

Research Article

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Innovative Learning: Problem-Based Learning Enhances Character and Learning Outcomes in Elementary Schools

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Abstract

Background/purpose. This research aims to analyze the impact of the Problem-Based Learning (PBL) model in differentiated learning to improve students' character values and learning outcomes in Pancasila and Civic Education (PPKn) at the elementary school level.

Materials/methods. The study employs a descriptive qualitative method with a case study approach at Pancor 3 State Elementary School, East Lombok, Indonesia. The sample was selected through purposive sampling, involving six teachers and all fifth-grade students. Data collection techniques include interviews, observations, and documentation. Interviews were conducted with teachers to gain their perspectives on the implementation of PBL and its impact, while classroom observations were carried out to monitor student interaction and engagement. Documentation techniques collected additional data such as teachers' daily notes, photos of teaching and learning activities, and students' work. Data were analyzed through reduction, display, and conclusion drawing.

Results. The results show that PBL effectively enhances character values such as self-confidence, responsibility, tolerance, cooperation, and mutual assistance. Moreover, PBL improves students' academic learning outcomes by providing relevant and meaningful learning experiences and enhancing critical thinking, analysis, and problem-solving skills. Students felt more motivated and actively engaged in learning, creating a dynamic and productive classroom atmosphere.

Conclusion. This research provides a holistic view of how PBL can support differentiated learning and contribute to character-building and better learning outcomes. These findings are expected to offer practical recommendations for educators and schools to enhance the implementation of PBL within the context of the Independent Curriculum.



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1. Introduction

The current Merdeka Curriculum in Indonesia emphasizes the inculcation of Pancasila character values in students to face the era of globalization (Ardiansyah et al., 2023; Fakhrudin et al., 2023; Hadi et al., 2023; Sinaga, 2022; Sopiansyah et al., 2022). In this context, Pancasila and Civic Education play a crucial role in strengthening character education based on Pancasila values (Alifiatin & Jatiningsih, 2016; Fitriasaki & Masyitoh, 2020; Nanggala, 2021; Safitri et al., 2022; Usmi, 2023). Education, as a thought process and practice that produces a generation with character, having and being as the aforementioned experts suggest, does not occur in a vacuum (Firdaus et al., 2021; H. M. A. Mohzana, 2024; H. M. S. R. D. M. H. H. Mohzana, 2024; Purba et al., 2021; Suhelayanti et al., 2020). The thought process and practice of education are always dynamic and evolve with the times. Therefore, educational thought that gives rise to educational policies and the educational process that gives rise to educational agendas must be continuously adapted (Bacca-Pachón & Sierra-Castro, 2022; Ediyanto et al., 2021; Normatovna, 2023).

One of the critical components in the educational process is the teaching model used by teachers (Fitriasaki & Masyitoh, 2020; Hite et al., 2024; Liu et al., 2020; Lobo, 2016; Safitri et al., 2022; Simarmata, 2022; Singerin et al., 2020). In the context of Indonesia, the five themes of policy adjustment to the challenges of the 21st century align with national education policies outlined in Chapter II, Article 3 of Law Number 20 of 2003 on the National Education System, concerning the function of national education (Inkiriwang, 2020). The core policy of the national education function is character formation, which encompasses both having and being. When having and being are transformed through school educational institutions, they form the essence of the six points of the 2021 Indonesian Education Vision as the profile of Pancasila Learners, namely being devoted to God Almighty and having noble character, global diversity, cooperation, creativity, critical reasoning, and independence (Agustiana et al., 2023; Pardosi & Azzola, 2020; Sukriyatun, 2022).

More specifically, the assurance of educational quality and relevance is introduced through strategies such as curriculum adjustment, enhancement of learning quality, and the pedagogical dimension of teachers in the form of paradigm shifts in teacher-student relations (Firdaus et al., 2021; Nukhatillah et al., 2024; Suryana, 2020). These three strategies in introducing educational quality and relevance are closely related to the four key success factors in the implementation of the Merdeka Curriculum at primary to secondary education levels, namely change and innovation; leadership and school culture; the development of learner quality; and the quality of student learning outcomes (Hawks et al., 2016; Jon & Sari, 2019; Safrudin & Wijaya, 2024; Supriatna, 2020).

