SCHOOLAR: Social and Literature Study in Education
Vol. 5 No. 2 October 2025, Page. 1 - 4
E-ISSN: 2797-0299

Implementation Of Problem-Based Learning To Improve Student Learning Outcomes

Siti Sukowati Wanafaktu Miruki[1*], M. Bagus Ardianto[2], Anggun Wulandari[3]
[1,2]Physics Education, Universitas KH. A. Wahab Hasbullah
[3]Biology Education, Universitas KH. A. Wahab Hasbullah
*Email: mirukie25@gmail.com

ABSTRACT
This study aims to implement and evaluate the effectiveness of the Problem-Based Learning Model (PBL) in improving the learning outcomes of class X Office Management (MP) 1 students on the material of social interaction and dynamics at private vocational secondary schools 1 Jombang. The research method used is a quantitative approach with a pretest-posttest design. The research sample consisted of 34 students who were all used as respondents through saturated sampling techniques. The results of the study showed that there was a significant increase in student learning outcomes after the implementation of the PBL model. The average pretest score of students before problem-based learning was 73, while the average posttest score increased to 82. In addition, students' responses to this learning model were also very positive, with increased motivation and involvement in the learning process. Based on the results of the study, it can be concluded that the implementation of the PBL model is effective in improving student learning outcomes. Therefore, it is recommended that teachers apply this method more often to improve student activity and understanding. In addition, further research is recommended to consider the characteristics and needs of students so that learning can run more optimally.

Keywords: *Problem-Based Learning; Learning Outcomes; Social Interaction; Social Dynamics*

INTRODUCTION
Education is one of the important aspects of human life, especially in supporting community life (Thesa & Rhomy, 2023). National education functions to develop abilities and shape the character and civilization of a dignified nation to educate the life of the nation, aiming to develop the potential of students to become human beings who believe in and fear God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens (Law of the Republic of Indonesia No. 20 of 2003).

The success of education in a school depends on the ongoing teaching and learning process in the classroom. This requires the involvement of teachers and students in their activities to meet predetermined standards. Learning is a reciprocal relationship that occurs between teachers and students in order for national education to be realized. The involvement of students in active learning activities is emphasized more in directed learning so that various knowledge is obtained that is learned holistically, meaningfully, authentically, and actively (Effendi et al., 2021). If the teacher can choose and use an appropriate learning model, then the learning results will be good or can be maximized.

One of the learning models that can be applied is the PBL (Problem-Based Learning) learning model. The PBL (Problem-Based Learning) learning model is a learning approach that involves students in solving real problems as part of the learning process. Mareti & Hadiyanti (2021) emphasized that PBL is a learning model that encourages students to be more active in developing their thinking skills to solve problems, so that students can develop their curiosity. Previous researchers have shown that PBL can improve student learning outcomes in the material of style. In addition, it also shows the effectiveness of PBL in improving science learning outcomes in elementary schools (Nurmasari et al., 2023).

The problem that occurs in class X office management 1 private vocational secondary schools 1 Jombang is that students tend to be less active in responding to problems that occur during the learning process because they still use the lecture method, so that their thinking and problem-solving skills are not honed. Therefore, the need for the use of PBL aims to determine and describe the steps of implementing the PBL (Problem-Based Learning) model in improving student learning outcomes in the material of Social interaction and dynamics in class X office management 1 at private vocational secondary schools 1 Jombang. This study is expected to contribute to the development of more effective learning methods in improving student learning outcomes, especially in learning Social Interaction and Dynamics in class X office management 1 at private vocational secondary schools 1 Jombang.

METHOD

The method used in this study is a quantitative approach. The study involved one class sample, so the research design used was a Pretest-Posttest Design. This study aims to consider whether there is an increase in learning outcomes by implementing the Problem-Based Learning (PBL) model. Pretest and posttest were conducted to obtain research data on learning outcomes of diverse material in the subject of Social Interaction and Dynamics.

