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Application of the Problem Based Learning Model in Increasing Student Activity and Learning Outcomes in Beautiful Materials Mutual Respect

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ABSTRACT
This research aims to increase the activeness and learning outcomes of grade V students in the material "The Beauty of Mutual Respect" at SD Negeri Srondol Wetan 04 Semarang City for the 2024/2025 Academic Year through the application of the Problem Based Learning (PBL) learning model. This research is a Class Action Research (PTK) which is carried out in two cycles, namely cycle 1 and cycle 2. Each cycle consists of planning, implementation, observation, and reflection stages. Data was collected through observation, learning outcome tests, and documentation. The results of the study show that the implementation of PBL is able to significantly increase student activity and learning outcomes. Student activity increased from an average score of 40 in the first cycle to 70 in the second cycle. Similarly, student learning outcomes showed an increase with the average score rising from 55 in cycle I to 80 in cycle II. The implementation of PBL has a positive impact on students' motivation, active participation, and critical thinking skills. Thus, the PBL learning model can be implemented as an alternative effective learning strategy to improve the quality of learning in elementary schools.

KEYWORDS
learning outcomes, student activeness, Islamic religious education, problem based learning.

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A. INTRODUCTION

Elementary school is the main foundation in children's cognitive, emotional and social development. This is where the formation of character and lifelong learning habits begins. At this level of education, in addition to academic skills such as reading, writing, and arithmetic, students also need to develop life skills, including the ability to think critically, work together, and respect each other. Learning carried out in elementary schools must be fun, interactive, and encourage active participation of students in order to build interest, motivation, and deep understanding of the subject matter (Mulyasa, 2014). However, in practice, many teachers still face challenges in creating an optimal learning atmosphere. Many students tend to be passive, less engaged in class discussions or activities, resulting in low learning outcomes and underdevelopment of 21st-century skills such as collaboration, communication, and creativity. This phenomenon becomes more complex when the material taught is theoretical and indirectly related to the real experience of students, making it difficult for them to connect emotionally or intellectually with the learning content.

One of the problems that is often found in the learning process in elementary school is the low activity of students during teaching and learning activities. Student activeness is very important because it is an indicator of their involvement in the learning process. Without adequate activeness,

students only become passive recipients of information without the stimulation of critical thinking and self-reflection. This of course has a negative impact on their learning outcomes (Sudjana & Rivai, 2013). Low learning outcomes are not always caused by students' lack of ability, but it could be because the learning methods used by teachers have not been able to stimulate students' interest and motivation to learn effectively. Furthermore, if students are not used to thinking independently and exploring solutions to a problem, then they will find it difficult to face increasingly complex real-world challenges. Therefore, a learning approach is needed that not only improves academic achievement, but also builds positive attitudes, social skills, and critical thinking skills, especially on topics relevant to human values such as "The Beauty of Mutual Respect".

To answer these challenges, innovation in learning approaches is needed. One of the learning models that is considered effective in increasing student activity and learning outcomes is Problem Based Learning (PBL). According to Trianto (2010), PBL is a learning model that puts students in real problem situations that are relevant to their daily lives. In PBL, students are encouraged to discuss, think critically, and work together in finding solutions to the problems given. This approach is very suitable to be applied in learning the theme "The Beauty of Mutual Respect", because it allows students to directly engage in simulations or projects that involve interaction between others and the application of tolerance values. In addition, PBL provides space for students to develop high-level thinking skills, such as analysis, synthesis, and evaluation, which are an important part of their intellectual and moral growth. Thus, research on the application of the PBL model in improving student activity and learning outcomes in certain materials is very important to be carried out as an effort to improve the quality of education at the elementary school level.

B. Theoretical Foundations

Problem Based Learning (PBL) is an innovative learning model that uses real problems as a starting point for developing students' knowledge and skills. In PBL, the learning process does not only focus on mastery of the material, but emphasizes more on critical thinking skills, problem solving, and the application of concepts in authentic situations. Students are encouraged to actively engage in analysis and discussion to understand the given problem, while the teacher acts as a facilitator who guides the process. According to Arends (2012), PBL provides opportunities for students to engage in complex and meaningful learning through teamwork, dialogue, and self-reflection. The main characteristics of PBL include student-centered learning, the use of real problems, a small group approach, as well as the application of the principles of constructivism, which is the theory that students build new knowledge based on previous experiences. Thus, PBL not only improves conceptual understanding, but also trains students to become independent, creative, and solutive learners in facing learning and daily life challenges.

