

## Application of Problem Based Learning Methods in Improving Learning Outcomes of Marriage in Islam at SMK Negeri 1 Bandar Masilam

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**Abstract:** This study aims to analyze the effectiveness of the *Problem Based Learning* (PBL) learning method in improving student learning outcomes on marriage materials in Islam at SMK Negeri 1 Bandar Masilam. The PBL method is applied to provide a problem-solving-based learning experience that is contextual and relevant to real life, so it is expected to improve students' understanding in more depth. This study uses a quantitative approach with an experimental method, where data is collected through learning outcome tests, observations, and questionnaires. The subjects of the study were students studying the material of marriage in Islam, which was divided into experimental and control groups. The results of the study show that students who learn with the PBL method have a better understanding compared to students who use conventional methods. In addition, this method also increases students' active involvement in the learning process as well as develops critical and analytical thinking skills in understanding the concept of marriage in Islam. Thus, the application of the PBL method has proven to be effective in improving learning outcomes and can be used as an alternative innovative learning strategy in Islamic Religious Education subjects.

**Keywords:** *Problem Based Learning*, learning outcomes, marriage in Islam, active learning.

### INTRODUCTION

Islamic Religious Education (PAI) has a crucial role in shaping students' character and understanding of Islamic values. However, challenges in PAI learning often arise, such as the lack of active participation of students and low critical thinking skills. This can hinder the internalization of religious values that are essential for the development of students' character.

One of the approaches that is considered effective to overcome these problems is *Problem Based Learning* (PBL). PBL is a learning model that emphasizes real problem-solving as a context for students to learn to think critically and acquire knowledge. In the context of PAI, the application of PBL can help students relate the subject matter to real-life situations, thereby increasing their relevance and understanding of the material being taught.

Research by Suraiya (2021) shows that the application of PBL in PAI learning can improve students' critical thinking skills. The study emphasizes that PBL encourages students to be more active in the learning process and be able to develop their analytical skills.

In addition, research by Niam (2015) shows that the application of PBL in learning the Qur'an Hadith at Madrasah Aliyah Nurul Ummah Kotagede Yogyakarta has a positive impact on the internalization of Islamic religious values. Students not only understand the material cognitively, but are also able to apply it in daily life.

*Problem Based Learning* (PBL), which is rooted in constructivist theory, emphasizes students' active involvement in solving real problems, thereby encouraging the development of analytical and problem-solving skills. In the context of PAI learning, the application of PBL can help students relate the subject matter to real-life situations, thereby increasing their relevance and understanding of the material being taught.

The implementation of PBL in PAI learning is also in line with efforts to improve higher-order *thinking skills* (HOTS). HOTS-based learning aims to develop students' ability to analyze, evaluate, and create, which is indispensable in understanding and practicing religious values critically and reflectively.

However, the implementation of PBL in PAI learning requires the readiness and competence of teachers in designing and managing problem-based learning. Teachers must be able to choose relevant and challenging problems, as well as guide students in the problem-solving process without providing solutions directly. This demands a paradigm shift from traditional teaching to more student-centered learning facilitation.

Thus, the integration of PBL methods in PAI learning not only improves learning outcomes, but also prepares students to face life's challenges with critical and creative thinking skills. Effective implementation of PBL can produce a generation that is not only knowledgeable, but also able to apply Islamic values in real life wisely and reflectively.

## **METHODS**

This study uses a quantitative approach with an experimental method. The research design applied is *quasi-experimental* with a *pretest-posttest control group design* model. In this design, there are two groups, namely the experimental group that gets learning using *the Problem Based Learning* (PBL) method and the control group that gets learning using conventional methods. The research was conducted at SMK Negeri 1 Bandar Masilam with the research subject of students who studied marriage material in Islam in the subject of Islamic Religious Education (PAI).

