



The effect of project-based learning on Social Studies learning outcomes

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ABSTRACT

Social Studies instruction in junior high schools remains dominated by conventional methods, which contribute to low student engagement and learning outcomes. Therefore, this study was conducted to provide empirical evidence on the implementation and effectiveness of Project-Based Learning (PjBL) in improving student engagement and learning outcomes in Social Studies, to describe its implementation and analyze its influence on student learning outcomes at SMP Muhammadiyah 2 Depok, Sleman. The study used a mixed-method approach with an Exploratory Sequential design. Qualitative subjects included Social Studies teachers, the principal, the vice principal, and four grade VII students, while quantitative subjects consisted of 26 grade VII B students. Data were collected through observation, interviews, documentation, and pretest and posttest, then analyzed qualitatively and quantitatively using n-gain and paired sample t-test. The results showed that PjBL was implemented systematically and effectively to improve Social Studies learning outcomes, indicated by an increase in the average value from 62.50 to 87.12 with an n-gain of 0.6671 and a significance of 0.000 (<0.05). Supporting factors include teacher readiness and student participation, while the main obstacles are time constraints and differences in student abilities.

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ABSTRAK

Pembelajaran IPS di SMP masih didominasi metode konvensional yang berdampak pada rendahnya keterlibatan dan hasil belajar murid. Oleh karena itu, alasan penelitian ini dilakukan untuk memberikan bukti empiris mengenai implementasi dan efektivitas Project-Based Learning (PjBL) dalam meningkatkan keaktifan dan hasil belajar IPS, dengan tujuan mendeskripsikan pelaksanaan PjBL serta menganalisis pengaruhnya terhadap hasil belajar murid di SMP Muhammadiyah 2 Depok Sleman. Penelitian menggunakan pendekatan mixed-method dengan desain Exploratory Sequential. Subjek kualitatif meliputi guru IPS, kepala sekolah, wakil kepala sekolah, dan empat murid kelas VII, sedangkan subjek kuantitatif terdiri atas 26 murid kelas VII B. Data dikumpulkan melalui observasi, wawancara, dokumentasi, serta tes pretest dan posttest, kemudian dianalisis secara kualitatif dan kuantitatif menggunakan n-gain dan paired sample t-test. Hasil penelitian menunjukkan bahwa PjBL dilaksanakan secara sistematis dan efektif meningkatkan hasil belajar IPS, ditunjukkan oleh peningkatan nilai rata-rata dari 62,50 menjadi 87,12 dengan n-gain 0,6671 dan signifikansi 0,000 (<0,05). Faktor pendukung meliputi kesiapan guru dan partisipasi murid, sedangkan kendala utama adalah keterbatasan waktu dan perbedaan kemampuan murid. **Kata Kunci:** hasil belajar; Ilmu Pengetahuan Sosial; implementasi PjBL; pembelajaran berbasis masalah

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INTRODUCTION

Education in the 21st century demands a fundamental transformation in the way teaching and learning are carried out. Students are no longer required to memorize information, but are expected to have critical thinking, creative, collaborative, and problem-solving skills in real-life contexts. In leading countries in educational development, including Finland, Singapore, and the United States, the education system has directed learning toward the development of 21st-century competencies, emphasizing Project-Based Learning (PjBL) and problem-solving (Iskandar et al., 2025; Shuang et al., 2023). This approach has proven effective in enhancing motivation for learning, conceptual understanding, and Higher-Order Thinking Skills (HOTS).

In response to these global developments, Indonesia's education system has undergone substantial transformation through the implementation of the Kurikulum Merdeka. This curriculum is designed to give teachers and educational units greater autonomy in designing learning activities that align with students' characteristics and the learning environment's context. Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi states that the Kurikulum Merdeka positions students as active subjects in the learning process through a student-centered approach, aiming to develop their potential optimally. In addition, this curriculum emphasizes the strengthening of the Pancasila Student Profile, which includes being faithful and devout, independent, critical thinkers, creative, and able to work together in social life (Fitra, 2023).