Student learning activeness refers to their level of physical, mental, and emotional involvement during the learning process. Participation such as asking questions, answering questions, discussing, and taking the initiative to find solutions is the main indicator of active learning. According to Sardiman (2012), internal factors such as motivation and interest greatly affect student activity, as well as external factors such as learning strategies used by teachers. In the PBL model, student activeness is highly emphasized because students are required to participate in problem identification, information search, and collaborative solution formulation. This approach creates an interactive and participatory learning environment, so students are more motivated and challenged to engage. In addition, activeness in PBL also contributes greatly to the development of social skills such as communication, cooperation, and leadership, which are important provisions for students in facing the real world. With the increase in learning activity, not only academic results increase, but also positive attitudes towards the learning process itself.

Learning outcomes are one of the main benchmarks for the success of the learning process in schools. Suprijono (2013) stated that learning outcomes are not only assessed from test or exam achievements, but also from changes in behavior, understanding of concepts, and students' ability to apply knowledge in a real context. The PBL model has great potential in improving learning outcomes because it puts students in relevant and meaningful learning situations. In PBL, students not only passively receive information, but also actively dig up information, discuss, and develop solutions with their peers. This makes it easier for them to understand and remember the subject matter. In addition, PBL is also effective in instilling character values, one of which is mutual respect. Through discussion and collaboration, students learn to listen to others' opinions, respect differences, and build a sense of tolerance. This value is very important to be developed from an early age so that students are able to live in harmony in a pluralistic society.

C. Research Methods

This study uses the Classroom Action Research (PTK) approach as the main method to improve student activity and learning outcomes through the application of the Problem Based Learning (PBL) learning model. PTK is a research approach that is reflective, participatory, and carried out collaboratively by teachers or researchers directly in the classroom. The goal is to improve learning practices in a real and systematic manner (Arikunto, 2010). In this study, the PTK process is carried out in two cycles, where each cycle consists of four main stages: planning, implementation of actions, observation, and reflection. With this approach, researchers can identify learning problems, design PBL-based solutions, and evaluate their impact on student learning activities and outcomes. The PBL model was chosen for its ability to increase student engagement through authentic problem-solving that is relevant to their lives. Thus, PTK is the right strategy to develop innovative learning that has a direct impact on the quality of the teaching and learning process in elementary schools.

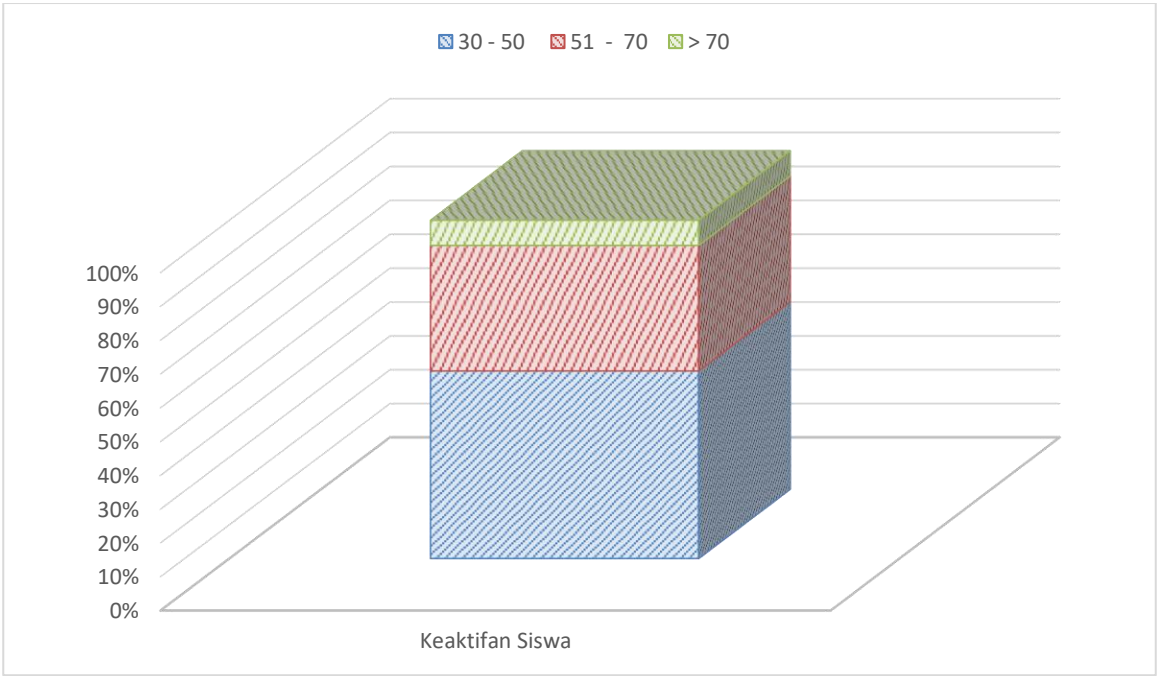
The subjects of this study are grade V students of SD Negeri Srondol Wetan 04 Semarang City, which totals 27 people, consisting of 14 male students and 13 female students. The research was carried out in the subject of Islamic Religious Education (PAI) on the material "The Beauty of Mutual Respect" during the 2024/2025 Academic Year, namely September 2024. The school was chosen as the location of the research because of real problems related to the low activity and learning outcomes of students in conventional learning. Based on initial observations, many students tend to be passive during the learning process, do not participate in discussions, and have an unoptimal understanding of the values of tolerance and mutual respect (Sugiyono, 2013). Therefore, a more interactive and contextual learning approach is needed to increase student engagement and understanding. With the implementation of PBL, it is hoped that students will not only become more active, but also be able to internalize important values such as cooperation, empathy, and respect for differences.