The data sources in this study consist of primary data and secondary data. Primary data was obtained through learning outcome tests (*pretest* and *posttest*), observation of student activities during the learning process, and questionnaires to find out students' responses to the application of the PBL method. Secondary data were obtained from scientific journals, reference books, and previous research that are relevant to the application of the PBL method in PAI learning.

The collected data was analyzed using inferential and descriptive statistical techniques. The paired *sample t-test statistical test* was used to measure the significance of the difference

in learning outcomes between the experimental group and the control group before and after the treatment. Descriptive analysis was used to interpret the results of observations and questionnaires to understand the effectiveness of PBL methods in increasing student engagement in learning. The results of this analysis will be the basis for drawing conclusions about the effectiveness of the PBL method in improving students' understanding of marriage material in Islam.

## RESULTS

The results of the study show that the application of *the Problem Based Learning* (PBL) method has a positive impact on improving student learning outcomes in marriage material in Islam. Based on the results of *the pretest* and *posttest*, there was a significant difference between the experimental group that used the PBL method and the control group that used the conventional learning method.

In addition, observations during the learning process showed that students in the experimental group were more active in participating in discussions, able to ask critical questions, and more motivated in completing problem-based tasks. Students in the experimental group showed higher enthusiasm in learning compared to students in the control group.

The results of the questionnaire also support these findings. Most of the students in the experimental group stated that the PBL method helped them understand the concept of marriage in Islam better because the problem-based learning approach made the material more relevant to daily life.

The following table presents the data of *the pretest* and *posttest* results of both groups:

Group	Installment- installment Pretest	Posttest installment	Increase (%)
Experiment (PBL)	60	85	25
Control (Conventional)	62	72	10

In addition, observational data regarding student involvement in class discussions also showed significant differences between the two groups:

Student Engagement Aspects	Experimental Group (%)	Control Group (%)
Be active in discussions	85	50
Ask a question	78	45
Complete tasks	90	65

Meanwhile, the results of the questionnaire regarding students' perception of the learning methods used also show quite striking differences:

Student Perception	Experimental Group (%)	Control Group (%)
Understand the material better	90	65
Feel more motivated	88	60
Likes the method used	92	70

### Data Verification

To ensure the validity and reliability of the data, several verification steps are carried out. First, data triangulation is used by comparing test results, observations, and questionnaires to see the consistency of the findings. Second, reliability tests were carried out on research instruments, especially questionnaires, using the Alpha Cronbach test to ensure that the question items had good internal consistency.

Third, a statistical validity test with a *paired sample t-test* was used to ensure that the increase in learning outcomes that occurred in the experimental group was statistically significant. The test results showed a significance value (p-value) < 0.05, which indicates that the PBL method has a significant impact on student learning outcomes.

In addition, reflections from teachers and students were also taken to understand the challenges faced in the application of the PBL method. Some students mentioned that they needed more guidance in understanding concepts before being given problem-based assignments. The teacher also stated that the application of this method requires more careful preparation in designing problem scenarios that are in accordance with the learning objectives.

### Research Implications

The findings of this study show that the PBL method not only improves student learning outcomes, but also encourages them to be more active in learning. Therefore, teachers are advised to start integrating PBL methods in Islamic Religious Education subjects or other subjects that require deep understanding and critical thinking skills.

However, there are several challenges in the application of this method, such as the readiness of teachers and students, as well as limited time in completing problem-based tasks. Therefore, further research is needed to explore more effective strategies in implementing PBL in various educational contexts.

## DISCUSSION

Data validation in this study was carried out to ensure that the results obtained really reflect the effectiveness of the Problem Based Learning (PBL) method in improving student learning outcomes. Validation is carried out through three main steps, namely data triangulation, reliability test, and statistical validity test. Data triangulation was carried out by comparing the results of pretest-posttest, observation of student involvement, and questionnaires regarding student perceptions of learning methods. By comparing these different data sources, it was found that the results had strong consistency. Students in the experimental group showed significant improvements in material comprehension, active participation in discussions, and higher motivation to learn compared to the control group.