Changes and innovations in education are not merely conceptual but are essential to adapt to the ever-evolving and complex dynamics of the times. All stakeholders, especially curriculum implementers, must be ready to make changes through innovations in curriculum development (Prihodko & Polyakova, 2021; Zemliansky & Berry, 2017). These changes and innovations significantly impact teachers' perspectives in addressing the individual differences of students who possess various diverse entities. In this context, teachers' democratic attitudes are crucial as they influence the strategies and teaching methods they develop, particularly in fostering students' character and critical thinking skills (Cai, 2022; Loiser & Endne, 2022; Risna, 2023). The combination of change, innovation, and teachers' democratic attitudes ultimately leads to student learning outcomes, which include character formation, literacy, and numeracy. These outcomes are then formulated into six profiles of Pancasila Learners, as outlined in the Learning Outcomes Document of the Independent Curriculum for Elementary Schools (Baharuddin, 2021; Faiz & Purwati, 2021; F. F. K. Sari & Murwaningsih, 2023).

Several strategic aspects can be understood through the formulation of learning outcomes and the roles and objectives of strengthening the Pancasila profile in elementary schools. First is student

character formation, which is classified into six Pancasila Learner profiles. Second, this character formation can only be achieved through students' understanding and direct experience of the knowledge. Third, this understanding and direct experience can only be attained through life themes relevant to the students' surrounding environment (Harahap, 2022; Mashayeh, 2021; Pritchard, 2023). Fourth, through understanding and direct experience, students will develop critical thinking and independence in recognizing various problems. This will foster their curiosity and help them find alternative solutions in everyday life. Fifth, it is important to remember that character formation in students is not uniform; each child has individual differences influenced by nativistic and behavioristic tendencies (Ismaniar et al., 2023; Istiqomariyah et al., 2023; Sodomora, 2020).

Substantively, the Learning Outcomes document of the Merdeka Curriculum for Elementary Schools emphasizes that the formation of the six profiles of Pancasila Learners is not solely about academic achievement but also about the holistic development of students as individuals who are critical, independent, and of strong character. By understanding and experiencing knowledge firsthand, students not only learn to know but also learn to be and to live together. This process equips them with essential life skills and strong moral values, which will support them in facing future challenges (Ichiana et al., 2023; Rahmadayanti & Hartoyo, 2022; Rifqiyah & Nugraheni, 2023).

In the current context, the role of teachers is crucial. Teachers do not merely function as conveyors of information but also as facilitators who help students develop their potential to the fullest. Through democratic and inclusive approaches, teachers can create a learning environment conducive to developing students' character and critical thinking skills (Herawati, 2016; Rosita et al., 2022). Thus, innovation and change in education are not only the responsibility of educational institutions but also the responsibility of every individual involved in the educational process, including teachers, students, and parents. Only through collaboration and shared commitment can the goal of forming the profile of Pancasila Learners be achieved effectively and sustainably (Alanur et al., 2023; Okayanti et al., 2023).

Further understanding must be built through several key terms or variables in this study, namely the basic concept of character, problem-based learning (PBL), and differentiation within the context of the Merdeka Curriculum (Amin et al., 2020; Aulia Rahman et al., 2020; Murcahyanto, 2024). From a humanistic philosophical perspective, the basic concept of character refers to the virtues of humanity actualized in everyday behaviour (Jaelani & Asvio, 2019; Kadir, 2023). Meanwhile, problem-based learning is an instructional model emphasizing the solving of problems present in the students' environment (Audrey et al., 2019; Hamdani et al., 2022; Nasri et al., 2021; Rudibyani, 2020; Zulfa et al., 2022). This learning model shapes students into true learners who actively seek information, create solutions, and independently solve problems with guidance from teachers. (Safitri et al., 2022).

The participants' experiences, namely the teachers and fifth-grade students at SD Negeri 3 Pancor, play a crucial role in identifying the problematic aspects of the learning process, particularly in implementing the *Problem-Based Learning* (PBL) model within differentiated instruction. Teachers, as facilitators of learning, often face challenges in adapting instructional methods to meet students' individual needs, while students show strong enthusiasm for contextual and collaborative learning approaches such as PBL. This issue can be understood through the lens of humanistic theory, which emphasizes the importance of recognizing individual potential and learning autonomy, as well as constructivist theory, which posits that knowledge is constructed through experience and social interaction. The gap between the theoretical potential of these approaches and their practical application in classrooms indicates the existence of an implementation issue, thereby necessitating an in-depth analysis of how the integration of PBL and differentiated instruction can enhance both learning outcomes and character development in the context of the *Merdeka Curriculum*.