This research procedure refers to the four main stages in PTK, namely planning, implementation of actions, observation, and reflection, which are carried out in two cycles. In the planning stage, the researcher prepares a learning implementation plan (RPP), learning modules, student worksheets (LKPD), and evaluation instruments in accordance with the PBL model. During the implementation of actions, the PBL model is applied by involving students in problem identification, group discussions, and collaborative solution formulation. The learning process is observed directly through observation sheets to collect data on student activity. After that, a reflection stage is carried out to evaluate the effectiveness of the action, identify obstacles, and design improvements in the next cycle. The data from observation and learning tests were analyzed quantitatively and qualitatively. Student activeness is measured based on indicators such as participation in discussions, ability to ask questions, initiative, and group collaboration, while learning outcomes are analyzed using the percentage of student learning completeness (Suprijono, 2013). The results of this analysis are used to evaluate the achievement of research objectives and provide recommendations for future learning development.

D. Research Results

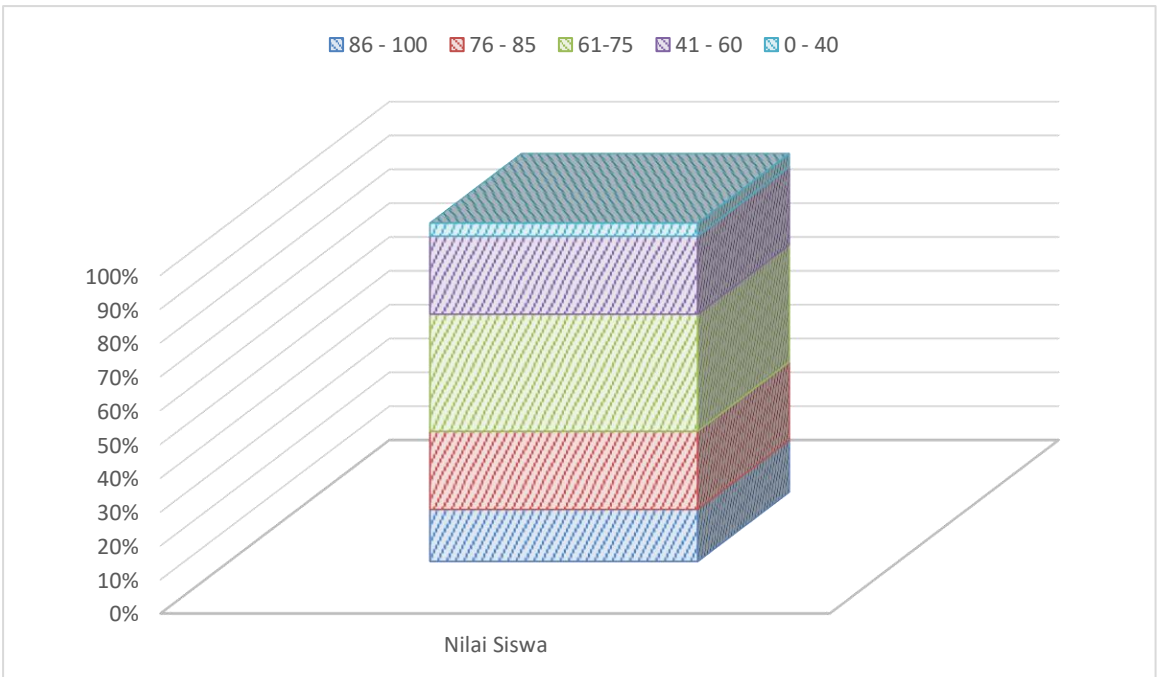
In the first cycle, it still does not show maximum results. Student activeness in participating in learning is still low with results that show that cycle 1 obtained a score of activity that was not good, namely with 27 students having an average score: 51.30. With the following value range:

30 - 50 : 15 Students
51 - 70 : 10 Students
> 70 : 2 Students



Meanwhile, the learning outcomes of students in Cycle I are also still less than optimal. There were average results of 27 students under KKM, with an average score of 70. Meanwhile, the range of scores of 27 students is as follows:

86-100 : 4 Students
76-85 : 6 Students
61-75 : 9 Students
41-60 : 6 Students
0-40 : 1 Student



This is because students still feel new and do not understand what teachers apply by applying the Problem Based Learning (PBL) learning model

The results of reflection from Cycle 1 consist of the results of student activity and student learning outcomes. The results of reflection on the observation of student activity are as follows:

1. Participation in Group Discussions

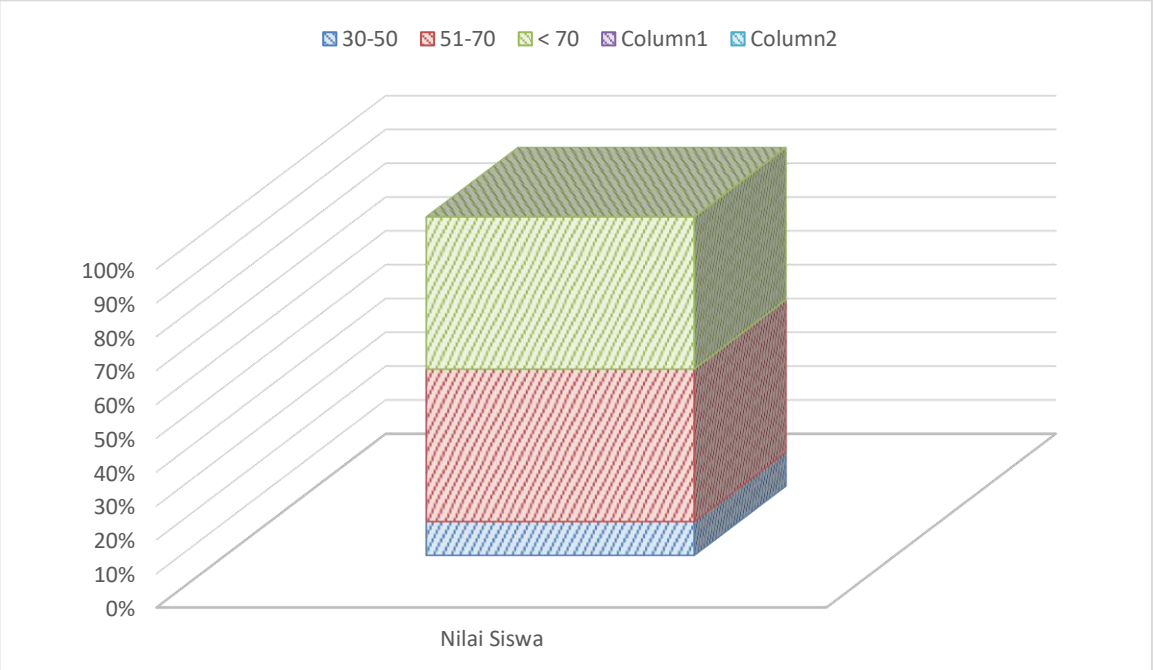
Advantages: Students who have high scores on this indicator show good engagement in discussions. They are more actively participating and contributing to the group discussion

