emotional, and psychomotor aspects. As a result, PjBL not only fosters academic success but also develops the 21st-century skills that are so much needed in today's educational landscape.

However, this study also identified a number of issues that still require attention, especially in relation to teachers' preparedness as facilitators, the scarcity of learning resources, project time management, and difficulties in putting into practice authentic assessments that fairly evaluate both process and product. These challenges show that not all educational units have implemented PjBL in an equitable and optimal manner.

Overall, these results show that PjBL is a significant and pertinent teaching strategy that helps the Merdeka Curriculum succeed because it can offer meaningful, contextual learning opportunities that are focused on helping students develop their competencies. For PjBL to be implemented stably and benefit all Indonesian students more broadly, it is necessary to continuously improve teacher training, offer sufficient facilities, and increase assessment procedures.

REFERENCES

- Dyah, E., Sari, P., & Adiarti, D. (2023). *Assessment of Students ' Creative Thinking Skill on the Implementation of Project-Based Learning*. 7(3), 414–428.
- Educatio, J. (2024). *Implementation of Merdeka Curriculum in Improving the Quality of*. 9(1), 394–401. <https://doi.org/10.31949/educatio.v9i1.4591>
- Hakim, M. N., Zakiyatus, K., Feiby, S., Arhanuddin, I., & Nova, S. (2024). *Optimizing the Merdeka Curriculum for Developing the Pancasila Student Profile through Project-Based Learning*. 5, 395–408.
- Indraprasta, S. P., & Pawiro, M. A. (2023). *Implementation of the Independent Curriculum to*



Improve the Quality of Learning English. 6, 674–688.

Inquiry-, A. (n.d.). *Designing Project- Based Learning Curricula :*

Ndari, W., & Mahmudah, F. N. (2023). *Implementation of the Merdeka Curriculum and Its Challenges. 4(3), 111–116.*

Nugroho, O. F., Hikmawaty, L., & Juwita, S. R. (2025). *Analysis of Student Engagement in Project Based Learning in The Merdeka Curriculum. 09(01), 49–59.*
<https://doi.org/10.55215/pedagonal.v9i1.32>

Pratami, D., Akhmal, N. H., Maulana, M. I. I. M., & Hassan, S. A. H. S. (2024). *INTRODUCING PROJECT-BASED LEARNING STEPS TO THE. 14(3), 883–902.*

Purwanta, H. (2025). *Pedagogical Model Innovation Based on Ki Hajar Dewantara ' s Among System for History Learning in the Merdeka Curriculum. 14.*

Purwanti, K. L., Adriyani, Z., Laily, E., Afifa, N., Nurhalisa, S., Negeri, U. I., & Semarang, W. (2025). *Journal of Integrated Elementary Education. 5(2), 353–368.*

Rahman, A. (2024). *Implementation of Islamic Religious Education Learning Evaluation Based on Project Based Learning in Merdeka Curriculum. 2, 21–35.*

Rahmawati, A. P., & Kusumaningtyas, E. D. (2024). *Implementation of Project Based Learning Though Merdeka Curriculum in Teaching Speaking Skills. 4(01), 25–34.*

Rokhimawan, M. A., Mastur, S. N., Fajriyani, N. A., Paulina, M., Sunan, U. I. N., & Yogyakarta, K. (2023). *PRIMARY: JURNAL PENDIDIKAN GURU SEKOLAH DASAR VOLUME 12 NOMOR 3 JUNI 2023 IMPLEMENTATION OF PROJECT-BASED LEARNING (PjBL) ON IPAS LEARNING MATERIALS IN THE MERDEKA CURRICULUM AT MUHAMADIYAH MUJAHIDDIN ELEMENTARY SCHOOL IMPLEMENTASI PROJECT-BASED LEARNING (PjBL) PADA MATERI IPAS,. 12, 689–702.*

Sunaryati, T., Muflida, V., & Surya, K. (2023). *Implementation Of Project-Based Learning Oriented To The Merdeka Learning Curriculum In The Form Of A Pancasila Student Profile With Global Diversity. 19(1), 115–124.*

Wardani, H. K. (2023). *The Indonesian Journal of the Social Sciences Analysis of the Impact of the Merdeka Curriculum Policy on Stakeholders at Primary School. 11(2).*

Yahya, A., & Barat, U. S. (2023). *IMPLEMENTATION OF THE MERDEKA CURRICULUM THROUGH THE APPLICATION OF THE PROJECT-BASED BLENDED LEARNING. 11(2), 273–284.*

Zidan, M. R. (2023). *A Literature Study On The Implementation Of Merdeka Curriculum. 2(2).*