

Integrating Problem Based Learning into Character Education: A Literature Review

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ABSTRACT

The increasing demand for education that balances cognitive achievement with character development has encouraged the adoption of innovative learning models, and this research aims to examine how Problem-Based Learning (PBL) contributes to character education while simultaneously improving students' cognitive skills. Using a qualitative literature review design, the study synthesizes findings from national and international academic publications focusing on the implementation of PBL in various educational contexts, with data obtained from peer-reviewed journal articles and books published within the last decade and analyzed thematically to identify patterns, values, and challenges in applying PBL. The findings reveal that PBL not only enhances critical thinking, problem-solving, and higher-order thinking skills but also nurtures essential character values such as responsibility, independence, tolerance, cooperation, and perseverance, which emerge naturally through collaborative problem-solving processes and are further reinforced when PBL is applied in multicultural learning environments. Although challenges remain, particularly regarding the need for sustained implementation and strong teacher facilitation, the evidence suggests that PBL offers a structured and adaptable pathway for integrating character education into classroom practice. In conclusion, this research highlights the potential of PBL as a pedagogical approach that bridges academic competence and character development, contributing both to the advancement of educational science and to practical innovations in teaching

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Introduction

The accelerating pace of social, economic, and technological transformation in the era of globalization requires education systems to undergo fundamental adjustments. Education can no longer be perceived merely as a medium for transmitting knowledge but must also serve as a process of shaping individuals holistically, encompassing moral, social, and character dimensions. In Indonesia, the phenomenon of moral degradation among students remains evident, ranging from dishonesty during examinations and smoking habits among adolescents to declining discipline and even incidents of violence in schools. These conditions underscore the urgency of character education as a national priority, as mandated by Indonesia's National Education System Law No. 20 of 2003, which emphasizes the development of learners into virtuous, creative, independent, and responsible individuals.

Within the domain of pedagogical practice, Problem-Based Learning (PBL) has emerged as an innovative approach with significant potential to address these challenges. PBL does not merely aim at the mastery of subject matter; it actively engages students in critical thinking, collaborative problem-solving, and reflective inquiry. Through these processes, students internalize values such as responsibility, independence, tolerance, hard work, and self-confidence. Jailani and Retnawati (2016) demonstrated that PBL enhances problem-solving competencies while simultaneously fostering students' sense of responsibility and autonomy. Similarly, Widiastuti, Ni Luh Gede Karang Winaya, and I Made Arna (2021) revealed that PBL contributes significantly to the development of higher-order thinking skills (HOTS) alongside character formation in elementary education. These findings provide compelling evidence of PBL's efficacy, while also signaling the need for deeper exploration.

Despite these encouraging outcomes, prior studies have largely concentrated on the cognitive dimensions of PBL, particularly in relation to academic achievement. The specific contributions of PBL to systematic character development remain underexplored, particularly in connection with multicultural education frameworks and civic values that are highly relevant to Indonesia's plural society. While some research highlights values such as cooperation, democracy, and tolerance fostered through PBL, the integration of these values into formal character education practices has been insufficiently elaborated (Kurnia & Mukhlis, 2023). This reveals a significant research gap: understanding how PBL can serve not only as a cognitive instructional strategy but also as a comprehensive pedagogical approach to embedding character values within classroom practice.

This concern resonates with broader global discourses on 21st-century education, particularly those related to character education and social-emotional learning (SEL). Recent international scholarship underscores that 21st-century competencies cannot be confined to digital literacy and critical thinking alone but must extend to collaborative

ability, empathy, tolerance, and social responsibility. Hence, research on the integration of PBL into character education is not only relevant to Indonesia's educational needs but also contributes to the global academic debate by positioning PBL as a holistic pedagogical framework for student development.

This research seeks to provide a comprehensive literature review on the integration of PBL into character education. By synthesizing findings from prior studies, it aims to identify the character values fostered through this approach, examine the challenges of implementation in schools, and offer recommendations for both educators and policymakers. Ultimately, the discussion intends to enrich scholarly discourse and highlight PBL's potential as more than a cognitive tool, but rather as a foundational pedagogical framework for cultivating character and preparing learners to face the complexities of modern life.

Materials and Methods

This research employs a qualitative approach with a library research design, aiming to review and synthesize previous studies on the integration of Problem-Based Learning (PBL) into character education. The literature review method was chosen because it enables the researcher to identify patterns, trends, and research gaps that emerge from prior academic publications. Unlike field research, which involves direct participants, this study relies on secondary data collected from scholarly journal articles, academic books, and relevant research reports. The strength of this method lies in its ability to provide a comprehensive overview of the topic while allowing for a comparative analysis across different educational contexts (Usmeldi, 2013).