process.
Disadvantages: Some students show very low participation (score 1), which indicates they are less engaged or passive in group discussions. This can indicate problems in self-confidence or a lack of motivation.
2. Ability to Ask and Answer Questions
Advantages: Students with high scores on this indicator are able to take advantage of the discussion moments to ask and answer questions, showing curiosity and a deep understanding of the topics being discussed.
Disadvantages: Many students have low scores in this ability, which indicates that they may not be active enough in questioning information or may lack understanding of the material and are reluctant to answer.
3. Initiative in Seeking Information or Solutions
Advantages: Students with high scores show good initiative in seeking information or solutions. They are proactive in finding answers without always relying on the direction of teachers or peers.
Disadvantages: Some students have low scores in this indicator, which indicates a lack of motivation or skills in taking initiative on their own. This may be due to dependence on members of other groups or a lack of a sense of personal responsibility.
4. Ability to Present Ideas or Opinions
Advantages: Students who actively express ideas or opinions have the confidence to voice their thoughts, which is crucial in creating dynamic discussions.
Disadvantages: Students with low scores on this indicator show difficulty in expressing their ideas or opinions, which may be due to uncertainty or fear of being wrong.
5. Level of Collaboration with Group Members
Advantages: Good collaboration between group members is evident from students with high scores, demonstrating their ability to work together and contribute harmoniously in a team.
Weaknesses: Students with low scores may have trouble collaborating, either due to a lack of interpersonal skills or a mismatch with other members of the group.
The visible advantages of students who have high scores on each indicator are the presence of active involvement, curiosity, and confidence in participating in group discussions. However, a major weakness that needs to be addressed is the lack of engagement in some students who score low, especially when it comes to asking questions, expressing opinions, and taking initiative. This shows the importance of further coaching in communication and collaboration skills within the group. Meanwhile, the reflection on student learning outcomes in Cycle I is seen from its advantages and disadvantages. The advantages of learning outcomes in cycle I are as follows:
a. High Grade Achievement (86-100):
There are 4 students who reach the score range of 86-100. This shows a good understanding of the learning material and the ability to solve problems effectively. Students such as Ardeva Fasihati Nihaya and Asia Rafa Nur Safii obtained perfect scores (100), which reflects consistency and accuracy in answering each question.
b. Improvements in Value Range 76-85:
A total of 6 students were in this grade range, indicating that most students had a fairly strong understanding of the material. These values show that students are able to answer most questions correctly and show good progress.
c. Most Students in the Grade Range 61-75 :
There are 9 students in the 61-75 grade range. These students, although not showing maximum achievement, have demonstrated a fairly good understanding of the material and are able to do the problems correctly for most items. They may only need a slight improvement to achieve better results.
While the strengths in the learning outcomes in Cycle I are as follows:
a. Students with Low Scores (41-60).
There were 6 students in this grade range, which showed that their understanding of the material was still lacking. Some of them may have difficulty answering certain questions or

do not have effective study strategies. Examples such as Viona Agchella Anindhya Putri and Afnan Rizky Putra who scored 43 and 57 show that there is an imbalance in understanding in some of the more difficult questions. b. Students with Very Low Scores 0-40
Only one student is in this range, namely Labitta Shaina Nadhifa with a score of 29. This indicates that these students may have great difficulty in understanding the material or have obstacles in solving problems, both cognitively and non-cognitively.
c. Distribution of Imbalances in Certain Problems:
Some students get a score of 0 on some questions, which indicates a gap in understanding on certain topics. For example, Cakra Dika Putra Pratama and Labitta Shaina Nadhifa scored 0 on certain questions, indicating that they may need further explanation or additional practice on the topic.
In general, student learning outcomes in Cycle I showed that most students were in the category of doing quite well, with only a few students needing more attention in terms of material understanding and learning strategies. Improvement can be focused on students who get low scores, especially in understanding concepts that have not been thoroughly mastered.