Despite its intended goals, the implementation of the Kurikulum Merdeka in the field continues to face several challenges. Observations and numerous studies show that most teachers remain accustomed to conventional teacher-centered learning, in which students are passive recipients of information (Anggraeni, 2024). This condition affects students' low levels of critical and collaborative thinking, as well as their lack of active engagement in the learning process. In the context of Social Studies or Ilmu Pengetahuan Sosial (IPS) learning, this problem is evident in the dominance of lecture- and memorization-based methods, which make it difficult for students to connect social concepts to issues in their surroundings. As a result, Social Studies learning outcomes across various junior high schools remain suboptimal, especially in the application of social knowledge and skills (Nasobandi, 2022).

In response to these conditions, there is a need for innovative learning models that emphasize not only knowledge but also meaningful real-world learning experiences. One relevant approach is PjBL (Wajdi, 2017). This learning model provides students with space to build knowledge through project activities focused on solving real problems in everyday life. The application of PjBL encourages students to plan, explore, formulate solutions, and present their work as observable products. This approach strengthens higher-order thinking, collaboration, and communication skills and instills responsibility in the implementation of group tasks.

Theoretically, the PjBL model is rooted in the constructivist theories of Piaget and Vygotsky, as evidenced by various scientific studies. Piaget's constructivist perspective emphasizes that knowledge is actively constructed by individuals through direct experience, enabling them to develop understanding through interactions with their environment (Mandar & Sihono, 2025). Meanwhile, research confirms that Vygotsky views learning as a social process that occurs through interaction with others, in which language and cultural context play a crucial role in students' cognitive development (Bustomi et al., 2024). In this context, the teacher serves as a facilitator, helping students build understanding through exploration and reflection.

Previous research has shown that PjBL has a positive, significant impact on student learning outcomes across various disciplines. The implementation of PjBL significantly improves student motivation and academic achievement (Barlian et al., 2022). Similarly, research has found that this learning model effectively fosters students' collaboration and critical thinking skills (Ikanubun & Pau, 2025). However, most existing research focuses on science, technology, engineering, and mathematics (STEM) subjects, while

investigations into the application of PjBL in social science education are still limited. In the Indonesian context, studies on PjBL in the social sciences have mainly emphasized its impact on learning outcomes, with less attention paid to the implementation process and its supporting and inhibiting factors, particularly within the Kurikulum Merdeka framework (Nasobandi, 2022).

In line with the limitations of previous studies, which still did not adequately examine PjBL in the context of the social sciences and the implementation of the Kurikulum Merdeka, this study is important to conduct. PjBL is seen as a learning approach that has the potential to increase student active engagement, conceptual understanding, critical thinking, and social awareness skills through contextual learning activities. However, social science learning at the junior high school level is still often dominated by conventional methods, resulting in suboptimal student participation and learning outcomes. In addition, the Kurikulum Merdeka requires student-centered learning, while the implementation of PjBL in the field continues to face various challenges. Therefore, an empirical study is needed to provide a clearer picture of the application of PjBL in social science learning. Based on this, the objectives of this study are to describe the implementation of PjBL in Social Studies learning at SMP Muhammadiyah 2 Depok Sleman, analyze its effectiveness in improving student learning outcomes, and identify the supporting and inhibiting factors in its application in the context of the Kurikulum Merdeka.

LITERATURE REVIEW

Learning

Learning is a systematic process characterized by intentional interactions between students, educators, and learning resources in an organized learning environment (Qalit et al., 2025). This includes professional facilitation provided by educators to support students in acquiring knowledge, developing skills and competencies, internalizing learning habits, and forming attitudes and beliefs that contribute to students' intellectual and character development. Therefore, learning activities or practices are designed to facilitate students' achievement of specific competencies or learning objectives (Albina & Pratama, 2025). Ideally, learning objectives reflect the knowledge, attitudes, and skills students can acquire through the learning process. Therefore, learning objectives must be formulated clearly and measurably, and aligned with the learning processes and methods used, so that the learning outcomes achieved align with the expected competencies (Alwis et al., 2024; Azani et al., 2024).