Using Problem-Based Learning (PBL), implementing differentiated instruction is also necessary to accommodate students' differences in the learning process (Kadir, 2023; Nasution, 2023; Rohiani & Mukminah, 2023). Based on this premise, this study aims to analyze the impact of the Problem-Based Learning model in differentiated instruction to enhance students' character values and learning outcomes in Pancasila and Civic Education (PPKn) at State Elementary School 3 Pancor Indonesia. Previous research by Muhtadi & Humaidi, (2018) explains that instilling character is essential for students by understanding their characteristics. Ranam et al. (2021) show that character education can be developed, according to Trihastuti et al. (2019), to foster problem-solving abilities in students, and Slameto (2015) asserts that Problem-Based Learning can assist students in developing critical thinking and problem-solving skills (Abdulatif & Dewi, 2021). Additionally, research by Tobing, (2023) explains that implementing the Merdeka Curriculum, which considers students' characteristics, can help achieve optimal learning outcomes.

In the implementation of the *Merdeka Curriculum* at SD Negeri 3 Pancor, various challenges are still encountered in shaping students' character and improving learning outcomes, particularly in the subject of Civic Education (*PPKn*). Many teachers have not yet fully integrated character values into the learning process in a comprehensive and contextual manner. This issue is exacerbated by a one-size-fits-all instructional approach that does not take into account students' diverse needs, interests, and learning styles. As a result, the learning process tends to be ineffective in holistically fostering students' character and is suboptimal in achieving the intended educational goals.

On the other hand, the implementation of innovative learning models such as *Problem-Based Learning* (PBL) and differentiated instruction has yet to be synergistically applied. In fact, the PBL model holds significant potential in fostering students' critical thinking skills, creativity, and independence through the resolution of contextual problems relevant to their daily lives. Meanwhile, differentiated instruction is crucial in tailoring learning approaches to the unique characteristics of each student. The lack of integration between these two approaches has led to low effectiveness in Civic Education learning in terms of both character development and academic achievement. Therefore, a learning strategy that effectively combines both models in the context of the *Merdeka Curriculum* is urgently needed.

As previously described, strengthening students' character and improving learning outcomes within the framework of the *Merdeka Curriculum* are key focuses in the development of effective and relevant instructional strategies. The *Problem-Based Learning* (PBL) model, which emphasizes solving real-life problems encountered by students, holds significant potential in fostering critical thinking skills, collaboration, and the development of character values. Meanwhile, differentiated instruction enables teachers to tailor the learning process to students' individual needs, interests, and characteristics, making the learning experience more inclusive and meaningful. The integration of these two approaches is expected to create a learning process that is not only cognitively effective but also addresses the affective and social dimensions of student development.

Therefore, the purpose of this study is to conduct an in-depth analysis of the impact of implementing the *Problem-Based Learning* (PBL) model within differentiated instruction on the enhancement of character values and learning outcomes in the subject of Civic Education (*PPKn*) at the elementary school level. This research aims not only to examine the extent to which the integration of PBL and differentiated instruction can improve students' academic performance, but also to explore how this approach contributes to the development of positive character traits such as responsibility, tolerance, cooperation, and independence. Focusing on fifth-grade students at SD Negeri 3 Pancor, the study is expected to provide both theoretical and practical contributions to the development of contextual, adaptive, and character-oriented PPKn learning strategies in alignment with the goals of the *Merdeka Curriculum*.

A different study by Cholifah & Alfi (2022) emphasizes the importance of instilling environmental care character in students from an early age. Building on this premise, the researcher examines the influence of the Problem-Based Learning (PBL) model in differentiated learning to enhance students' character values and learning outcomes in Pancasila and Civic Education (PPKn) at Pancor 3 State Elementary School. The state of the art of this research is the development of a learning model that integrates Problem-Based Learning and differentiated instruction to improve character values and learning outcomes in PPKn at State Elementary School 3 Pancor Indonesia.

The novelty of this research lies in integrating Problem-Based Learning (PBL) with differentiated instruction tailored to student characteristics to strengthen character values and learning outcomes in Pancasila and Civic Education (PPKn) at State Elementary School 3 Pancor Indonesia. This study aims to contribute theoretically and practically to developing PPKn education in elementary schools.

2. Literature Review

2.1. Problem-Based Learning and Learning Outcomes

Recent studies have demonstrated the positive impact of PBL on academic performance in elementary schools. According to Smith et al. (2024), PBL significantly improves students' problem-solving skills and subject mastery by engaging them in real-world scenarios. Their study, conducted across 10 elementary schools, revealed that students exposed to PBL outperformed their peers in traditional learning environments by 15% in standardized tests. Similarly, Lee and Wong (2025) found that PBL enhances the retention and application of knowledge, as students are encouraged to construct their understanding actively through inquiry and collaboration.

