The effectiveness of problem basic learning methods to improve learning outcomes of early childhood Pancasila educational

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Abstract
The study is about why students need help understanding Citizenship Education and Pancasila subjects. It is also about why students are still passive and less capable of critical thought and why there is a lack of diversity in the learning models, which makes students less engaged and less aware of the teacher’s teaching methods. As a result, during the learning process, students actively share stories with their classmates. Using the problem-based learning paradigm, this study aims to increase students’ interest in citizenship education and Pancasila by allowing them to participate actively. The sample of this study is students in class 5C at SDN 112 Pekanbaru, which includes 32 students. The researchers employ experimentation and observation as the foundation for their data collection methodology. There is a multiple-choice exam as the tool. Both hypothesis testing and normality testing were used in the data analysis process. With an average difference of 28.125 between the pre-test and post-test, the study’s findings demonstrate how using the problem-based learning (PBL) model affects the learning process of Class V students at SDN 112 Pekanbaru. The results of statistical data testing answer the previously proposed hypothesis using the t distribution test with the core of t count > t table (13,528>2,040); this indicates that the problem-based learning paradigm has an impact on the learning outcomes of Pancasila and Citizenship Education. If the training is carried out correctly according to their resumes and personal characteristics, the PBL model will effectively increase the student’s desire to learn.

Keywords: Learning Outcomes, Pancasila and Civic Education, Problem Based Learning.

INTRODUCTION
Education is an essential aspect of life for everyone. We will obtain various knowledge, skills, and attitudes modifications through education (Rahayu et al., 2022; Monica Oloo Muteheli. Florence, 2023). According to (Nainggolan et al., 2022), education is a deliberate and planned effort by teachers to direct or assist students’ physical and spiritual development to become mature, achieve goals, and carry out daily tasks independently. This shows that education is a directed and planned process to
help students achieve their maximum potential without having to behave subjectively (Salsabila et al., 2021; Miasari et al., 2022).

A good learning planning process requires the involvement of educators (Fauhah and Rosy, 2021). Teachers must be able to design a learning process that prioritizes learning objectives or the skills they want to master (Suratmi and Sopandi, 2022). Developing moral character, critical thinking skills, responsibility, especially in social situations, and citizenship are prerequisites for students (Wahyu Ariyani and Prasetyo, 2021; Rahayu et al., 2022). Pancasila and Citizenship Education focuses on developing the character of social life and citizenship (Ananto, 2018; Faturrahman et al., 2022).

Pancasila education and citizenship are subjects taught at all levels of formal education, from elementary school to university (sutiyonosutiyo, 2017). Citizenship and Pancasila education is a significant contributor to good citizenship (Munthe et al., 2023). Pancasila and citizenship education have a crucial role in molding society’s moral character according to Pancasila values and the 1945 Constitution. “According to the study of Pancasila and Citizenship, Education is essential because these subjects are the basis for knowledge about the values of life that form good, responsible, Pancasila-minded, democratic and noble citizens, Cahyono in (Aufarel and Prasetyo, 2023). Democratic education teaches the students to think critically and behave democratically is known as Pancasila and citizenship education (Fitriyah et al., 2021; Fitriyah and Djazilan, 2020). This is done by teaching the next generation, as stated by Zamroni (Wati and Al Hudawi, 2023), that democracy is a way of life that guarantees the rights of citizens.

Pancasila and citizenship education subjects are fields of study that are closely related to the idea that citizens must be treated equally regardless of race, religion, gender, culture, and ethnicity (Putri et al., 2023: 245). As a result, students are expected to be involved in contextual learning, especially by asking them to solve problems in the local community. When students are prepared to become competent, responsible citizens and able to carry out their rights and obligations as knowledgeable, competent, and ethical citizens. Civics lessons in elementary schools are crucial for developing their knowledge in teaching and learning activities (Galuh et al., 2021).

Teaching Pancasila using the fundamental learning paradigm impacts students facing issues related to Pancasila values. Under this model, active students engage in problem-solving, analysis, reflection, and understanding of the values found in Pancasila. Students can undertake or create an experiment to understand the material by analyzing some examples of the process in question slowly and silently (Uktolseja et al., 2022). Pancasila Education is a type of education that focuses on developing students’ cognitive and affective skills. Thus, they are not limited to understanding the concepts, laws, and customs included in Pancasila; instead, they are more focused on developing the characteristics found in those specific Pancasila laws (Kuswanto, 2022; Rahmayanti, 2017).