Project-Based Learning (PjBL)

PjBL is a learning approach based on John Dewey's educational philosophy that emphasizes learning centered on direct experiences closely related to students' real-life experiences (Prismawati et al., 2024). Dewey argued that effective education occurs when students actively construct knowledge through activities aligned with their interests and needs, and that involve collaboration in environments that resemble real communities. In PjBL, teachers act as facilitators, guiding students in designing and completing meaningful projects to foster critical thinking, creativity, collaboration, and problem-solving skills. Thus, PjBL helps students learn deeply through exploration, reflection, and application of concepts in real contexts (Said et al., 2025; Ridwan et al., 2022; Nugraha et al., 2023). PjBL is a learning model and method based on constructivism, in which the learning process is directed through systematic project activities oriented towards tangible results. As a model, PjBL has structured steps to guide students toward meaningful learning objectives. At the same time, as a method, PjBL provides teachers and students with opportunities to engage in exploratory, collaborative, and problem-solving activities grounded in real-world contexts (Dewi, 2023; Nababan et al., 2023).

Social Studies

Social Sciences is an integrated subject designed from various social science disciplines and packaged as simplified, engaging teaching materials tailored to students' characteristics to support the learning process in schools (Saputra et al., 2024). Social Studies is essentially the integration of several social science disciplines, drawing on material from history, sociology, anthropology, geography, economics, political science, and law. Social Studies is a fundamental subject taught at all levels of education (Susanti et al., 2025). The aim of Social Studies learning is to develop students into citizens who have the knowledge, values, attitudes, and skills needed to play an active role in democratic life. Social Studies material is selected and developed from historical and social science studies and, in some contexts, also draws on the humanities and sciences, with a learning approach that adapts to students' social characteristics, cultural experiences, and personal development.

METHODS

Research Design

This research adopts a mixed-methods, exploratory sequential design as its research framework, a study that begins with a qualitative approach and continues with a quantitative approach. This method was chosen because it was considered the most appropriate for thoroughly explaining the implementation and effectiveness of PjBL in the context of Social Studies education. A mixed-methods approach is used when researchers need quantitative data to measure phenomena and qualitative data to interpret the results. This research was conducted at SMP Muhammadiyah 2 Depok, Sleman, Daerah Istimewa Yogyakarta, in the subject of Social Studies. The research activities took place from December 2024 to August 2025, covering the stages of preparation, observation, data collection and analysis, and the preparation of the research report.

Phase 1: Qualitative Approach

The subjects of this qualitative study were Social Studies teachers, principals, vice principals, and four seventh- and eighth-grade students, selected through purposive sampling based on their involvement in the application of PjBL. Informants were deliberately selected for their relevant experience and knowledge of PjBL implementation, so that the data obtained could describe the real conditions of learning. If additional informants were needed during the research process, the researcher could use the snowball sampling technique to enrich the data and broaden the understanding of the research context.

Qualitative data were analyzed using an interactive analysis model developed by Miles and Huberman, consisting of four main stages: data collection, data reduction, data presentation, and conclusion drawing. Data collection was conducted through interviews, observations, and documentation as the primary sources of information on the implementation of PjBL. Next, in the data reduction stage, the researchers selected, focused on, simplified, and organized raw data into relevant categories and themes. The reduced data were then presented in narratives, tables, or diagrams to systematically show the relationships between the data and the patterns of findings. In the final stage, conclusions were drawn continuously through a verification process until a comprehensive understanding of PjBL implementation and the factors that supported and hindered it was obtained.

Phase 2: Quantitative Approach

In this quantitative study, sampling was conducted using cluster sampling, selecting one class, namely class VII B of SMP Muhammadiyah 2 Depok, as the population representative, as the study focused on the application of the PjBL model in classes that fully implemented this learning method. All students in class VII B were included in the study and received the same treatment, thus enabling accurate measurement of learning outcome improvement. Data collection was carried out using test instruments comprising pre- and post-tests, each consisting of 20 multiple-choice questions to measure students' understanding of Social Studies material. The pre-test was used to assess students' initial abilities before implementing PjBL. In contrast, the post-test was used to assess students' final understanding, enabling objective analysis of changes in learning outcomes.

The subsequent stage involved quantitative data analysis to assess the effectiveness of PjBL on students' learning outcomes. The learning outcome test instruments were validated through content validity by experts in Social Studies education and learning evaluation to ensure alignment with the measured competency indicators. Data were analyzed using SPSS version 25 through several analytical procedures.