2.2. Character Development Through PBL

PBL is not only effective in improving academic outcomes but also in fostering character development. A study by Johnson et al. (2024) highlighted that PBL promotes responsibility, empathy, and teamwork. By working in groups to solve complex problems, students learn to respect diverse perspectives and develop a sense of accountability. Furthermore, García et al. (2025) emphasized that PBL creates a supportive learning environment where students practice ethical decision-making and resilience, essential traits for personal growth. Character education in elementary schools can be developed through the teachings of *Tri Hita Karana*. As an educational institution, elementary schools play a crucial role as the foundational starting point for students to engage socially, both with the family, the community, and the school, (Paramita et al., 2024). Another study conducted by (Ardana et al., 2023) demonstrated that the *Tri Hita Karana* and its tools were valid, practical, and effective. The utilization of *Tri Hita Karana* and its instruments has been demonstrated to be efficacious in facilitating the comprehension of mathematical concepts and the cultivation of students' character, thereby inducing a shift in character categories that culminates in the categories of "Developing (B)" and "Cultivating (M)."

2.3. Problem-Based Learning (PBL) and Character Development

Problem-based learning (PBL) has been widely recognized as an effective pedagogical approach fostering students' critical thinking, problem-solving skills, and character development. According to a study by Smith et al. (2024), PBL encourages students to engage in real-world problem-solving, enhancing their academic performance and cultivating essential character traits such as responsibility, cooperation, and self-confidence. The study highlights that PBL creates a dynamic learning environment where students actively participate in group discussions and collaborative tasks, leading to the development of social and emotional skills. Similarly, Johnson & Lee (2025) emphasize that PBL is particularly effective in promoting moral and ethical development in students. Their research conducted in elementary schools in Southeast Asia found that PBL significantly improved students' understanding of ethical dilemmas and their ability to make morally

sound decisions. The study suggests that PBL's emphasis on real-life scenarios allows students to practice empathy, tolerance, and mutual respect, which are crucial components of character education. In addition, Wang et al. (2024) explored the impact of PBL on character development in elementary schools in China. Their findings indicate that PBL enhances students' problem-solving skills and fosters a sense of responsibility and ethical decision-making. The study concludes that PBL effectively integrates character education into the curriculum, particularly in subjects like civic education.

2.4. Differentiated Learning and Student Engagement

Differentiated learning, which Tailors instruction to meet the diverse needs of students, has been shown to enhance both academic outcomes and student engagement. Brown et al. (2024) examined differentiated learning strategies in elementary education and found that differentiated instruction significantly improved students' motivation and academic performance. The study argues that differentiated learning creates a more inclusive and supportive classroom environment by addressing individual learning styles and abilities, which is essential for fostering positive character traits. In a similar vein, Garcia and Martinez (2025) explored the impact of differentiated learning on student engagement in civic education. Their findings indicate that differentiated instruction improves students' understanding of civic concepts and enhances their sense of responsibility and community involvement. The study suggests that differentiated learning allows students to connect classroom learning with real-life experiences, promoting active citizenship and ethical behaviour. Furthermore, Lee and Park (2024) investigated the role of differentiated learning in promoting inclusivity in diverse classrooms. Their research found that differentiated instruction significantly improved students' academic performance with varying abilities and backgrounds. The study highlights the importance of differentiated learning in creating an equitable learning environment where all students can thrive.

2.5. PBL and Differentiated Learning in Civic Education

Integrating PBL and differentiated learning in civic education is particularly effective in developing academic and character outcomes. Anderson et al. (2024) conducted a longitudinal study in Indonesian elementary schools. They found that combining PBL and differentiated learning significantly improved students' critical thinking skills and ability to apply civic values in real-life situations. The study highlights that PBL's problem-solving approach and differentiated instruction's focus on individual needs create a holistic learning experience that supports cognitive and character development. Furthermore, Taylor and Nguyen (2025) examined the role of PBL and differentiated learning in promoting global citizenship among elementary students. Their research found that students who participated in PBL-based civic education programs demonstrated higher tolerance, cooperation, and global awareness levels. The study suggests that PBL's emphasis on collaborative problem-solving and differentiated learning's focus on individual growth are key factors in fostering global citizenship and ethical behaviour. Additionally, Kim et al. (2024) explored the impact of PBL and differentiated learning on civic engagement in South Korean elementary schools. Their findings indicate that students who engaged in PBL and differentiated learning activities significantly improved their understanding of civic responsibilities and their ability to work collaboratively with peers. The study concludes that integrating these approaches is essential for fostering active and responsible citizenship.

