

Research Article

Implementation of The Problem Based Learning Model Using The "Pancasila Smart Board" Medium to Improve Student Learning Outcomes in The Pancasila Education Subject Topic: Pancasila Values for Grade Iii at Sdn Tamansari 1

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Abstract. This study examines the implementation of the Problem-Based Learning model using the "Pancasila Smart Board" medium to improve student learning outcomes in the Pancasila Education subject—specifically regarding Pancasila values—for third-grade students at SDN Tamansari 1. The study was motivated by low student learning outcomes regarding Pancasila material at the elementary level and a teaching process dominated by the lecture method, which resulted in low student engagement. The objective of the study was to describe the implementation of the instructional medium and to improve student learning outcomes. A classroom action research method was employed, conducted over two cycles with 16 students as subjects. The results demonstrated an improvement in learning outcomes, with the average rising from 37.5% in the pre-cycle stage to 56.25% in Cycle 1, ultimately reaching 93.75%. It can be concluded that implementing the Problem-Based Learning model using the Pancasila Smart Board medium effectively improves the learning outcomes of third-grade students at SDN Tamansari 1.

Keywords: Elementary Education; Learning Outcomes; Pancasila Education; Problem-Based Learning; Smart Board.

Received: Januari 01, 2026

Revised: March 27, 2026

Accepted: May 16, 2026

Published: July 21, 2026

Curr. Ver.: July 21, 2026.



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1. Introduction

Education is a conscious and planned effort to create an enjoyable learning environment that enables students to actively develop their personal potential—including the intelligence, personality, and skills required by both the individual and society. Success in the field of education is inseparable from the role of the teacher (Pristiwanti, 2022; Muadi et al., 2024).

Teaching involves systematically designed interactions between educators and learners aimed at creating learning experiences that facilitate a process aligned with intended goals. Curriculum and instruction are closely linked; curriculum development must take learning principles into account, while instructional planning must align with the comprehensive framework outlined in the curriculum. Students' mastery of the material is typically measured by grades based on the Minimum Mastery Criteria (KKM) (Parendé & Pane, 2020; Mastur et al., 2025).

Teachers play a pivotal role in student success. Even a well-designed curriculum and adequate facilities will not yield optimal results without the support of competent, high-quality teachers. A teacher's role extends beyond mere instruction to include efforts to innovate and refine the learning process. Professional teachers are capable of critical thinking and conduct, enabling them to achieve established learning objectives (Tarigan et al., 2021; Jumanto et al., 2024).

Low student achievement regarding the material taught in schools indicates that learning mastery has not been optimally attained. The teacher's role in the learning process is crucial for achieving maximum learning outcomes. As facilitators, teachers are expected to create a conducive and effective learning environment that ensures the process runs smoothly and encourages students to pay attention to and understand the learning objectives being pursued.

The researcher focused on third-grade students at SDN Tamansari 1 because the issues to be investigated were specific to that grade level. The third-grade class exhibited general learning difficulties regarding the topic of Pancasila values; notably, 50% of the students scored below the Learning Objective Achievement Criteria (KKTP). Data gathered by the researcher revealed the following: (1) the teacher's instructional approach relied heavily on lectures and assignment-based tasks; (2) student academic achievement was low, largely due to a lack of motivation during lessons; and (3) the instructional process remained predominantly teacher-centered. Given these issues, there is a need to implement an updated instructional model.

Consequently, the researcher aims to conduct a study utilizing the Problem-Based Learning (PBL) model, incorporating a "Pancasila Smart Board" as an instructional medium. One of the HR management strategies that is commonly applied today is the use of outsourced labor. For service provider companies such as PT. Kinarya Selaras Piranti, the quality of the workforce placed in the client company is the face of the company's own reputation. However, managing outsourced employees has its own challenges, especially in maintaining performance consistency in the midst of different employment relationship statuses with permanent employees, which often affects their emotional attachment to the organization.