RESULTS AND DISCUSSION

Implementation of PjBL in Social Studies Subjects

The results of the study conducted at SMP Muhammadiyah 2 Depok Sleman indicate that Social Studies learning has been implemented through a well-planned application of the PjBL model, presenting social issues relevant to students' real-life experiences. Social Studies teachers play an active role in designing learning activities, providing initial guidance, and assisting students throughout the project. One of the main projects is the creation of trash bins from recycled materials as a solution to environmental pollution, integrated with Social Studies materials related to environmental issues and sustainable economics. This activity enables students to go beyond understanding theory by identifying issues, designing plans, producing project outputs, and assessing their impact, thereby making the learning process more hands-on and meaningful.

PjBL at SMP Muhammadiyah 2 Depok is designed to be broadly relevant to students' daily lives and the social issues in their environment. Projects include making trash bins from used bottles, creating a wall magazine on Indonesian culture, and designing traditional food products to understand local economic potential. All projects are designed in line with the Kurikulum Merdeka and involve the entire process, from data collection and analysis to design, implementation, presentation, reflection, and evaluation. Active engagement in every stage of the learning process enables students to cultivate creativity, critical thinking, collaborative skills, and the capacity to address real-world problems in their environment.

This study is novel because the PjBL practice at SMP Muhammadiyah 2 Depok not only produces technical products such as PPTs and videos but also emphasizes the creation of two- and three-dimensional products that directly address students' social problems. Unlike previous research findings, which generally highlight PjBL as a means of increasing motivation and learning outcomes through presentational or digital-based projects, this study shows that PjBL can be applied in a more context- and problem-solving-oriented manner, yielding products with a tangible impact on the school environment and the surrounding community. This approach not only strengthens the relevance of Social Studies learning but also illustrates the implementation of the Kurikulum Merdeka, which places social problem-solving at the core of learning. By integrating environmental and local cultural issues into the model, this practice has the potential to become a reference for other schools in developing more meaningful, applicable, and community-oriented PjBL.

Based on the observations, it was apparent that the teachers carried out each stage of PjBL implementation well. The teachers provided clear guidance at each stage, from determining the basic questions to planning and scheduling the project, carrying out the activities, compiling reports and presentations, and evaluating the project results. During the process, teachers also emphasized the importance of cooperation among group members. Students appeared enthusiastic and active, especially when collecting used materials, designing, and producing products such as trash bins from recycled items. The implementation steps of PjBL at SMP Muhammadiyah 2 Depok, as adapted from the PjBL syntax, are presented as follows.



Figure 1. PjBL Syntax at SMP Muhammadiyah 2 Depok

Source: Social Studies Teaching Module, 2025. Document not published. SMP 2 Muhammadiyah, Depok.

The figure above illustrates the five main stages of the PjBL model, which serve as the foundation for implementing PjBL in Social Studies instruction. Each step plays an important role in guiding students through an active, collaborative, and product-oriented learning process. From determining fundamental questions to evaluating project results, each stage helps students think critically, solve problems, and relate Social Studies concepts to everyday situations. To make the implementation of this model more structured, the following table explains the stages of PjBL implementation in Social Studies learning based on the syntax shown in the image above.

Table 1. Syntax Stages of PjBL in Social Studies Learning

No	Stages	Description
1.	Identifying fundamental questions	Teachers pose key issues or fundamental questions related to Social Studies topics. These questions are challenging and encourage students to seek solutions through project activities.
2.	Project planning	Students and teachers design project steps, determine objectives, divide tasks, identify the tools and materials needed, and decide how to collect data to complete the project.
3.	Schedule Development	Students create a detailed schedule for project activities, including implementation times, task distribution for each member, and deadlines for each project stage.
4.	Project Implementation, Report Preparation, and Presentation	Students carry out project activities according to the plan, document the implementation process, compile reports on the results, and present the final product to teachers and friends.
5.	Project outcome evaluation	Teachers and students reflect together on the project's process and results. The evaluation covers aspects of activity, cooperation, product quality, and students' ability to relate the project to Social Studies learning materials.

