

## RESEARCH ARTICLE

## The Impact of Project-Based Learning (PjBL) Implemented through the *Projek Penguatan Profil Pelajar Pancasila (P5)* Project on Students' Creativity at a Senior High School in Surabaya

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### ABSTRACT

Creativity is a crucial 21st-century skill that must be developed through innovative learning models. This study aims to analyze the impact of *Project-Based Learning* (PjBL), implemented through the *Projek Penguatan Profil Pelajar Pancasila (P5)*, on high school students' creativity in Surabaya. A mixed-method approach was employed, combining a *Systematic Literature Review* (SLR) with qualitative descriptive field research. Data were obtained from a systematic review of four peer-reviewed articles and interviews with thirteen students who had participated in the P5 program for one semester. The findings reveal that P5 implementation has the potential to enhance students' creative thinking, collaboration, and problem-solving skills. However, its execution still faces challenges, including limited facilities, insufficient teacher readiness, and lack of follow-up on project outcomes. This study emphasizes the importance of teacher preparedness and instructional design in fostering a learning environment that promotes students' creativity.

**Keywords:** Creativity, Project-Based Learning, P5

### ABSTRAK

Kreativitas merupakan keterampilan penting abad ke-21 yang perlu dikembangkan melalui model pembelajaran inovatif. Penelitian ini bertujuan untuk menganalisis dampak *Project-Based Learning* (PjBL) atau *Projek Penguatan Profil Pelajar Pancasila (P5)* terhadap kreativitas siswa SMA di Surabaya. Penelitian ini menggunakan metode campuran dengan pendekatan *Systematic Literature Review* (SLR) dan penelitian lapangan deskriptif kualitatif. Data diperoleh dari telaah sistematis terhadap empat artikel ilmiah dan wawancara dengan tiga belas siswa yang telah mengikuti program P5 selama satu semester. Hasil penelitian menunjukkan bahwa penerapan P5 berpotensi meningkatkan kemampuan berpikir kreatif, kolaboratif, dan pemecahan masalah siswa. Namun, implementasinya masih menghadapi kendala pada aspek sarana, kesiapan guru, dan tindak lanjut terhadap hasil proyek. Penelitian ini menegaskan pentingnya kesiapan guru dan desain pembelajaran dalam mendukung terciptanya lingkungan belajar yang mendorong kreativitas siswa.

**Kata kunci :** Kreativitas, Pembelajaran Berbasis Proyek, P5

### INTRODUCTION

Learning models are a fundamental element of the educational system, serving as a guide for teachers to design, implement, and evaluate instructional processes. When appropriately designed, learning models not only help achieve curriculum objectives

but also foster meaningful and engaging learning experiences that align with students' needs and the social-cultural context of the school. In modern education, instructional approaches are expected to move beyond the transmission of knowledge, focusing instead on developing 21st-century

competencies such as critical thinking, communication, collaboration, and creativity (Chasanah et al., 2025).

One of the pedagogical models proven to support these competencies is *Project-Based Learning* (PjBL). This approach positions students as active learners who construct knowledge through direct experience, exploration, and problem-solving. In Indonesia, PjBL is systematically implemented within the *Merdeka Curriculum* through the *Projek Penguatan Profil Pelajar Pancasila* (P5) or *Pancasila Student Profile Strengthening Project*. The program is designed to cultivate six key attributes of the *Pelajar Pancasila*: faith and devotion to God Almighty, global diversity, cooperation, independence, critical reasoning, and creativity. These values are nurtured through contextual and experiential learning projects that connect classroom instruction with real-life challenges (Pangestu et al., 2024).

Conceptually, P5 serves as both a character-building framework and a multidisciplinary learning platform. Through project activities, students are encouraged to link theoretical concepts to real-world applications. For instance, in environmental projects, students might investigate waste problems in their community, discuss sustainable solutions, and create tangible products such as *eco-enzymes* or *ecobricks*. Such experiences foster critical thinking, communication, and social responsibility-skills that are indispensable in the 21st century.

However, the implementation of P5 across senior high schools in Surabaya has shown mixed results. While many students perceive P5 as refreshing and engaging, others find it less meaningful due to passive and repetitive activities such as writing reports or watching videos. The lack of teacher preparedness and limited understanding of PjBL principles have led to inconsistencies in project design and execution (Hadi et al., 2025).

Additional challenges include inadequate facilities, inefficient time management, and the absence of follow-up activities that appreciate or sustain students' project outcomes. For example, student-made *eco-enzymes* and *ecobricks* are often left unused, diminishing students' motivation and sense

of accomplishment. From a psychological standpoint, students also experience affective barriers such as low confidence, fear of failure, and limited experience with collaborative learning.