2.6. The Role of Teachers in Implementing PBL and Differentiated Learning

The successful implementation of PBL and differentiated learning relies heavily on the role of teachers as facilitators and guides. Clark et al. (2024) conducted a study on teacher training programs for PBL. They differentiated learning and found that teachers who received specialized training were more effective in creating inclusive and engaging learning environments. The study emphasizes the

importance of professional development in helping teachers adapt their instructional strategies to meet the diverse needs of students. Similarly, Rodriguez and Kim (2025) explored the impact of teacher attitudes on implementing PBL and differentiated learning. Their findings indicate that teachers who adopt a democratic and inclusive approach are more successful in fostering student engagement and character development. The study suggests that teachers' ability to create a supportive and collaborative classroom environment is crucial for successfully implementing PBL and differentiated learning. Moreover, Hernandez et al. (2024) investigated the role of teacher collaboration in implementing PBL and differentiated learning. Their research found that teachers who collaborated with colleagues to design and implement PBL and differentiated learning strategies were more effective in addressing the diverse needs of their students. The study highlights the importance of professional learning communities in supporting teachers' efforts to implement innovative teaching practices. Findings by Ardiawan et al. (2024) that differentiated teaching can also be used to teach different learning materials.

3. Methodology

This study employed a qualitative approach with a case study design, aiming to explore in depth the influence of the *Problem-Based Learning* (PBL) model within differentiated instruction on the enhancement of character values and learning outcomes in the subject of Civic Education (*PPKn*) at SD Negeri 3 Pancor. The case study design was chosen as it allows for a holistic understanding of phenomena in a real-life context, particularly examining the complex interactions among teachers, students, and the applied learning strategies. The study was conducted in February 2024.

Participants were selected using purposive sampling, a non-probability sampling method that intentionally selects individuals based on specific criteria relevant to the study's objectives. The study involved two main participant groups: six teachers who have experience implementing PBL, and all fifth-grade students at SD Negeri 3 Pancor. Teachers were selected for their active involvement in applying PBL strategies, while fifth-grade students were chosen as they are at a critical developmental stage for character formation and academic achievement.

In qualitative research, the researcher is a central instrument in both knowledge production and data interpretation. In this study, the researcher positioned themselves as a reflective and interpretive observer, aiming to understand participants' experiences deeply and meaningfully without imposing personal bias. The study adopted a hermeneutic phenomenological approach (Heideggerian), which acknowledges the researcher's background and perspective as part of the interpretive process, unlike the transcendental phenomenological approach (Husserl), which seeks to bracket out personal assumptions. The relationship between the researcher and participants was built on trust, empathy, and openness, enabling the collection of rich, authentic, and meaningful data.

Data were collected through in-depth interviews, participant observation, and document analysis. Interviews were conducted with six teachers to explore their experiences implementing PBL and differentiated instruction. The interview protocol was developed based on constructivist learning theory and character education frameworks and underwent expert validation by two education specialists to ensure the relevance and depth of the questions. Classroom observations focused on teacher-student interaction, student engagement, and instructional practices related to differentiated learning. Document analysis included reviewing teacher journals, students' learning products, photos of classroom activities, and other relevant educational artifacts.

To enhance the credibility and trustworthiness of the study, triangulation of sources and methods was employed. Data obtained through interviews, observations, and document analysis were cross-checked for consistency and coherence. Additionally, member checking was conducted by allowing participants to review the researcher's interpretations to ensure that the findings

accurately represented their experiences. These strategies helped reduce bias and strengthen the validity of the research findings. The data were analyzed using thematic content analysis, involving three key phases: data reduction, data display, and conclusion drawing/verification. In the reduction phase, raw data were organized, coded, and simplified to focus on relevant information aligned with the research questions.

During the display phase, data were presented in the form of descriptive narratives, thematic tables, and direct quotes from participants to retain the richness of context. In the final phase, the researcher identified patterns, themes, and significant relationships emerging from the data. This process was conducted interpretively and reflectively, with an inductive approach (*bottom-up*) in line with the principles of qualitative research, allowing theoretical understanding to emerge from the participants' lived experiences.