Source: Research Document 2025

This PjBL model emphasizes activities oriented toward problem-solving and product creation through an investigative process. In this study, the PjBL steps were applied systematically, with several adjustments to align with the students' learning objectives and field conditions. Interviews with teachers showed that applying PjBL had a positive effect on students' attitudes and learning behavior. Students became more independent, creative, and responsible for their tasks. Teachers also assessed that the classroom atmosphere became more lively because students were directly involved in contextual activities. Meanwhile, interviews with several students revealed that they found PjBL more enjoyable and easier to understand because the material was related to real activities in their surroundings. The following is an example of a trash bin project made from used items by students in the classroom, a simple project, but one that has enormous benefits in fostering social awareness and creativity in students.



Figure 2. Project to create trash bins from recycled materials

Source: Research Document 2025

However, several obstacles were encountered during the implementation of PjBL. Some students had difficulty managing their time and dividing tasks evenly among group members. Moreover, constraints related to limited tools and project materials became inhibiting factors in the smooth conduct of the learning activities. However, teachers tried to overcome these obstacles by providing additional guidance and using readily available school materials.

The effectiveness of PjBL in improving Social Studies learning outcomes

The purpose of this study is to determine the effectiveness of PjBL in improving the Social Studies achievement of Grade VII students at SMP Muhammadiyah 2, Depok, Sleman. A one-group pretest-posttest design was applied, involving 26 students as the research subjects. The research instrument was a multiple-choice test comprising 20 questions administered at the pretest and posttest stages. Before the implementation of PjBL, the learning process was still dominated by conventional lecture and assignment methods, resulting in learning completeness of only 33.3% and an average score of around 71-72. This condition indicates the need for more active and meaningful learning innovations (Source: Recapitulation of Social Studies test scores for Grade VII B in the odd semester of the 2023/2024 academic year, Social Studies teacher at SMP Muhammadiyah 2 Depok). The following presents the pretest and posttest data for Grade VII B students at SMP Muhammadiyah 2 Depok Sleman in 2025, following the implementation of PjBL in Social Studies.

Table 2. Average Pre-test and Post-test Scores of Grade VII B

No	Mastery Level	Criteria	Frequency	
			F	%
1.	Very good	85-100	4	15.4%
2.	Good	70-84	16	61.5%
3.	Enough	60-69	6	23,1%
4.	Less	50-59	0	0
5.	Extremely poor	<49	0	0
Total			26	100%

Source: Research Document 2025

The results indicate that of the 26 respondents, 4 students attained an excellent level of mastery, 16 demonstrated good mastery, and 6 showed fair mastery. In contrast, no students were categorized as having poor or very poor mastery. Consequently, the Social Studies learning outcomes of Grade VII B students at SMP Muhammadiyah 2 Depok in the 2025-2026 academic year can be considered generally good following the implementation of PjBL. This finding suggests that PjBL has the potential to enhance student learning outcomes.

However, these learning outcomes need to be supported by more in-depth quantitative analysis to assess the extent of improvement and its statistical significance. Further analysis is needed to obtain an empirical picture of changes in student learning outcomes before and after PjBL implementation, as well as to objectively and measurably assess the effectiveness of the learning model. As a basis for drawing research conclusions, the pretest and posttest data were analyzed using a systematic statistical framework that included prerequisite analyses, descriptive statistics, measurement of learning effectiveness, and inferential hypothesis testing. To facilitate understanding of the analysis results, a summary of the overall statistical findings is presented in an integrated synthesis table. The results of the statistical analysis of the pretest and posttest of project-based Social Studies learning are presented in **Table 3**.

Table 3. Summary of statistical analysis results of the pretest and posttest of project-based Social Studies learning

Analysis Aspects	Indicator	Value	Reference Criteria	Interpretation
Analysis Requirements	Sig. Shapiro-Wilk Pretest	0.069	Sig. > 0,05	Normally distributed data
	Sig. Shapiro-Wilk Posttest	0.68	Sig. > 0,05	Normally distributed data
Learning Outcomes	Mean Pretest	62.50	Scale 0-100	Students initial abilities
	Mean Posttest	87.12	0-100	Competencies after PjBL
	Mean difference	24.61	> 0	There has been an increase in learning outcomes
Effectiveness of Learning	N-Gain	0.6671 (66.71%)	Hake (1999)	Medium category
Significance Test	Sig. (2-tailed)	0.000	P < 0,05	Significant difference
Statistical Decision	Hypothesis	Ha Accepted	-	PjBL has a significant impact.