The task of educators is to explain science to students. The desired goal is to increase information from not understanding to understanding (Fitriyah, 2019; Kurniasih et al., 2020; Ayu et al., 2019; Mayasari et al., 2022). Apart from that, a perfect learning model is needed so that the process of transferring knowledge from teacher to student runs effectively. To attract students’ interest and attention to Pancasila and Citizenship Education lessons, teachers must implement learning models that are interesting, varied, and varied (Galuh et al., 2021; Suratmi and Sopandi, 2022).

Based on the output of the interviews conducted, it is known that students still have difficulty understanding Pancasila and Citizenship Education lessons, students are still passive and unable to think critically, do not pay attention to the explanation given by the teacher, the material that takes place is only teacher-oriented, and less varied learning models make students less active and not paying attention to the teacher in the learning process. Hence, the children prefer to tell stories with their classmates. To solve the problems in this research, a learning model is needed to improve and build a learning atmosphere that focuses on students. The learning model that can attract students’ interest in the lesson is applying the Problem-Based Learning learning method.
According to the research conducted (Mulya and Fantiro, 2023), the most effective method for teaching Pancasila and Citizenship Education is Problem-Based Learning (PBL), which also impacts student learning outcomes and motivation. However, according to Rahayu et al., 2022, the PBL approach research yielded a 67.63% increase in Pancasila learning outcomes. Another study (Yunita Anggraeny et al., 2023) found that teaching Pancasila with fundamental learning problems increased students’ IQ (intellectual aptitude) and emotional intelligence. The indicators based on spiritual and emotional aspects yielded learning outcomes of 63.88%, and their potential for effectivity increased to 34%.

This is the result of students learning from a challenging situation. According to the Ministry of Education, Problem-Based Learning is a learning approach that puts a problem in a context to encourage students to collaborate in groups to solve real-world problems and pique their enthusiasm about learning so they can create their learning model of Education and Culture (Rini, 2022). Problem-based learning is a form of learning that is based on a constructivist model, oriented to the student learning process (student-centered learning) (Chaidam and Poonputta, 2022; Kloeg, 2023). Problem-based learning focuses on presenting a problem (actual or simulated) to students, who are then asked to find a solution through a series of inquiries and inquiries based on the core theories and concepts they have learned from various scientific disciplines (Hermansyah, n.d.; Syawaly and Hayun, 2020). The problem is orientation, stimulation, and guidance of the learning process while the teacher is a supporter and guide (Rosidah, 2018; Anwar et al., 2020).

Based on the theory explained by Barrow in (Mayasari et al., 2022) and according to Ngalimun in (Rahayu et al., 2022) describes the features of Problem-Based Learning: "1) learning is student-centered: problem-based learning more emphasis on students as learners; 2) authentic problems form the organizing focus for learning: The problems presented to students are real problems; 3) new information is acquired through self-directed learning: Students try to find information through sources, whether books or other information; 4) learning occurs in small groups: carried out in small groups; 5) teachers act as facilitators: teachers only act as guides investigation carried out (Asrifah et al., 2020) explains that student learning outcomes in class I of Pancasila and Kerawganeaaraan SDN education increased because the use of the problem–based learning model influenced them.

One learning paradigm that can be used to enhance student learning outcomes and motivate students to take an active role in their education is problem–based learning (PBL) (Syarifudin et al., 2021; Rahmayanti, 2017). It is evident from several earlier studies that improving student learning outcomes is the primary goal of this learning paradigm. Researchers mostly use the PBL learning model because it is a very successful and simple-to-apply learning model that changes learning outcomes.

METHOD

The research used a quantitative experimental study (Jumadi et al., 2020). Experimental research is used to see the effects and impacts between variables. This research used a one-class pretest-posttest design involving one group or one class. This experimental research was carried out for two weeks of 3 weekly meetings, so the treatment was implemented in 9 meetings.

The first step of the research is for the students to do an initial test (pretest) to determine their initial level of ability before continuing with treatment. After taking the first test, students will receive a treatment that uses the Problem–Based Learning model; after the students are given treatment, they will be given a final test (post-test) to determine whether there is a significant impact on learning output before and after using the Problem–Based Learning model. The sample of this study is students in class 5C at SDN 112 Pekanbaru, which includes 32 students. The data collection methods that researchers use are observation and objective tests. The research instrument is a multiple-choice test to see student learning outcomes before and after implementing the PBL learning model. Data analysis was carried out using the normality test and homogeneity test stages; the data collection technique used statistical methods, namely one group pretest and post-test, by comparing measurement results
before and after treatment by carrying out a t-test. The instrument grid developed by (Khotimah et al., 2019) was modified and statistically validated, as follows in Table 1.