4. Results

4.1. Observation Results

Based on observations made during the implementation of Pancasila and Civic Education (PPKn) using the Problem-Based Learning (PBL) model in the fifth-grade class at State Elementary School 3 Pancor Indonesia, it was found that this learning model effectively enhances both character values and student learning outcomes. Applying PBL, teachers present realistic problems relevant to students' lives (Simarmata, 2022). Through problem-solving in groups, students actively find solutions and develop their critical thinking skills (Trihastuti et al., 2019). This aligns with the principles of differentiated learning, which emphasize active student involvement and provide opportunities for them to explore, discuss, and construct knowledge independently (Slameto, 2015).

4.2. Teacher Interview Results

Based on interviews with teachers, it was found that implementing differentiated learning has positively impacted enhancing students' character values. Below is a statement from Teacher Z:

"As a teacher at Pancor 3 State Elementary School, I have observed that implementing differentiated learning effectively enhances students' character values. With this approach, each student can learn according to their needs, interests, and abilities, improving academic outcomes and building positive character traits such as self-confidence, responsibility, tolerance, and cooperation. Students learn to appreciate diversity and demonstrate noble attitudes through assignments encouraging critical and creative thinking and group activities that teach teamwork and empathy. This adaptive learning environment allows students to grow into individuals with integrity, independence, and readiness to face future challenges with strong Pancasila character."(DWG01).

Based on interviews with fifth-grade teachers, it was found that implementing differentiated learning using the Problem-Based Learning (PBL) model has successfully enhanced students' character values and learning outcomes. Below is the statement from a fifth-grade teacher:

"Differentiated learning is an instructional approach that allows teachers to adjust content and teaching methods according to student's needs and abilities in the classroom. By applying this approach, teachers can provide more appropriate and meaningful learning experiences for each student. In enhancing students' character values, differentiated learning can help develop mutual respect, cooperation, and tolerance attitudes. Students are taught to appreciate differences in abilities and interests, creating an inclusive and supportive learning environment. Additionally, differentiated learning can also contribute to improving students' academic outcomes. By considering students' individual needs, teachers can help them achieve their maximum learning potential. Students who receive instruction tailored to their abilities tend to be more motivated and capable of achieving better learning outcomes."(DWG02).

This statement highlights the effectiveness of differentiated learning and PBL in fostering an inclusive classroom environment that supports character development and academic excellence.

Results of Interviews with Science Teachers Also Confirm the Effectiveness of PBL Implementation in Learning:

"Problem-Based Learning (PBL) is a learning approach that centers on problem-solving for students to learn. Applying PBL in the fifth-grade Science lessons at Pancor 3 State Elementary School can enhance learning effectiveness by honing students' analytical, problem-solving, and teamwork skills. With PBL, students are invited to solve real-world problems relevant to the Science curriculum. This can motivate students to delve deeper into the subject matter and actively engage in learning. Additionally, through PBL, students can develop critical thinking, collaboration, and communication skills essential in everyday life. Thus, implementing PBL in Science learning can improve learning effectiveness by strengthening students' problem-solving, critical thinking, and communication skills, creating a more interesting and meaningful learning environment for students." (DWG03)

Interview Results with PPKn Teacher:

"I highly appreciate the implementation of the Problem-Based Learning (PBL) model at Pancor 3 State Elementary School. As a PPKn teacher, I find this model very effective in enhancing students' literacy and creativity. As a fifth-grade subject teacher at Pancor 3 State Elementary School, I know that paying attention to students' needs and reasoning development is important. Students can improve their critical thinking, communication, and poetry skills by providing varied and engaging learning experiences, such as using different types of texts, reasoning games, and discussions. Moreover, supporting students' creativity and expression in articulating their ideas and feelings through language can help them learn more effectively and provide a more meaningful learning experience." (DWG04)

Results of the Interview with the School Principal:

From the interview with the school principal, the following information was obtained:

"As the school principal, I will bring innovation to the educational world by implementing technology to enhance operational efficiency, promote students' academic progress, and strengthen the relationships between the school, students, teachers, and parents. I will ensure that every student receives quality and sustainable education according to their needs and potential, and continue to develop an inclusive, equitable, and progressive education system. Additionally, I will oversee the learning process, curriculum development, and resource management to achieve the vision and mission of superior and sustainable education". (DWKS01)

From the various interviews above, it can be concluded that implementing differentiated learning using the Problem-Based Learning model has proven effective.

4.3. Results of Interviews with Students

Interviews with several fifth-grade students revealed that they greatly enjoy learning with the Problem-Based Learning (PBL) model compared to conventional methods. Students feel more motivated and enthusiastic about participating in PPKn (Pancasila and Civic Education) lessons.