Reliability tests were carried out on research instruments, especially questionnaires, using the Alpha Cronbach test. The test results showed an Alpha Cronbach value of 0.85, which is above the minimum limit of 0.70. This shows that the questionnaire has a high level of reliability and can be trusted as a measurement tool in this study. Meanwhile, the statistical validity test using the paired sample t-test was carried out to test the difference between the pretest and posttest scores in the two groups. The test results showed that the significance

value (p-value) was  $< 0.05$ , which means that there was a significant difference between before and after the application of the PBL method, especially in the experimental group.

The validation results show that the data obtained in this study has a high level of validity. Triangulation of the data revealed that the results of the pretest and posttest showed a significant increase in the experimental group, from an average of 60 to 85, an increase of 25%. Observations also showed that 85% of the students in the experimental group were active in the discussion, compared to 50% in the control group. In addition, a questionnaire given to students showed that 90% of students felt the PBL method helped their understanding, compared to 65% of students in the control group. In terms of reliability tests, the Alpha Cronbach score of 0.85 confirms that the research instrument has a high level of reliability. The statistical validity test also showed that the paired sample t-test produced a p-value of 0.05, which means that the learning outcomes in the experimental group were statistically significant.

With the results of this strong validation, it can be concluded that the PBL method is effective in improving student learning outcomes on marriage material in Islam. This supports previous studies that show that the PBL method can improve students' critical thinking skills, conceptual understanding, and learning motivation. However, although the PBL method has proven to be effective, this study also found that this method requires higher teacher and student readiness than conventional learning methods. Some students stated that they had difficulty adapting to problem-based learning because they were previously familiar with the lecture method. Therefore, more intensive mentoring is needed, especially for students who still lack confidence in completing problem-based tasks.

Overall, the validation results show that the PBL method can be applied effectively in Islamic Religious Education learning, especially for materials that require deep conceptual understanding. With good planning and adequate support, this method can be an innovative and useful learning strategy in improving the quality of Islamic education in schools.

## **CONCLUSION**

Based on the results of the research, it can be concluded that the application of the Problem Based Learning (PBL) method is effective in improving student learning outcomes on marriage materials in Islam at SMK Negeri 1 Bandar Masilam. These findings are supported by a significant increase in pretest and posttest results in the experimental group, high student involvement in class discussions, and positive responses from students to the learning methods used. In addition, data analysis shows that the PBL method not only improves students' conceptual understanding, but also encourages them to think critically and be more active in learning.

The improvement in learning outcomes was seen from the increase in the average score of students in the experimental group by 25% after the application of the PBL method, compared to only 10% in the control group. In addition, student involvement in the experimental group was also higher, with 85% of students actively participating in class discussions, while in the control group it only reached 50%. The students' perception of the PBL method was also very positive, with 90% of the students in the experimental group feeling that the method helped them understand the material better, while only 65% of the students in the control group said the same. This result was strengthened by statistical validation through the paired sample t-test which showed that the difference in learning outcomes between the experimental and control groups was statistically significant with a p-value  $< 0.05$ .

This study makes an academic contribution by strengthening the evidence that the PBL method can improve the quality of Islamic Religious Education (PAI) learning. With this method, students not only gain a better understanding of the material, but also develop critical thinking, problem-solving, and collaboration skills. Teachers also gain new insights into more interactive and effective teaching methods in increasing student engagement in the learning process.

From a social perspective, the application of the PBL method in learning marriage materials in Islam can have a positive impact on students in real life. A better understanding of

the concept of marriage in Islam helps students in building awareness of the importance of marriage in accordance with religious values. In addition, the critical thinking and problem-solving skills developed through this method can help students in facing social challenges in the future, both in the family, community, and world of work.

Overall, this study shows that the PBL method is an effective and innovative learning strategy that can be applied in various subjects, especially in Islamic religious education. With proper planning and implementation, this method can improve the quality of education as well as provide long-term benefits for students in academic and social aspects.

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