Nevertheless, prior research suggests that PjBL holds significant potential for enhancing students' creativity, collaboration, and self-directed learning. (Pangestu et al., 2024) demonstrated that PjBL improved students' creative thinking in physics through hands-on experimentation and contextual problem-solving. Similarly, (Chasanah et al., 2025) emphasized that project-based learning promotes holistic growth by integrating cognitive, affective, and psychomotor domains.

Given these dynamics, this study aims to explore how the implementation of *Project-Based Learning* through the *Projek Penguatan Profil Pelajar Pancasila* (P5) influences high school students' creativity in Surabaya. The study further seeks to identify both the enabling and constraining factors affecting the program's success. By understanding these dynamics, educators and policymakers can design more effective strategies for implementing P5—not merely as a curriculum component, but as a transformative learning space that nurtures critical, creative, and humane learners.

## METHOD

### *Research Design*

This study employed a qualitative descriptive design combined with a *Systematic Literature Review* (SLR) approach. The SLR was selected to systematically identify, evaluate, and interpret previous studies relevant to the impact of *Project-Based Learning* (PjBL) on students' learning outcomes and creativity. The qualitative descriptive design was deemed appropriate because it allows for an in-depth exploration of students' experiences and perceptions that cannot be captured through numerical data. This design aligns with the study's aim to explore how the implementation of the *Projek Penguatan Profil Pelajar Pancasila* (P5) fosters creativity among high school students.

### *Participants*

Thirteen students (six male, seven female), aged 16–17 years, from a senior high school in Surabaya participated in this study. All participants had engaged in the P5 program for at least one semester during the 2024/2025 academic year. Participants were selected using *purposive sampling*, with inclusion criteria of being active in school projects, having completed a minimum of one P5 cycle, and being willing to share their experiences openly. In qualitative research, the researcher serves as the primary instrument for data collection and interpretation. Therefore, reflexivity was maintained to minimize personal bias and ensure credibility of findings.



**Figure 1.** Researcher giving instructions to participants prior to the interview session. (Field documentation, 2025).

#### Data Collection Strategy

Data were collected through semi-structured interviews and a *Systematic Literature Review*. The SLR utilized keywords such as “Project-Based Learning,” “P5,” and “creativity” to retrieve peer-reviewed articles from databases including Google Scholar and DOAJ. Inclusion criteria covered studies published between 2023–2025 that examined PjBL in secondary education. The qualitative interviews were conducted individually, lasted approximately 15–20 minutes each, and focused on students’ perceptions, challenges, and experiences in P5 implementation.

#### Data analysis

Interview data were analyzed thematically following the six-phase model of Braun and Clarke (2006): data familiarization, coding, theme identification, reviewing, defining, and reporting. The analysis was conducted manually by cross-checking coded data and validating emerging themes with participants (*member checking*) to enhance credibility. The SLR data were analyzed using descriptive synthesis to identify recurring findings and gaps across studies.

## RESULTS

### *Findings from the Systematic Literature Review (SLR)*

The *Systematic Literature Review (SLR)* analyzed five peer-reviewed articles that examined the implementation of *Project-Based Learning (PjBL)* and the *Projek Penguatan Profil Pelajar Pancasila (P5)* across various educational contexts. All selected studies met the inclusion criteria—published between 2023 and 2025, focused on secondary education, and relevant to the development of students’ creativity.

The review revealed that *Project-Based Learning* generally contributes positively to enhancing students’ creative and collaborative skills (Pangestu et al., 2024; Chasanah et al., 2025). However, several studies also highlighted persistent challenges, such as teachers’ lack of preparedness, limited school facilities, and inadequate project follow-up (Giska et al., 2025; Hadi et al., 2025).

*Table 1. Thematic Summary of Reviewed Articles*

No	Author	Year	Research Focus	Main Findings
1	Giska et al.	2025	Barriers to P5 implementation in elementary schools	Teachers unprepared; limited facilities

2	Pangestu et al.	2024	PjBL in high school physics lessons	Improved creativity and collaboration
3	Hadi et al.	2025	P5 and linguistic creativity	Promoted linguistic and social creativity
4	Chasanah et al.	2025	PjBL in Islamic Education	Enhanced integration of values and active learning
5	Present field study	2025	P5 implementation in Surabaya high school	Improved creativity limited by implementation issues

### *Findings from Qualitative Field Data*

Thematic analysis of interviews with thirteen students produced three key themes describing their experiences and perceptions regarding P5 implementation in their school.

#### *Theme 1: Limited Facilities and Teacher Preparedness*

Most students stated that P5 activities were not yet optimal due to limited facilities and insufficient teacher understanding. One participant remarked:

“The activities are good, but sometimes the teachers seem confused about what to do, so we mostly just write or watch videos.”