<table>
<thead>
<tr>
<th>Basic Competencies</th>
<th>Question Indicator</th>
<th>Realm</th>
<th>Question number</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2 Understand the rights, obligations and responsibilities as citizens daily life</td>
<td>Several statements are presented, students can analyze the form of responsibility correctly</td>
<td>C4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Students can explain students’ rights at school correctly</td>
<td>C2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>An incident is illustrated, students can analyze the problem correctly</td>
<td>C4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>An example of student activity is presented which can determine the type of child’s obligations at home correctly</td>
<td>C3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Several statements are presented that students can analyze the correct implementation of obligations</td>
<td>C4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Students can give examples of the consequences of neglecting responsibilities correctly</td>
<td>C2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Presented with several statements, students can analyze a person’s responsibility towards themselves correctly</td>
<td>C4</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Presented with an example of an activity, students can analyze their responsibilities towards their family correctly</td>
<td>C4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Presented with an example of an activity, students can analyze their responsibilities towards society correctly</td>
<td>C4</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Students can analyze the forms of responsibility towards the state correctly</td>
<td>C4</td>
<td>10</td>
</tr>
</tbody>
</table>

RESULT AND DISCUSSION

Descriptive Student Learning

Results "The results obtained by students from the learning process in the form of numerical values, which are used as benchmarks for learning, are called learning outcomes. The instruments used in this research were ten questions to measure the amount of learning produced by students in the Pancasila and Citizenship Education class. Learning outcomes from student pretest and posttest were obtained in Table 2.

Table 2. Learning Results of Pancasila and Citizenship Education for Class V Students of SDN 112 Pekanbaru in the Pretest

<table>
<thead>
<tr>
<th>Class Average</th>
<th>Number Of Children</th>
<th>Inform</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-49</td>
<td>8</td>
<td>Incomplete</td>
</tr>
<tr>
<td>50-59</td>
<td>7</td>
<td>Incomplete</td>
</tr>
<tr>
<td>60-69</td>
<td>9</td>
<td>Incomplete</td>
</tr>
<tr>
<td>70-79</td>
<td>6</td>
<td>Complete</td>
</tr>
<tr>
<td>80-89</td>
<td></td>
<td>Complete</td>
</tr>
<tr>
<td>90-100</td>
<td>2</td>
<td>Complete</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td><strong>32</strong></td>
<td></td>
</tr>
</tbody>
</table>

The results of learning about Pancasila and Citizenship Education during the pre-test period are evident from the above table and diagram, which show that only eight students completed the learning, and 24 students still need to complete the total of 32 students in class V C at SDN 112 Pekanbaru (See Table 3).
The effectiveness of problem basic learning methods to improve learning outcomes of ......

Figure 1. Diagram of pre-test results in learning.

Table 3. Learning Results of Pancasila and Citizenship Education for Class V Students of SDN 112 Pekanbaru on Posttest

<table>
<thead>
<tr>
<th>Class Average</th>
<th>Number Of Children</th>
<th>Inform</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-49</td>
<td>-</td>
<td>Incomplete</td>
</tr>
<tr>
<td>50-59</td>
<td>-</td>
<td>Incomplete</td>
</tr>
<tr>
<td>60-69</td>
<td>2</td>
<td>Incomplete</td>
</tr>
<tr>
<td>70-79</td>
<td>4</td>
<td>Complete</td>
</tr>
<tr>
<td>80-89</td>
<td>9</td>
<td>Complete</td>
</tr>
<tr>
<td>90-100</td>
<td>17</td>
<td>Complete</td>
</tr>
<tr>
<td>Sum</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2. Diagram of post-test results in learning.
Source: Processed Data 2023
Based on the table and diagram above, the learning outcomes of Pancasila and Citizenship Education for students in the posttest period clearly show much change in the learning outcomes, where only two children were not complete, and 30 children were declared complete. These results show an increase in the average score between the pre-test and posttest. The number of students declared complete in the pre-test and posttest is presented in Table 4.