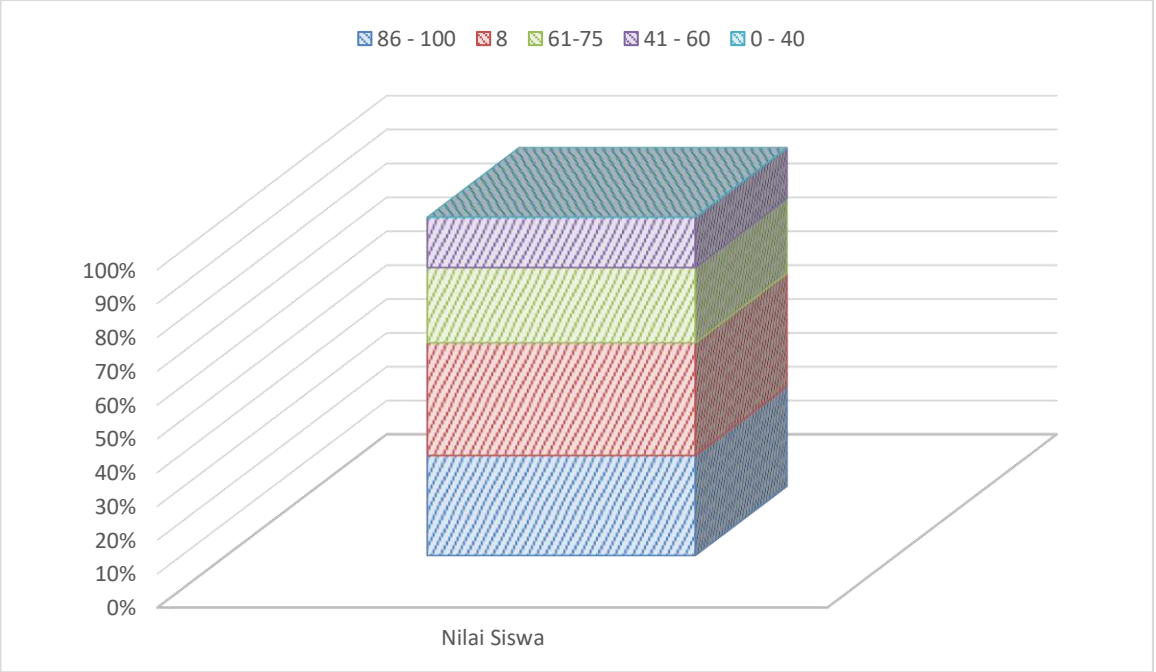
In cycle II, the results showed an increase in the activeness of the observation results. Student activity in participating in learning has increased compared to the results shown in cycle 1. in Cycle II, an activeness score was obtained with an average score of 72. The range of values is as follows:

30 - 50 : 2 Students
51 - 70 : 9 Students
> 70 : 16 Students



Meanwhile, the learning outcomes of students in Cycle II are also still improving compared to Cycle 1. There were average results of 28 students above KKM, with an average score of 76. Meanwhile, the range of scores of 28 students is as follows:

86-100 : 8 Students
76-85 : 9 Students
61-75 : 6 Students
41-60 : 4 Students
0-40 : 0 Students



The results of reflection from Cycle 2 consist of student activity results and student learning outcomes. The results of reflection on the observation of student activity are as follows:

1. Participation in Group Discussions

Advantages: Some students show excellent participation, which gets a score of 4 on this indicator. They are actively involved in group discussions, which reflects the ability to collaborate well as confidence in expressing opinions. In most students, participation in group discussions was rated good (3-4). This shows that many students are actively involved in group activities, which contributes to collaborative learning.

Disadvantages: There are students who are still passive in participating, who only get a score of 2. This suggests that they are less involved in the discussion process, which could be due to uncertainty in understanding the material or a lack of confidence. There are some students who get low scores (for example, 2), which indicates a lack of participation. This can be due to the student's lack of confidence or understanding of the material being discussed.

2. Ability to Ask and Answer Questions

Advantages: Some students show excellent ability to ask and answer questions (score 4). It reflects critical thinking skills and the courage to actively participate in discussions with relevant questions and answers. Students who score 4 show excellent ability to ask and answer questions, which indicates a deeper understanding of the material and high curiosity.

Disadvantages: Some students score 1-2 on this indicator, indicating that they may be less able to ask or answer questions. This could indicate a lack of understanding of the material or discomfort in speaking in front of the group. Some students only score 1-2, which indicates they are passive in asking or answering. This could be a sign of a lack of understanding or courage to engage in class discussions.

3. Initiative in Seeking Information or Solutions

Advantages: Students who score 4, show that they have a strong initiative in seeking information or solutions on their own. They are proactive in resolving problems without waiting for instructions from others. Students with high scores (3-4) show good initiative in seeking solutions and information, which is a sign of critical thinking skills and independence in learning.

Disadvantages: Students who only get a score of 1, which indicates a lack of initiative. This could indicate a higher dependence on other group members or a lack of personal

responsibility in solving problems. Some students only get a score of 1-2, indicating that they tend to be passive and only rely on existing information without trying to find solutions independently.

4. Ability to Present Ideas or Opinions

Advantages: Some students score high (4) in presenting ideas or opinions, which demonstrates their ability to convey their thoughts clearly and convincingly in front of the group. Students with a score of 3-4 demonstrate good ability to convey ideas or opinions, which is an important skill in conveying arguments and engaging in discussions.

Disadvantages: Some students score low (1-2), indicating difficulty in expressing ideas. This may be due to the discomfort of public speaking or a lack of confidence in the validity of their opinions. Low scores (1-2) in some students indicate that they may have difficulty expressing opinions, which could be due to a lack of confidence or limitations in communication skills.