#### *Theme 2: Student Engagement and Learning Motivation*

Several students found project activities engaging, especially when conducted in groups. However, they felt that creativity was not fully stimulated because of repetitive or less interactive tasks.

“When we do group projects, it’s more fun and we get more ideas, but sometimes it’s just theory, so it feels boring.”

#### *Theme 3: Impact of P5 on Creativity and Collaboration*

Despite the challenges, most students agreed that P5 encouraged open thinking and teamwork skills.

“When doing the project, we learn to share tasks and come up with ideas together. It gives us more freedom to express opinions.”

These findings indicate that P5 implementation has potential for fostering creativity and collaboration, though its effectiveness remains constrained by limited support and follow-up within the school environment.

#### *Summary of Key Findings*

- a. P5 and PjBL contribute to the development of students’ creative thinking and collaborative learning.
- b. Main obstacles include limited infrastructure, lack of teacher readiness, and minimal project sustainability.
- c. Supporting factors include group collaboration, relevant project themes, and student autonomy in decision-making.

## **DISCUSSION**

The findings of this study reveal that the implementation of the *Projek Penguatan Profil Pelajar Pancasila* (P5) has not yet reached its full potential in fostering students’ creativity in high school settings. Although students acknowledged that P5 activities encouraged collaboration and creative expression, the overall effectiveness of the program remains limited by inadequate facilities, insufficient teacher readiness, and the lack of follow-up after project completion.

These results are consistent with the findings of (Giska et al., 2025) and (Hadi et al., 2025), who similarly reported that the main challenges of P5 implementation lie in the readiness of teachers and institutional support. However, unlike those studies which primarily examined P5 at the elementary level, this study contributes new insights by analyzing how such limitations manifest within



high school contexts, where academic pressures and curriculum demands are more complex.

From a pedagogical standpoint, these findings reinforce the principles of *constructivist learning theory* (Li & Wong, 2025), which emphasize that creativity and problem-solving skills emerge most effectively through authentic, contextualized experiences. The lack of meaningful, hands-on project engagement identified in this study suggests that P5 activities have yet to fully align with these constructivist principles. This misalignment may stem from the teachers' limited understanding of PjBL's philosophical foundation, causing the activities to revert to traditional, task-based instruction rather than experiential learning.

Furthermore, the study supports (Chasanah et al., 2025; Pangestu et al., 2024) who found that *Project-Based Learning* enhances students' creativity when teachers act as facilitators rather than information transmitters. The students in this study expressed greater motivation and engagement when they were given autonomy in their projects, reflecting the intrinsic link between *student agency* and creativity development (Sawyer, 2003).

The implications of these findings are twofold. First, schools need to strengthen professional development programs for teachers to deepen their pedagogical and conceptual understanding of PjBL and P5. Effective implementation requires teachers to be not only facilitators of learning but also mentors who can guide reflection and creativity. Second, institutional policies should ensure that P5 projects are not treated as extracurricular add-ons, but as integral, credit-bearing components of the curriculum that foster holistic learning.

In terms of theoretical contribution, this study fills an important knowledge gap by providing empirical evidence of how P5 functions as a hybrid form of project-based and value-based learning in the Indonesian *Merdeka Curriculum*. While prior studies have discussed its conceptual potential, this research highlights the realities of its implementation, thus contributing to the ongoing discourse on *creative pedagogy* within Southeast Asian education systems.

Overall, the findings suggest that the sustainability of P5 as a creativity-oriented model depends on a supportive ecosystem one that empowers teachers, values student expression, and integrates projects meaningfully into the curriculum. Future research may extend this study by exploring longitudinal impacts of P5 on different domains of creativity and by investigating teacher professional learning as a mediating factor.

## CONCLUSION

This study concludes that the implementation of the *Projek Penguatan Profil Pelajar Pancasila* (P5) has the potential to enhance students' creativity, collaboration, and problem-solving skills when supported by an effective pedagogical framework. However, its effectiveness in high schools remains constrained by limited facilities, teachers' insufficient readiness, and the absence of systematic project follow-up.

The findings provide empirical evidence that bridges the gap between the conceptual aims of P5 and its actual practice in the Indonesian *Merdeka Curriculum*. This study contributes new insights into how *Project-Based Learning* operates within a value-based education framework, highlighting the importance of teacher facilitation and contextual learning in nurturing creative thinking.

It is recommended that schools and policymakers strengthen teacher training programs on *Project-Based Learning* and provide continuous support systems that encourage creativity-oriented learning environments. Future research should explore longitudinal impacts of P5 implementation across different learning domains and investigate teacher professional development as a mediating factor in enhancing student creativity.

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### DECLARATION OF POTENTIAL CONFLICT OF INTEREST

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. The authors do not work for, consult, own shares in, or receive funding from any organization that would benefit from this manuscript, and have disclosed no affiliations other than those noted within the paper.

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