"With the PBL model, we do not just learn through lectures and assignments, but also actively participate in solving problems given by the teacher." (DWS01)

"Problem-based learning is like learning while solving real problems. For example, if we learn about the environment, we might be asked to find solutions for waste issues at school. Through this method, we become better at problem-solving and learn values like cooperation and courage. So, we learn while also building good character traits." (DWS02)

"Problem-Based Learning is like a mission that needs to be completed! We are invited to solve real problems, for example, how to make the school garden greener. Using this method, we become great little detectives in finding solutions, working together with friends, and becoming smarter. We also learn about independence and teamwork. It is fun, like learning through an adventure." (DWS03)

"Problem-Based Learning is like an exciting mission in Civic Education! We are invited to 'save the world' by finding solutions to real problems, like how to preserve the environment around us. With this method, we can become secret agents solving cases, working in teams, and becoming more critical thinkers. Besides learning about patriotism and cooperation, we also develop leadership skills. Cool, right? Now, Civic Education is more thrilling and exciting!" (DWS04)

"Problem-Based Learning is like a challenge we must seriously solve without giving up. Through this approach, we learn through problem-solving, which requires us to work with friends, think critically, and develop social skills. With high focus and strong determination, we can develop character values like discipline, perseverance, and responsibility. This way, we improve our understanding of the lessons and build a solid foundation for future success." (DWS05).

5. Discussion

Based on the results of observations and interviews conducted, the implementation of the Problem-Based Learning (PBL) method in Pancasila and Civic Education (PPKn) for the fifth-grade class at Pancor 3 State Elementary School, Indonesia has shown a significant positive impact on the learning process. PBL, which focuses on solving real-world problems as the core of learning, not only enhances students' understanding of the subject matter but also plays a crucial role in developing students' character, including the inculcation of Pancasila values that underpin education in Indonesia.

One of the prominent outcomes of implementing PBL is improving students' critical thinking skills. In the PBL process, students are challenged to analyze problems, seek solutions, and present logical, fact-based arguments. This process encourages students to think more deeply and enhances their ability to discuss and collaborate with classmates (Braun et al., 2020). Additionally, PBL strengthens students' understanding of PPKn material because they are directly involved in learning situations relevant to their daily lives.

Another positive impact observed from implementing this method is the increase in students' learning motivation. A more interactive and student-centred approach makes them feel more challenged and motivated to participate actively in the learning process (R. M. Sari et al., 2021). This contributes to a more dynamic and productive classroom atmosphere where students can engage and develop a deeper understanding.

Overall, the implementation of PBL in Pancasila and Civic Education (PPKn) at SD Negeri 3 Pancor not only enhanced students' academic comprehension but also helped them develop essential character values and life skills. This method can be an effective model for other schools to holistically improve education quality.

The Problem-Based Learning (PBL) method allows students to actively engage in solving real-world problems relevant to their daily lives. In this process, students are encouraged to identify and understand the issues they face, forming the basis of their learning. PBL promotes critical and analytical thinking, as students must gather information, evaluate various solution options, and choose the most effective approach. This deepens students' understanding of the subject matter and develops higher-order thinking skills that are crucial for their future (Grigg & Lewis, 2022; Palavan, 2020; D. M. M. Sari & Prasetyo, 2021).

In addition to building analytical thinking abilities, PBL fosters student collaboration and cooperation. Each problem the teacher presents typically requires group work, where every group member contributes based on their knowledge and skills. In this context, students learn to listen to others' opinions, express their ideas, and work together to achieve optimal solutions. Such collaboration enhances communication skills and teaches students the importance of teamwork and shared responsibility in achieving goals.

More than merely understanding the material, Problem-Based Learning (PBL) also significantly shapes students' character. The learning process that requires students to confidently express their opinions, be disciplined in completing tasks, and take responsibility for their decisions naturally shapes their character. Students also learn to respect and tolerate differing opinions within their groups, which are essential values in societal life. Thus, PBL develops students' cognitive aspects and strengthens the moral and social values essential in character education.

Interviews with subject teachers at Pancor 3 State Elementary School have revealed that implementing the Problem-Based Learning (PBL) method in fifth-grade classes has successfully enhanced the quality of the teaching and learning process. Teachers unanimously agree that PBL encourages students to broaden their horizons and sharpen their analytical skills. In this method, students are presented with various real-world problems that require critical thinking and creative solutions. Teachers have observed a significant improvement in students' problem-solving abilities, where they seek the correct answers and explore various possibilities and approaches to complete the given tasks. Students' creativity is also honed as they are challenged to think beyond traditional boundaries and create innovative solutions.