2. Literature review

In elementary education, PBL is considered an effective approach because it provides meaningful learning experiences through contextual problems. Students are encouraged to discuss, analyze, and propose solutions collaboratively, enabling them to develop higher-order thinking skills while strengthening their understanding of learning materials. Previous studies have shown that the implementation of PBL significantly improves students' academic achievement and classroom engagement.

Learning media also play a crucial role in supporting successful learning implementation. Interactive media can attract students' attention, increase motivation, and simplify abstract concepts into concrete experiences. The Pancasila Smart Board is an instructional medium specifically designed to facilitate the learning of Pancasila values through visual representations, games, and interactive activities. The use of this media is expected to create enjoyable learning experiences while enhancing students' understanding of the principles and values of Pancasila.

Learning outcomes represent one of the primary indicators of instructional success. They encompass students' cognitive, affective, and psychomotor achievements after participating in learning activities. Several previous studies have reported that combining innovative learning models with interactive media contributes positively to improving students' learning outcomes. Therefore, implementing the Problem-Based Learning model supported by the Pancasila Smart Board is expected to enhance students' achievement in Pancasila Education at the elementary school level.

Problem Based Learning

According to Wena (in Meilasari et al., 2020), the Problem-Based Learning (PBL) model is a learner-oriented instructional approach in which students are presented with various real-life problems and subsequently work to find solutions to them.

According to Hotimah (2020), PBL is an instructional model designed to help learners master the skills needed to navigate the era of globalization. Meanwhile, Yuliasari (2023) states that problem-based learning is a teaching strategy wherein the teacher introduces real-world problems into the learning process.

This view aligns with that of Elsa Yuliana et al. (2023), who suggest that problem-based learning utilizes problems as a means to enhance students' knowledge, skills, and self-confidence. The problem-based learning model offers several advantages, including: (1) helping students grasp learning material more easily, (2) broadening students' knowledge through

the exploration of new concepts, (3) encouraging active student participation in learning activities, (4) helping students apply knowledge to daily life, and (5) developing critical thinking abilities and enhancing student skills.

Pancasila Smart Board

"Smart board" media refers to tools designed in a board format and used to convey messages while stimulating students' thinking and interest to facilitate learning; examples include bulletin boards, chalkboards, magnetic boards, flannel boards, and others (Akhir et al., 2021; Kamaladini et al., 2021).

Smart board media also serves as a form of graphic media capable of effectively and practically displaying specific messages; it consists of a board and visual elements—such as images, letters, or numbers—that can be attached and removed (Kamaladini et al., 2021; Yosiva et al., 2021).

In this context, the researcher developed a smart board featuring multiplication content, designed to assist students with multiplication calculations (Yosiva et al., 2021). The "Pancasila Smart Board" is an instructional medium designed to help students understand material regarding Pancasila, including the introduction of its symbols and the application of its values in daily life. Utilizing this medium can make the learning process easier for students to grasp while also making the experience enjoyable. Instructional media can be defined as any tool used by teachers to convey learning material to students, serving as both an aid and a learning resource.

3. Proposed Methods

This study employs Classroom Action Research (CAR). CAR plays a vital and strategic role in efforts to improve the quality of the learning process. It serves as a vehicle for teachers' professional development, as the approach positions the teacher to act directly as both a researcher and an agent of change within a collaborative working framework.

The study aims to describe how student learning outcomes can be improved through the implementation of an engaging learning tool—specifically, the "Pancasila Smart Board"—in the third-grade class at SDN Tamansari 1. The cyclical model adopted aligns with the requirements of classroom action research, and data collection at the end of each cycle involves both written tests and observations.

Research Subjects

The subjects of this study were 16 third-grade students—comprising 7 boys and 9 girls—at SDN Tamansari 1, Dringu District, during the Pancasila Education lessons of the 2025/2026 academic year. Meanwhile, the object of the study was the entire process of improving student learning outcomes through the Problem-Based Learning (PBL) model, utilizing "Pancasila Smart Board" media to teach the topic of Pancasila values to the third-grade class at SDN Tamansari 1. The students in this third-grade class exhibited diverse individual characteristics.