Source: SPSS Analysis of Pre-test and Post-test of Grade VII B Students, 2025

Based on **Table 3**, the Shapiro-Wilk normality test results for the pre-test and post-test data on Social Studies learning outcomes showed p-values of 0.069 and 0.068, respectively. Both values are greater than 0.05, indicating that the pre-test and post-test data are typically distributed. Thus, the data meet the normality assumption and are suitable for parametric statistical testing in the next stage. Furthermore, descriptive statistics indicate an increase in student learning outcomes following the implementation of PjBL. The average pre-test score was 62.50, reflecting students' initial ability before instruction. After the PjBL intervention, the average post-test score increased to 87.12. The average difference between the pre-test and post-test scores of 24.61 indicates a significant increase in learning outcomes after the implementation of PjBL.

To determine the level of effectiveness of learning outcome improvement, an N-Gain analysis was conducted. The calculation results showed an N-Gain value of 0.6671, equivalent to 66.71%. Based on Hake's 1999 classification, this value falls into the medium category. These findings indicate that PjBL is effective in improving students' Social Studies learning outcomes, although the improvement has not yet reached the high category. In addition, to test the statistical significance of the improvement in learning outcomes, a paired-samples t-test was conducted on pre-test and post-test scores. The test results showed a significance value (Sig. 2-tailed) of 0.000, which is less than 0.05. This indicates a significant difference between the pre-test and post-test scores. Thus, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. Based on this analysis, it can be concluded that PjBL significantly improves students' Social Studies learning outcomes. The application of the PjBL model not only improves learning outcomes quantitatively but is also proven to be effective and statistically significant.

Supporting and Inhibiting Factors in the Implementation of PjBL

The implementation of PjBL in Social Studies at SMP Muhammadiyah 2 Depok Sleman is influenced by various supporting and inhibiting factors. Identification of these factors is necessary to understand the actual conditions of PjBL implementation in schools. A summary of the supporting and inhibiting factors for PjBL implementation is presented in the following table.

Table 4. Supporting and inhibiting factors in the implementation of PjBL

No	Types of Factors	Factors	Brief Description
1	Supporter	Kurikulum Merdeka	The curriculum is flexible, integrative, and oriented towards developing student competencies, thereby supporting the implementation of PjBL.
2	Supporter	Teacher readiness and competence	Teachers have the ability and readiness to design and implement PjBL.
3	Supporter	School support	The school provides managerial support and ensures the project's continuity.
4	Supporter	Project topic	Digital access makes it easier for teachers and students to choose relevant, context-specific project topics.
5	Supporter	Learning media	Digital learning resources enrich the information and supporting materials for project implementation.
6	Supporter	Collaboration between students	Student cooperation is going well, encouraging balanced task sharing, mutual assistance, and shared responsibility.
7	Inhibitor	Facilities and infrastructure	The availability of facilities and tools to support the project is still limited.
8	Inhibitor	Learning time	Limited learning time means that some projects have to be carried out outside of school hours.
9	Inhibitor	Project funding	The limited funds available to students hinder the optimal implementation of the project.
10	Inhibitor	Social Studies Material	Some Social Studies materials are challenging to develop into contextual projects.
11	Inhibitor	Parental support	Some parents do not yet understand the benefits of PjBL or have not given their full permission and support for project activities.

Source: Research Document 2025

Based on **Table 4**, the implementation of PjBL in Social Studies learning is supported by the flexibility of the Kurikulum Merdeka, which enables competency-based and contextual learning. The readiness and competence of teachers in designing and managing projects are important factors that support the implementation of learning, alongside the role of school management in providing supporting policies and facilities. The use of digital media and learning resources also facilitates the selection of project topics relevant to students' lives. In contrast, student collaboration runs smoothly through task sharing, cooperation, and joint responsibility in completing projects.