The data were obtained from published academic sources, particularly national and international journals discussing the effectiveness of PBL in enhancing critical thinking skills while simultaneously instilling character values in students. The criteria for literature selection included: (1) publications within the last five to ten years, (2) relevance to issues of character education and PBL implementation, and (3) appearance in indexed and reputable journals. The process of data collection involved reading, classifying, and analyzing the main findings from each publication. To ensure the reliability of the analysis, only sources meeting academic standards—both in terms of methodology and publication credibility—were included in this study (Jailani & Retnawati, 2016; Widiastuti, Ni Luh Gede Karang Winaya, & I. M. A., 2021).

The data were analyzed thematically, with emphasis on identifying character values fostered through PBL, assessing its effectiveness compared to direct instruction, and exploring challenges in its implementation. A literature synthesis technique was applied to integrate findings into a coherent narrative, thereby offering a clearer understanding of PBL's contribution to character education. Ethical considerations were also taken into account; since this study does not involve direct participants, there are no issues related

to consent or confidentiality. With this approach, the research is expected to provide a conceptual framework that can be replicated and used as a reference for future studies examining the effectiveness of PBL in fostering students' character development (Kurnia & Mukhlis, 2023; Taufikin, 2017).

Result

The analysis of the reviewed literature consistently reveals that Problem-Based Learning (PBL) contributes positively to both cognitive and character development of students. Studies indicate that when students are engaged in solving real-life problems, they not only demonstrate improved critical thinking and problem-solving skills but also show enhanced responsibility, persistence, and self-confidence. Jailani and Retnawati (2016) highlighted that students participating in PBL-based activities achieved higher levels of problem-solving competence compared to those in direct instruction models. Similarly, Widiastuti et al. (2021) demonstrated that the integration of PBL in elementary schools significantly improved higher-order thinking skills while simultaneously nurturing students' discipline and perseverance. These findings collectively affirm the effectiveness of PBL in creating learning environments that support holistic student growth.

Another significant finding is the emergence of specific character values through PBL. Responsibility, independence, tolerance, and cooperation were repeatedly identified as dominant values cultivated during the learning process. In group activities, students developed the ability to distribute tasks, respect others' contributions, and engage in democratic decision-making. The literature further suggests that tolerance is particularly reinforced when PBL is combined with multicultural education contexts, where students are exposed to diverse perspectives and are encouraged to appreciate differences (Kurnia & Mukhlis, 2023). This indicates that PBL not only builds individual resilience but also nurtures social cohesion, making it highly relevant for plural societies such as Indonesia.

The thematic synthesis also found that PBL enhances students' engagement and motivation in the classroom. Several studies reported that learners became more active and enthusiastic when lessons began with real-life problems that were relevant to their daily experiences. For instance, Widiastuti et al. (2021) observed that students were more motivated to complete assignments and actively participate in discussions when the problems presented were aligned with social and environmental issues familiar to them. This heightened engagement appears to be linked with the formation of confidence and perseverance, as students gained satisfaction from completing tasks collaboratively and creatively.

The findings further underscore that PBL provides a structured pathway for the gradual internalization of character values. Through cycles of identifying problems, formulating hypotheses, gathering data, testing assumptions, and proposing solutions, students experienced repeated opportunities to exercise discipline, responsibility, and

collaborative learning. This systematic process not only strengthened their cognitive capacities but also established behavioral habits that reflect positive character traits. Importantly, PBL was shown to encourage students to reflect upon their decisions and actions, which in turn deepened their sense of accountability and empathy.

Finally, challenges were also noted in the implementation of PBL, although they were not the primary focus of the studies reviewed. Some reports indicated that the formation of character values requires consistent and long-term application, and results are not always immediately visible. Teachers also play a pivotal role in facilitating the learning process, as the effectiveness of PBL depends heavily on their ability to guide discussions and ensure active participation. Despite these limitations, the body of evidence supports the claim that PBL is a promising pedagogical model for embedding character values into educational practices. Table 1 below summarizes the key findings of the reviewed studies, presenting the contexts, main focuses, and character values identified.