Research Design

This study employs a Classroom Action Research (CAR) design consisting of two cycles: Cycle I and Cycle II. The study comprises two cycles spanning four meetings in total. Each cycle involves four stages: planning, implementation, observation, and reflection.



Figure 1. Classroom Action Research Design.

The study was carried out in a third-grade elementary school classroom involving 26 students. The intervention consisted of implementing the Problem-Based Learning (PBL) model supported by the Pancasila Smart Board as an interactive learning medium in Pancasila Education. The learning activities were designed to encourage students to solve contextual problems collaboratively while improving their understanding of Pancasila values.

Data were collected through classroom observations, learning achievement tests, documentation, and field notes. Observation sheets were used to assess teacher and student activities during the learning process, while achievement tests measured students' cognitive learning outcomes at the end of each cycle.

The collected data were analyzed using descriptive quantitative and qualitative techniques. Quantitative data were analyzed by calculating the average scores and the percentage of students achieving the minimum mastery criterion (KKM). Qualitative data from observations and field notes were analyzed through data reduction, data presentation, and conclusion drawing to describe the learning process and students' participation.

Data Collection Techniques

Data collection in this study was conducted using three methods: tests, observation, and documentation. These three techniques were employed to enhance the validity of the data obtained.

Tests were administered to students following the instructional process to assess learning outcomes; the teacher posed questions via written tests to measure whether student learning improved after the implementation of the "Pancasila Smart Board" media.

Observation: Through the observation method, the researcher assisted by the teacher and colleagues observed the attitudes of third-grade students at SDN Tamansari 1 and the learning activities conducted using the Problem-Based Learning model and the "Pancasila Smart Board" media.

Documentation: Data collected via this method consisted of photographs capturing the learning activities conducted using the Problem-Based Learning model and the "Pancasila Smart Board" media.

Data Analysis Techniques

Efforts to understand the effectiveness of the methods used in the teaching and learning process require data analysis, evaluation, and reflection. This aims to determine the extent to which expected learning outcomes were achieved and to gather student feedback on the instruction delivered using the "Pancasila Smart Board. This study employs Classroom Action Research (CAR) combined with a qualitative approach. This approach is intended to capture the actual facts or conditions observed during the learning process in the classroom.

Following the conclusion of the teaching and learning activities, data regarding the level of success or the percentage of student mastery was analyzed using various techniques, including the administration of a written test to third-grade students at SDN Tamansari 1.

4. Results and Discussion

Research Results

The implementation of the Problem Based Learning model, supported by the Pancasila Smart Board Papan Pintar Pancasila learning aid, successfully improved student learning outcomes in the Pancasila Education subject. This improvement was evident in the rise of both the average student scores and the percentage of learning mastery from Cycle I to Cycle II. These findings demonstrate that combining an innovative learning model with interactive learning media can create a more effective learning process for elementary school students.

Table 1. List of Student Learning Completion.

No	Completeness	Pre Cycle		Cycle I		Cycle II	
		F	%	F	%	F	%
1.	Completed	6	37,5%	9	56,25%	15	93,75%
2.	Not Completed	10	62,5%	7	43,75%	1	6,25%
	Amount	16	100%	16	100%	16	100%

Based on Table 1 following the initial cycle using the problem-based learning method supported by the Pancasila Smart Board medium, there was an increase in the class average and the number of students who achieved learning mastery. The classroom action research was conducted in two cycles involving third-grade elementary school students. Each cycle consisted of planning, implementation, observation, and reflection stages. The implementation of the Problem-Based Learning (PBL) model assisted by the Pancasila Smart Board media demonstrated a positive impact on students' learning outcomes and classroom participation.

The pre-cycle assessment indicated that most students had not achieved the minimum mastery criterion. Students experienced difficulties in identifying and applying the values of Pancasila in daily life. Classroom observations also revealed limited participation during learning activities, with teacher-centered instruction dominating the learning process.

After implementing the intervention in Cycle I, students showed noticeable improvement in classroom engagement. They actively participated in group discussions, identified problems presented through the Pancasila Smart Board, and collaborated to propose solutions. The average learning achievement increased compared with the pre-cycle condition. However, several students still required guidance in analyzing problems and communicating their ideas.