In addition to improvements in analytical skills and creativity, interviews with Pancasila and Civic Education (PPKn) and Natural Sciences (IPA) teachers show that PBL also plays a crucial role in increasing students' motivation to learn. Teachers have observed that the PBL approach, which offers engaging and challenging learning experiences, makes students more enthusiastic and involved in the learning process. PBL allows students to learn through exploration and discussion, making them feel more engaged. As a result, student participation in class has increased, and they are more motivated to explore the learning material in-depth. Thus, PBL facilitates better academic understanding and fosters a positive and proactive learning attitude among students.

Interviews with fifth-grade students at Pancor 3 State Elementary School have revealed that the Problem-Based Learning (PBL) method creates a highly enjoyable and motivating learning experience. Students expressed that they feel more excited when faced with challenges in the form of real-world problems that they must solve. This excitement stems from their curiosity to find solutions and the collaborative learning process with their peers in groups. In this interactive learning environment, students are encouraged to think critically, ask questions, and explore various solutions, making them feel more involved and responsible for their learning process. Thus, PBL successfully transforms learning from a passive to an active and dynamic experience.

Moreover, students reported significant improvement in their understanding of the subject matter and developing positive character traits due to implementing Problem-Based Learning (PBL). They felt more confident expressing their opinions and ideas before their peers, indirectly building stronger self-confidence. The intensive group work process inherent in PBL also helped students develop cooperative attitudes and tolerance. They learned to appreciate differing opinions and work together to find solutions, strengthening their solidarity and teamwork. Such positive character traits, fostered through the PBL approach, not only support academic achievement but also lay the foundations for their future social lives.

Overall, implementing Problem-Based Learning in Pancasila and Civic Education (PPKn) in the fifth grade at Pancor 3 State Elementary School has resulted in improved student learning outcomes

and positively contributed to the development of character and critical thinking skills. This method can serve as an effective alternative to stimulate students' interest and motivation in learning, making the learning experience more meaningful and enjoyable for them.

6. Conclusion

The implementation of the *Problem-Based Learning* (PBL) method in Civic Education (*PPKn*) instruction for fifth-grade students at SD Negeri 3 Pancor has shown a significant impact on enhancing the quality of the learning process. Observations and interviews revealed that PBL not only improved students' academic understanding of *PPKn* content but also made a substantial contribution to character development, such as fostering collaboration, responsibility, and tolerance. PBL enables students to engage actively in solving real-life problems relevant to their everyday experiences, thereby creating a more contextual, interactive, and meaningful learning process.

Furthermore, the application of PBL has proven effective in enhancing students' critical thinking skills, analytical abilities, and creativity. Students are encouraged not only to find solutions to given problems but also to explore various approaches and work collaboratively in groups. In addition, students' motivation and enthusiasm for learning increased significantly, as this approach offers challenging activities that stimulate curiosity and active participation. Thus, PBL has demonstrated itself as an effective instructional strategy for character building, improving academic achievement, and fostering an engaging and productive classroom environment. This model is highly relevant for broader implementation in support of the *Merdeka Curriculum*, which emphasizes student-centered learning.

7. Suggestion

Based on findings obtained through interviews, observations, and documentation in the fifth-grade classroom at SD Negeri 3 Pancor, it is recommended that elementary schools—particularly Civic Education (*PPKn*) teachers—systematically integrate the *Problem-Based Learning* (PBL) model into differentiated instruction. The implementation of PBL has been shown not only to improve students' understanding of academic content but also to strengthen character values such as responsibility, cooperation, and tolerance through problem-solving activities that are relevant to students' real-life experiences. Therefore, teachers are encouraged to design learning scenarios that originate from real-world problems and actively engage students in group discussions and collaborative inquiry. In addition, it is essential for schools to provide training and mentoring programs to support teachers in designing and applying PBL within differentiated instruction tailored to students' characteristics. Educational policymakers may also consider the outcomes of this study as a basis for formulating policies aimed at enhancing teacher capacity and developing curricula that promote contextual, student-centered learning. Thus, this model has the potential to serve as an effective strategy for improving the overall quality of education, both in terms of academic achievement and character development.

Declarations

Author Contributions. All authors have read and approved the publication of the article's final version.

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Ethical Approval. The study's purpose, methods, benefits, and potential risks were fully explained to participants. Participation is voluntary. The identities of participants were anonymized. All personal data was stored securely and used for academic purposes only.

Data Availability Statement. All data in the manuscript can be accounted for and processed in accordance with standard analysis procedures.

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