The place of this research is at private vocational secondary schools 1 Jombang. The subjects in this study were class X Office Management students of private vocational secondary schools 1 Jombang. While the object of this study is the Implementation of Problem-Based Learning (PBL) offline in learning Social Interaction and Dynamics Material to improve learning outcomes. This research was conducted from February to March 2025 at the private vocational secondary school 1 Jombang.

The sample used in this study was 34 students, consisting of 33 females and 1 male. The sampling technique used was saturated sampling, which refers to determining the sample by using the entire population as a sample (Al Mawaddah et al. 2021). The research instruments used were interviews, observations, and tests. The test used in this study was a multiple-choice test. Multiple-choice tests were chosen because they can produce objective and easily interpreted data through assessment tables, as well as provide an overview of students' understanding of the material that has been taught. The pretest was used to obtain initial data, and the posttest was carried out with the aim of assessing the final data or learning outcomes of students. The results of these scores were analyzed and interpreted in the indicator table. The table of indicators for achieving learning outcomes is presented below.

Table 1. Outcome Achievement Indicators

Mastery level	Category
90% - 100%	Very high
80% - 89%	High
65% - 79%	Currently
40% - 64%	Low
0% - 39%	Verry low

(Ratna & Kusnul. 2018 in Jumiarti D. & Kurniawati.2023).

In the implementation of research activities, the success of treatment can be seen from the increase in student learning outcomes in the social interaction and social dynamics subjects of class X, office management 1, private vocational secondary schools 1, Jombang.

RESULT AND DISCUSSION

Result

The results regarding the increased learning outcomes by implementing the Problem-Based Learning learning model in class X Office Management at private vocational secondary schools 1 Jombang are presented through pretest and posttest data. The data includes pretest scores (before treatment is given) and posttest scores (after treatment is given).

Table 2. Learning Outcomes

N	Minimum value	Maximum value	Average
Pre-test	35	75	73
Post-test	60	100	82

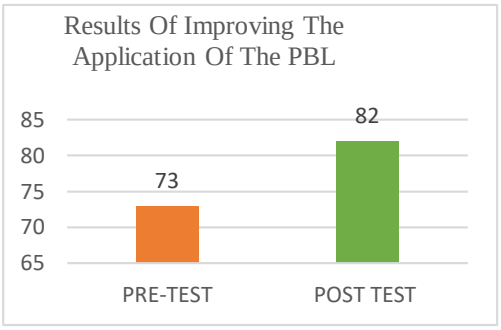

Chart 1. Results of improving the application of the PBL model in class X MP 1

From the chart above, it can be seen that the results before and after the implementation of PBL have increased, and have a good response from students. Students have a good level of thinking and problem-solving, and are active in answering the questions given. From the explanation above, there is an increase from before being given treatment and after being given treatment, both in terms of increasing individual and classical completeness, increasing teacher and student activity, and increasing teacher ability to manage learning. So it can be concluded that the implementation of the PBL (Problem-Based Learning) learning model has succeeded in making students interested and enthusiastic in participating in learning.

The results of this study indicate that the application of the problem-based learning model (PBL) is able to improve student learning outcomes in the material of Social Interaction and Dynamics in class X office management of private vocational secondary schools 1 Jombang. Based on pretest and posttest data, there was a significant increase in student learning outcomes. Before being given treatment, the average pretest score was 73, with the lowest score of 35 and the highest score of 75. After the PBL model was applied, the average score increased to 82, with the lowest score of 60 and the highest score of 100. So that it is in accordance with the learning outcome achievement indicator, namely the pretest score of 73, which has a moderate category, and the posttest score of 82, which has a high category. This increase shows the effectiveness of PBL in improving students' understanding and critical thinking skills.