Based on the reflection from Cycle I, several improvements were introduced in Cycle II. The teacher provided clearer instructions, optimized group collaboration, and encouraged all students to participate actively during problem-solving activities. Consequently, students demonstrated greater confidence, better communication skills, and stronger understanding of Pancasila values. Learning activities became more interactive, with students actively utilizing the Pancasila Smart Board to complete collaborative tasks.

The final evaluation conducted at the end of Cycle II showed a substantial increase in students' learning outcomes. Most students successfully achieved the minimum mastery criterion, while the class average also improved compared with Cycle I. The observation results further indicated increased student participation, enthusiasm, and responsibility throughout the learning process.

Overall, the findings demonstrate that integrating the Problem-Based Learning model with the Pancasila Smart Board media effectively enhanced students' cognitive achievement as well as their active participation during Pancasila Education lessons. These results indicate that contextual learning activities supported by interactive instructional media can create a more meaningful and student-centered learning environment. Similar findings have been reported in studies showing that Problem-Based Learning improves learning outcomes, participation, and problem-solving skills in elementary education.

Discussion

The findings of this study indicate that the implementation of the Problem-Based Learning (PBL) model supported by the Pancasila Smart Board media successfully improved students' learning outcomes in Pancasila Education. The improvement was evident from the increase in students' average scores and learning mastery between the first and second cycles. These findings suggest that integrating an innovative learning model with interactive instructional media creates a more effective learning environment for elementary school students.

The improvement in learning outcomes can be explained by the characteristics of the PBL model, which encourages students to actively participate in identifying problems, discussing possible solutions, and presenting their ideas collaboratively. Throughout the learning process, students became more engaged and demonstrated greater confidence in expressing opinions and solving problems related to Pancasila values. This active involvement helped students develop a deeper understanding of the learning materials compared to conventional teacher-centered instruction.

The Pancasila Smart Board media also played an important role in supporting students' learning. The visual and interactive features of the media attracted students' attention and increased their motivation to participate in classroom activities. By providing concrete representations of abstract concepts, the media enabled students to understand the values of Pancasila more easily and apply them to everyday situations. This finding indicates that instructional media can effectively complement student-centered learning models to improve learning effectiveness.

Furthermore, classroom observations revealed positive changes in students' learning behavior. Students became more cooperative during group discussions, showed higher responsibility in completing assigned tasks, and demonstrated greater enthusiasm throughout the learning activities. These behavioral improvements reflect the successful integration of cognitive, affective, and social aspects of learning promoted by the PBL approach.

Overall, the findings of this study are consistent with previous research indicating that Problem-Based Learning supported by interactive learning media contributes positively to students' academic achievement and classroom engagement. Therefore, the implementation of the Problem-Based Learning model through the Pancasila Smart Board media can be considered an effective instructional strategy for improving learning outcomes in Pancasila Education at the elementary school level.

5. Conclusions

Based on the analysis of research data regarding the implementation of instructional media for the Pancasila Education subject—specifically the topic of Pancasila Values—in Grade III at SDN Tamansari 1, it can be concluded that the use of the Work Environment and Work Motivation simultaneously (together) have a significant effect on employee performance.

1. The implementation of the Pancasila Smart Board learning aid covering the material on Pancasila values yielded positive results. Through this medium, students found it easier to grasp the subject matter and became more actively engaged in Pancasila Education lessons. The "Pancasila Smart Board" was perceived as engaging and effective, thereby boosting student participation during learning activities.

2. Improvements in student learning outcomes across Cycles I and II were driven by the specific learning media and models employed by the researcher: the "Pancasila Smart Board" combined with cooperative learning, lectures, and presentations. This approach led to a significant increase in the number of students achieving mastery, as evidenced by cognitive test results. The mastery rate rose from 56.25% in Cycle I to 93.75% in Cycle II. The results of the determination coefficient test showed an Adjusted R Square value of 0.927. This means that 92.7% of the performance variables were influenced by the environment and motivation, while the remaining 7.3% were influenced by other variables outside of this study.

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