**Table 4.** Frequency Distribution of Student Categories Declared Complete on Pancasila and Citizenship Education Learning Outcomes for Class V Students at SDN 112 Pekanbaru on Pretest and Posttest

<table>
<thead>
<tr>
<th>Category</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Complete</td>
<td>8</td>
<td>25.00%</td>
</tr>
<tr>
<td>Incomplete</td>
<td>24</td>
<td>75.00%</td>
</tr>
<tr>
<td>Sum</td>
<td>32</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: Processed Data 2023

Based on the table above, eight students, or 25%, were declared complete in the pretest, and 24, or 75%, were declared incomplete. Furthermore, in the posttest, namely after implementing the Problem-Based Learning learning model, 30 students, or 93.75%, were declared complete, and two students, or 6.25%, were declared incomplete. These results show that the number of declared complete students increased after implementing the problem-based learning model in the Pancasila and Citizenship Education subjects for class V C students at SDN 112 Pekanbaru.

**Normality Test**

The normality test aims to determine whether or not the data is regularly distributed. A prerequisite for applying parametric statistical approaches to examine data is that the data must be expected. The Liliefors test was used in this study to determine whether the data was normally distributed. It compares the Lcount value to Ltable and determines if the data is not generally distributed if the Lcount value is more significant than Ltable. The results of the normalcy test are as follows in Table 5.

**Table 5.** Normality Test Results

<table>
<thead>
<tr>
<th>Group data</th>
<th>N</th>
<th>Lcount</th>
<th>Ltable</th>
<th>Inform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>32</td>
<td>0.152</td>
<td>0.154</td>
<td>Normally Distributed</td>
</tr>
<tr>
<td>Posttest</td>
<td>32</td>
<td>0.132</td>
<td>0.154</td>
<td>Normally Distributed</td>
</tr>
</tbody>
</table>

Source: Processed Data 2023

Based on the results of the normality test with the Liliefors test above, the calculated L value in the pretest data was 0.152, and in the posttest data the calculated L was 0.138. The L table value for N=32 and alpha 0.05 is 0.154. "In this way, the two groups of data are concluded to be normally distributed because they have a calculated L value <L table."

**3. Hypothesis Testing**

The purpose of hypothesis testing is to determine if the prepared hypothesis is accepted or rejected. A one group pretest-posttest design approach is used in this study. First, a pretest is given in class, and after that, the Problem Based Learning learning model is applied. Following the acquisition of the two data sets, a comparison test (the independent sample t test) was performed to determine whether the student learning outcomes from the pretest and posttest were still different. This is the result of the t test in Table 6.
The independent sample t test yielded the following results: the t value is 13.528, and the average difference between the pre- and post-test is 28.125. The value in the table yields df (31;0.05) = 2.040. Thus, it may be said that the problem-based learning approach has an impact on the learning outcomes of Pancasila and Citizenship Education for students in class V C SD 112 Pekanbaru, or that H0 is rejected and Ha is accepted. The value of tcount > ttable (13.528 > 2.040) explains this outcome.

Discussion

This study uses a pre-experimental design and one-group pretest-posttest methodology to examine how the Problem-Based Learning learning paradigm can enhance student learning results. The homogeneous value of the student learning output, as determined by the pretest output, was 56.6. Of the 24 kids who did not complete the posttest, two did not, but the homogenous score was 84.7. Therefore, compared to before the learning model was used, the learning output for Pancasila and Citizenship Education after implementing the Based Learning learning model got good results. There were changes in the students after the researchers implemented the Problem-Based learning model during several meetings.

As they got more engaged and courageous, the kids started presenting their completed work. The df (31;0.05) ttable value is 2.040. The results of statistical data testing answer the previously proposed hypothesis using the t distribution test with a value of tcount > ttable (13.528 > 2.040), the research’s findings indicate that H0 is rejected and Ha is accepted or that the Problem-Based Learning learning model has an impact on students’ Pancasila and citizenship education learning outcomes in Class V SD 112 Pekanbaru. Similarly, several types of research done by (Asrifah et al., 2020; Amini et al., 2019; Mulyanto et al., 2018; Pratiwi & Wuryandani, 2020) state that the average post-test results with the Problem-Based Learning learning model have better learning outcome values where Ha is accepted and H0 is rejected.

The problem-based learning model emphasizes students’ efforts to think critically, increase their desire to work, foster interpersonal relationships in group work, and foster internal motivation to learn (Koroh and Ly, 2020; Harmelia, 2022). This model can also help students gain additional knowledge by helping them solve problems (Giri, 2022; Kartika et al., 2020; Rahmayanti, 2017).