5. Level of Collaboration with Group Members

Advantages: Some students show excellent collaboration (score 4). They can work together effectively in groups, contribute evenly, and interact well with other members. Students with high scores (3-4) show good cooperation with other group members. Effective collaboration shows that they are able to support and work in a team.

Weaknesses: Some students who only score 2 indicate that their collaboration with group members may not be optimal. This can be due to communication difficulties or a lack of active involvement in teamwork. Some students with low scores (1-2) show a lack of collaborative skills, which may be due to a lack of awareness of their role in the group or an inability to work well with others.

Overall, the results of the observation of Cycle II showed an improvement in some students in terms of participation and collaboration. However, there are still some students who need more attention in terms of asking questions, taking the initiative, and expressing opinions. Additional guidance and encouragement are needed for low-scoring students, especially when it comes to improving communication skills and the courage to be more active in groups. Meanwhile, the reflection on student learning outcomes is as follows:

1. Reflection on Advantages in student learning outcomes

a) Some students show a consistent understanding of the material, such as students who get high scores. This shows that they are able to answer questions well in most aspects.

b) Students with high scores show a good understanding of the concepts taught, as well as diligence in answering questions thoroughly.

c) Students who get a score above 80% can consistently answer questions correctly on various types of questions. This indicates success in absorbing the material and active involvement in the learning process.

d) Another advantage that can be seen is that some students who have high enough grades, show perseverance and good understanding consistently. This can demonstrate the effectiveness of the learning method for those who are actively engaged.

e) An increase in scores in some students from the previous cycle indicates progress in their understanding and ability to absorb the material.

f) Questions that are easy to answer (high scores in most students) Questions number 11 to 15 indicate that the majority of students are able to answer correctly. This can indicate that these questions are easier for students to understand or that the material tested on these questions is more mastered.

2. Reflection on Shortcomings in Student Learning Outcomes

a) Some students get low scores. This indicates that there are obstacles in understanding the material or perhaps a lack of preparation in facing the exam.

b) There are students who have difficulty answering questions on certain topics, which can be seen from the many zeros on several question numbers. This may indicate that they are confused or lack a grasp of the concepts tested on the question.

c) The gap in grades among students shows the need for a more differential learning

approach so that underperforming students can get additional help in understanding the material.

d) Some students still show less than satisfactory grades, which may signal the need for improvement in the teaching or evaluation approach. Additionally, these students may need additional guidance or different study strategies to help them understand the material better.

e) Some students score low on the initial number questions (e.g., numbers 2 and 5). This may indicate that these questions are more difficult or are not covered in enough depth during the lesson.

Overall, the learning outcomes in Cycle II show that most students have understood the material quite well, but there are also students who need more attention to help them achieve more optimal learning outcomes.

This increase is due to the fact that students feel more comfortable learning and comfortable when teachers do learning by applying the Problem Based learning model

E. Discussion

The findings of this study show that in cycle I, the average student activity score reached 55, indicating an increase in participation in group discussions and collaboration, although some students still tend to be passive. Learning outcomes have also increased with an average score of 65, but have not reached the minimum completion target of 75%. Based on the reflection of the first cycle, improvements were made in the second cycle by providing more intensive guidance from teachers and more interesting assignments. As a result, the activeness score increased to 75 and the average score of learning outcomes reached 85, which met the completeness criteria. Overall, the application of the PBL model has proven to be effective in increasing student involvement during the learning process, developing critical thinking skills, and deepening understanding of the material. Students are more active in discussing, solving problems collaboratively, and expressing opinions. This positive change can be seen from observation data and evaluation results in each cycle, thus proving that PBL is a relevant learning strategy to be applied in elementary schools to improve the quality of learning and internalize mutual respect values.

The results of this study, which showed a significant increase in student activity and learning outcomes after the application of the Problem Based Learning (PBL) model, can be explained through the approach of several learning theories. One of them is the theory of constructivism, which states that students build their own knowledge through experience and reflection, rather than just passively receiving information (Suprijono, 2013). In PBL, students are involved in solving real problems, so they can more easily connect the subject matter to the context of daily life. In addition, Vygotsky's social learning theory is also relevant, because PBL relies heavily on collaboration and interaction between students to build mutual understanding through discussions and group work (Slavin, 2015). This kind of interaction creates a proximal developmental zone that supports the student's learning progress. Furthermore, the active learning approach that is the main principle of PBL also explains the effectiveness of this model in increasing student participation and learning outcomes. By providing authentic and meaningful assignments, students are motivated to actively engage in the learning process (Arends, 2012). Therefore, the increase in the activeness score from 55 to 75 and the average learning outcome from 65 to 85 showed that PBL succeeded in creating a learning environment that supports the development of high-level thinking skills as well as the internalization of mutual respect values in elementary school students.