On the other hand, the implementation of PjBL still faces several obstacles that could affect its effectiveness. Limited facilities and infrastructure, as well as project support tools, hinder the optimal implementation of activities. In addition, limited learning time means that some project activities must be carried out outside school hours, which affects the need for additional funds and student readiness (Zhang & Ma, 2023). Obstacles also arise from the characteristics of some Social Studies materials, which are relatively complex to develop into contextual projects. Another contributing factor is the lack of optimal parental support, especially in understanding the benefits of PjBL and in granting permission for activities outside of school. Overall, these findings indicate that the success of PjBL is not only determined by the classroom learning process but is also influenced by the availability of resources, support from the school institution, and involvement of parties outside the school. Efforts to optimize supportive conditions and reduce existing obstacles are important steps to improve the effectiveness of PjBL in Social Studies education.

Discussion

The findings of this study indicate that implementing PjBL in Social Studies education has a positive impact on the quality of the learning process and student outcomes. This improvement not only reflects cognitive achievement but also demonstrates the development of critical thinking, collaboration, and problem-solving skills that arise through students' active involvement in contextual projects. This indicates that PjBL is capable of creating meaningful learning experiences because students are directly confronted with social issues relevant to their lives, making Social Studies learning no longer abstract but rather applicable and reflective.

The results of this study align with John Dewey's theory of experiential learning, which emphasizes that knowledge is constructed through direct interaction between learners and their environment (Lavado-Anguera et al., 2024; Rahmawati & Pamungkas, 2025). The implementation of PjBL in this study reinforces Dewey's view that learning is more effective when students are actively involved in real activities that reflect everyday social life. The waste management project developed in Social Studies learning allows students to relate social concepts to real-world practices, thereby deepening their conceptual understanding. Thus, PjBL not only functions as a learning strategy but also as a means of internalizing social values and environmental responsibility, which are the main objectives of Social Studies learning.

The findings of this study align with previous research showing that PjBL is effective in improving student learning outcomes, creativity, and higher-order thinking skills (Lestari, 2022; Said et al., 2025; Sari & Has, 2023). PjBL significantly improves student motivation and academic achievement (Barlian et al., 2022). This approach also significantly enhances students' collaboration abilities and self-confidence (Ikanubun & Pau, 2025; Yuliasari et al., 2025). However, unlike previous research, which generally focuses on academic products or learning media, this study emphasizes projects that address real-world social problems in students' environments (Dewi, 2023; Nababan et al., 2023). This difference in focus suggests that PjBL not only impacts academic achievement but also has the potential to strengthen students' social awareness and problem-solving skills when integrated with contextual social issues.

The success of PjBL implementation in this study was also inseparable from the role of teachers and the support of the learning environment (Al-Munawar et al., 2025; Pebriani et al., 2025). The flexibility of the Kurikulum Merdeka allowed teachers to design projects that suited students' characteristics and needs. In contrast, teachers' roles as facilitators were key to maintaining a structured, meaningful learning process. These findings align with John Dewey's view, which emphasizes the role of teachers and a supportive learning environment in the successful implementation of innovative learning models (Rahmawati & Pamungkas, 2025). However, this study also identified several obstacles, including limited time, facilities, and parental support, indicating that implementing PjBL requires systemic support to run optimally and sustainably.

CONCLUSION

Based on the analysis and research objectives, the implementation of PjBL at SMP Muhammadiyah 2 Depok followed a systematic process, including determining essential questions, project design, scheduling, project implementation, report preparation, presentation, and evaluation. These stages were adapted to students' characteristics and the school environment, making the learning process meaningful, contextual, and in accordance with the principles of the Kurikulum Merdeka. PjBL was effective in improving students' Social Studies learning outcomes. These results indicate that PjBL improves students' conceptual understanding, active engagement, and learning motivation. The supporting factors include teacher preparedness, student enthusiasm, and adequate school facilities, while the inhibiting factors

include limited time for project implementation and differences in students' group work abilities. These factors should be considered to improve future PjBL implementation.

AUTHOR'S NOTE

The author declares that there are no conflicts of interest associated with the publication of this article. The author also confirms that all data and content presented in this article are free from plagiarism. Sincere appreciation is extended to SMP Muhammadiyah 3 Depok for their support, cooperation, and the opportunity provided to conduct this research. The assistance and openness of the school, teachers, and students greatly contributed to the smooth running and success of this research.

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