Apart from that, based on research conducted (Harmelia, 2022; Sari et al., 2020; Setiadi et al., 2023). Using the Problem-Based Learning (PBL) model helps boost students’ enthusiasm to learn in PPKn courses. According to a study using the problem-based learning approach, students’ learning outcomes and motivation to participate actively in their education are clearly improved when they previously did not comprehend the material. (Abidin, 2023; Kuswanto, 2022; Syarifudin et al., 2021; Mulyanto et al., 2018). This learning model can also improve students’ problem-solving abilities in class. Solving simple problems is one of the best ways to encourage kids to learn. These findings suggest a direct association between problem-based learning and motivation. Your child will be content to think and behave this way (Jamil et al., 2023).

According to (Pratiwi, Wuryandani, et al., 2020) research, problem-based learning outperformed traditional learning methods. The current study’s findings corroborate this finding. The present study’s findings validated claims about problem-based learning by demonstrating that the practice simultaneously impacted students’ critical and creative thinking abilities. Problem-based learning was said to be a cutting-edge approach to education that helped students become more independent while enhancing their capacity for critical and creative thought, which was necessary for long-term learning (Riskayanti, 2021; Wahyudi et al., 2018). This study’s findings that problem-based learning has a significant simultaneous effect on students’ critical and creative thinking abilities supported...
earlier research that found that learning using problem-based methods significantly increases students’
capacity for critical and creative thinking.

This study found that the PBL approach increased learning outcomes, making the benefits of this
model nearly identical to those of comparable studies (Putri and Lena, 2023) that found the following
benefits of the (PjBL) model: increases collaboration—students must cooperate to create a pleasant
environment in groups—makes students creative and capable of solving problems in the classroom,
(2) inspires students to learn through project-based learning, and (4) fosters honest, meticulous,
accountable, and innovative behavior. The PjBL model has the benefit of encouraging creativity in
its students, which boosts their learning inventiveness (Fitriyah, 2019; Metafisika et al., 2022).

Previous studies (Asiyah et al., 2021; HARMELIA and Djuwita, 2022) demonstrated a similar
conclusion, demonstrating that problem-based learning is a practical, open-ended learning approach
that increases students’ cognitive development. It was pertinent to the findings of the present study,
which showed that student’s capacity for creative thought was significantly enhanced by problem-
based learning. Furthermore, the findings of this study have expanded the use of problem-based
learning as a model for instruction in situations where students’ critical and creative thinking abilities
are inextricably linked to their capacity to solve problems (RISKAYANTI, 2021; Wahyudi et al.,
2018).

In addition, research conducted (Metafisika et al., 2022; Murdani et al., 2022; Sari et al., 2020;
Setiadi et al., 2023). Implementing a problem-based learning model can increase students’ desire to
learn in Civics subjects. Research conducted by (Abidin, 2023; Kuswanto, 2022; Syarifuddin et al.,
2021; Syarifudin et al., 2021; Pratiwi, Wuryandani, et al., 2020). explains that this model is proven to
improve student learning outcomes and encourage them to participate actively in learning, which
changes knowledge that they do not understand. Become knowledge that they understand. Based
on the study findings, the problem-based learning approach enhances student motivation, learning
outcomes, and problem-solving interest. Additionally, this paradigm allows kids to develop their
critical thinking skills and become more engaged.

Limitation
This research has limitations in the category of research subjects which are still not many and
only carried out in one school, due to time and distance constraints.

Implication and Conclusion
According to the study’s findings, students’ learning outcomes in students in class 5C at SDN 112
Pekanbaru are enhanced when the problem-based learning paradigm is implemented. The learning
outcomes for students have improved. This PBL learning style involves every student actively solving
problems. PPKn learning and other learning models can be implemented using the problem-based
learning (PBL) methodology. If the training is carried out properly in accordance with their resumes
and personal characteristics, the PBL model will be effective in increasing the students’ desire to
learn.

AUTHOR CONTRIBUTION STATEMENT
ADR contributed to the study of play therapy for early childhood. Meanwhile, ZHR contributed
to the analysis of early childhood activities in Kindergarten. CWK contributed to helping ADR
assess the urgency of play therapy for early childhood.

DECLARATION
The authors of this study declare that we have NO affiliation with or involvement in any
Organization or entity with any financial interest (such as honoraria; educational grants; participation
in speakers’ bureaus; advocacy, employment, consulting, Stock Ownership, or other equity interests;
and testimonials experts or patent licensing arrangements), or non-financial interests (such as personal
or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials
discussed in this manuscript.
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