This study shows similarities with the results of previous research which stated that the Problem Based Learning (PBL) model is effective in increasing student activity and learning outcomes (Trianto, 2010; Suprijono, 2013). Like previous research, the application of PBL in this study also succeeded in encouraging students' active involvement in group discussions, problem solving, and the development of critical thinking skills. However, what

distinguishes and becomes a novelty in this study is the application of PBL to the material "The Beauty of Mutual Respect" in the subject of Islamic Religious Education (PAI), which has not been widely researched before. In addition, this study pays special attention to the internalization of character values such as tolerance and cooperation through contextual learning. Significant results—an increase in average activity scores from 55 to 75 and learning outcomes from 65 to 85—prove that PBL can be effectively implemented at the primary school level to integrate academic and moral aspects. In contrast to some previous studies that focused more on the purely cognitive realm, this study emphasizes the importance of using authentic problems relevant to students' daily experiences as the foundation for the development of their social attitudes. Thus, these findings make a new contribution to the use of PBL not only as an academic learning strategy, but also as a medium for character formation in basic education.

The findings of this study also provide significant implications in the development of Islamic Religious Education (PAI) learning in elementary schools. The application of the Problem Based Learning (PBL) model has been proven to not only improve learning outcomes, but also strengthen the internalization of character values such as mutual respect and tolerance through a contextual and meaningful learning approach. The results showed that the students' activity score increased from 55 to 75 and the average learning outcome increased from 65 to 85 after the implementation of PBL gradually in two cycles. This shows that PBL is able to create a more interactive, collaborative, and student-centered learning process, in accordance with the principle of constructivism which states that students build understanding through direct experience (Suprijono, 2013). In the context of PAI, PBL helps students relate religious teachings to the real situation in their surroundings, so that religious values are not only accepted theoretically, but also practiced in daily life (Trianto, 2010). In addition, the role of teachers as facilitators in PBL supports the development of students' critical thinking and communication skills, which are important for early character formation (Arends & Kilcher, 2010). Therefore, these findings recommend that PBL be integrated into the PAI learning strategy in elementary schools to improve the quality of religious education while strengthening students' moral and social development.

F. Conclusion

Based on the results of the Classroom Action Research (PTK) conducted in two cycles regarding the application of the Problem Based Learning (PBL) model to improve student activity and learning outcomes in the material "The Beauty of Mutual Respect" in grade V of SD Negeri Srondol Wetan 04 Semarang City, it can be concluded as follows: (1) The application of the Problem Based Learning (PBL) Learning Model at SD Negeri Srondol Wetan 04 is carried out by applying syntax in the Problem Based Learning Model. The Problem Based Learning model provides space for grade V students of SD Negeri Srondol Wetan 04 to learn independently, critically, and collaboratively. Students are given the opportunity to find solutions to problems relevant to daily life, which ultimately improves their motivation and learning outcomes. (2) The application of the Problem Based Learning model has been proven to be effective in increasing the activity of grade V students of SD Negeri Srondol Wetan 04. This is shown by the increase in student participation in group discussions, the ability to ask and answer questions, and collaboration between students from the first to the second cycle. The activity of students who were previously passive began to show a significant increase, where most students were able to be actively involved in the learning process. The learning outcomes of grade V students of SD Negeri Srondol Wetan 04 have also increased significantly. In the first cycle, some students were still below the Minimum Completeness Criteria (KKM), but in the second cycle, most students had achieved scores above the KKM. This shows that the PBL learning model is able to help students better understand the material taught and apply their knowledge in problem solving.

This research has several limitations, such as the relatively short duration of

implementation and the number of subjects limited to one class in one elementary school. In addition, reliance on teacher observation in measuring student activity can affect the objectivity of the data. Nevertheless, the results of this study show that the PBL model is effective in increasing student activity and learning outcomes. For further research, it is recommended to expand the sample to a wider school level and extend the implementation time to obtain more comprehensive data. In addition, it is necessary to develop a more objective instrument to measure student activity consistently. With these improvements, the implementation of PBL can be more optimal in improving the quality of PAI learning while forming a character of mutual respect in early childhood students.

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