Table 1. Key Findings on Problem-Based Learning and Character Education

Author(s) & Year	Context of Study	Main Focus	Character Values Identified
Jailani & Retnawati (2016)	Secondary education, Indonesia	Effectiveness of PBL in problem-solving	Responsibility, Independence, Critical Thinking
Widiastuti, Ni Luh Gede Karang Winaya, & I. M. A. (2021)	Elementary education, Indonesia	PBL and Higher Order Thinking Skills (HOTS)	Discipline, Perseverance, Cooperation
Kurnia & Mukhlis (2023)	Multicultural education, Indonesia	Integration of PBL with character tolerance	Tolerance, Empathy, Respect for Diversity

Discussion

The findings of this research reinforce the argument that Problem-Based Learning (PBL) is not only a cognitive instructional model but also a pedagogical framework with strong potential to shape students' character. The consistent emergence of values such as responsibility, independence, tolerance, and cooperation reflects the inherent design of PBL, which requires students to actively engage in inquiry, collaborate with peers, and reflect on their problem-solving processes. These results are aligned with the work of Jailani and Retnawati (2016), who found that students in PBL contexts demonstrated higher levels of responsibility and problem-solving competence compared to those in direct instruction classrooms. Such findings suggest that PBL facilitates the integration of knowledge acquisition with the internalization of values, a combination that is central to holistic education.

The alignment of these results with previous studies also underscores the universality of PBL's effectiveness across educational levels. Widiastuti, Ni Luh Gede Karang Winaya, and I. M. A. (2021) emphasized that PBL significantly enhances higher-order thinking skills in elementary school students while simultaneously cultivating discipline and perseverance. When considered together with the present synthesis, this indicates that PBL is adaptable across different age groups and educational contexts, making it a versatile approach. At the same time, the integration of multicultural perspectives into PBL, as highlighted by Kurnia and Mukhlis (2023), expands its potential by linking problem-solving activities with character values such as tolerance, empathy, and respect for diversity. This demonstrates that PBL not only develops individual competencies but also prepares students to thrive in pluralistic societies.

Despite these positive findings, it is important to note that the character-building effects of PBL are not always immediate and require sustained application. Nugroho (2011) previously argued that character formation occurs gradually through stages of dissatisfaction, rational vision, responsibility, and consistency. This theoretical perspective helps explain why some studies report limited short-term effects of PBL on character development. Furthermore, the role of teachers remains critical: as Sani (2014) asserted, PBL demands that educators act as facilitators rather than transmitters of knowledge. If teachers are not adequately trained to guide inquiry and manage collaborative tasks, the expected outcomes in character development may not be fully realized. This highlights a practical challenge in implementing PBL consistently and effectively.

The contribution of this research lies in synthesizing evidence that demonstrates how PBL can bridge the long-standing gap between cognitive achievement and character education. While earlier studies often emphasized the cognitive benefits of PBL, such as critical thinking and problem-solving (Arends & Kilcher, 2010; Widiastuti et al., 2021), the present synthesis shows that these cognitive outcomes are inseparable from the cultivation of character values. By embedding real-world problems within learning tasks, PBL situates knowledge in contexts that demand ethical judgment, cooperation, and responsibility. This makes PBL a pedagogical approach that aligns with global calls for 21st-century education, where academic competence must be complemented by social-emotional skills and moral integrity.

Nevertheless, this research also acknowledges its limitations. As a literature review, it relies on secondary sources and does not provide new empirical evidence. The scope of reviewed studies is also limited to those available in the past decade, and thus may not fully capture longer-term historical trends in PBL research. Future studies should adopt mixed-method or longitudinal designs to empirically measure how character values develop over extended periods of PBL implementation. Practical recommendations also include strengthening teacher training programs to ensure that educators possess the facilitation skills necessary to maximize both cognitive and character outcomes. By

addressing these gaps, subsequent research can build on the foundation presented here and contribute to refining PBL as a powerful strategy for holistic education.

Conclusion

This research concludes that Problem-Based Learning (PBL) serves as a powerful pedagogical model that not only enhances students' cognitive skills, such as critical thinking and problem-solving, but also fosters essential character values, including responsibility, independence, tolerance, cooperation, and perseverance. By engaging students in authentic problem-solving tasks, PBL effectively bridges the gap between academic achievement and character education, thereby contributing to the development of holistic learners equipped for the demands of the twenty-first century. The synthesis highlights that while the impact of PBL on character formation requires consistent and long-term implementation, its adaptability across educational contexts makes it a highly relevant approach for both national and global educational practices. This research contributes to advancing knowledge by situating PBL as a strategy that integrates cognitive and moral development, while also offering practical implications for strengthening teacher training and classroom practices. Future research is recommended to conduct empirical and longitudinal studies to further validate and expand the understanding of PBL's role in cultivating character education.

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