This increase is in line with research conducted by Nurmasari et al. (2023), which states that PBL is able to improve students' conceptual understanding through active involvement in authentic problem-solving. In addition, research by Effendi et al. (2021) also confirms that the PBL model can improve student learning outcomes through more meaningful and interactive learning experiences. In the context of social learning, Johnson & Johnson (2022) explain that problem-based learning helps students develop social and cooperation skills, which are very important in social interaction material.

In addition to academic results, students' responses to the implementation of PBL were also very positive. The majority of students showed increased motivation in learning, as indicated by their increased participation in group discussions and completion of assignments. According to Vygotsky's (1978) theory of social learning, social interaction in a collaborative learning environment can accelerate students' cognitive development. Therefore, the PBL model provides a more interesting and challenging learning environment, so that students are more active in understanding the concept of social interaction in more depth.

In addition, students' responses to the application of the problem-based learning model, Problem-based learning (PBL), tend to be positive. This positive response indicates that students are enthusiastic about the learning provided. This can motivate students to increase their attention and make them more actively involved in a fun and meaningful learning experience. This motivation encourages students to carry out learning activities, as observed by observers. High student responses, indirectly, can help them gain a more comprehensive understanding of the concept.

CONCLUSIONS

Based on the results of the study, it can be concluded that the implementation of Problem-Based Learning (PBL) is effective in improving student learning outcomes in the material of Social Interaction and Dynamics. This is evidenced by the increase in the average student score from 73 (moderate) to 82 (high) according to the table in the method, which shows an increase in student understanding after the implementation of this learning model. In addition, student responses to the PBL model are also very positive, indicated by their increased motivation and active involvement in learning.

From these findings, it is recommended that teachers apply the PBL method more often in learning, especially in subjects that require an in-depth understanding of social dynamics. In addition, further research can explore how the implementation of PBL can be adjusted to the characteristics and needs of individual students so that learning can run more optimally and inclusively.

REFERENCES

Al Mawaddah, F., Suprapto, N., & Wasis. (2021). *Pengaruh model pembelajaran inkuiri terbimbing terhadap keterampilan proses sains siswa*. Jurnal Ilmiah Pendidikan Fisika, 10(1), 1–9.

Effendi, A., Susilo, H., & Suwono, H. (2021). *Penerapan model problem based learning (PBL) untuk meningkatkan hasil belajar siswa*. Jurnal Pendidikan Biologi Indonesia, 7(1), 23–30. https://doi.org/10.22219/jpbi.v7i1.16356

Johnson, D. W., & Johnson, R. T. (2022). *Cooperation and the use of technology*. In D. W. Johnson & R. T. Johnson, *Learning Together and Alone: Cooperative, Competitive, and Individualistic Learning* (6th ed.). Allyn & Bacon.

Jumiarti, D., & Kurniawati, D. (2023). *Analisis capaian hasil belajar siswa dengan pendekatan scientific*. Jurnal Pendidikan dan Pembelajaran, 12(2), 45–52.

Mareti, N. P., & Hadiyanti, P. (2021). *Pengaruh model problem based learning terhadap kemampuan berpikir kritis siswa*. Jurnal Ilmu Pendidikan, 8(1), 34–40.

Nurmasari, A., Haryanto, & Fitriyani, L. (2023). *Efektivitas model pembelajaran berbasis masalah dalam meningkatkan hasil belajar IPA di sekolah dasar*. Jurnal Ilmu Pendidikan Dasar, 10(2), 112–118. https://doi.org/10.21009/JIPD.102.09

Pemerintah pusat.(2003). Undang-undang (UU) tentang Sistem Pendidikan Indonesia. Jakarta [diakses pada hari jumat,26 Mei 2023 Pukul 13.10. Website : UU No. 20 Tahun 2003 tentang Sistem Pendidikan Nasional [JDIH BPK RI])

Thesa, A. R., & Rhomy, H. A. (2023). *Pendidikan dalam perspektif pembangunan bangsa*. Jurnal Pendidikan dan Sosial, 15(1), 15–22.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.