

**THE EFFECTIVENESS OF THE LEARNING MODEL OF PROBLEM  
BASED LEARNING ON THE LEARNING OUTCOMES  
OF BOTTOM PASSING**

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**Abstract**

*The background of this study is the lack of understanding of students about the basic techniques of volleyball, one of them is about the bottom passing. In the learning process. The teacher always gives conventional learning model. It is like only give instruction so it makes the students less enthusiastic in participating in learning. So, the students just reach the learning value of volleyball bottom passing which is still much below the KKM (70), which is 12 students while those above the KKM (75) or complete A total of 15 students. The purpose of this study is to determine the effectiveness of the problem-based learning model on the learning outcomes of volleyball bottom passing game in grade IV students of SDN 2 Sendangharjo. The type of research used by the researcher in this research is quantitative using a one group pre-test - post-test design. The Population is a fourth grade student of SDN 2 Sendangharjo. with the method of taking saturated samples (all populations are made into samples), which is 23 students. The instrument used in this study is a volleyball bottom test pass. Data calculations are assisted by using Microsoft excel. The results of the study using problem-based learning model in learning to pass bottom the volleyball game increased by 30.43%. From the results of the study, it was explained that the learning method given to each group had an effect from the initial data of complete student data was only 34.78%, 65.22% of incomplete students and the pre-test showed it increased to 60.87% for students who complete. The student who have not completed are 39.13. Meanwhile, in the post-test is 91.30 for students who are in the complete category, while those who have not completed it are 8.70%. The increase can be seen from the results of the pretest of 60.87% to the posttest of 91.30%. The conclusion of this study is that the problem-based learning model is effectively used to improve the learning of passing under the volleyball game in students. The presentation, the learning outcome increased by 30.43%. The suggestion from the researcher to the next researcher is to be able to develop a problem-based learning model to improve the learning of other PJOK materials.*

**Keywords:** *Problem Based Learning, Volleyball Bottom Passing, PJOK Learning*

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## INTRODUCTION

Education is one of the important pillars in the development of a country. The educational process is carried out using awareness and patterned. This is the same as explained by Eska (2018), education aims to develop students' self-potential. In an effort to reduce the unemployment rate, achieving learning goals at an early stage is crucial. The achievement of learning objectives can be realized through the process of learning that will occur in the form of learning outcomes and student motivation (Tya Maya Ningrum et al., 2023).

The implementation of physical education and sports means a long-term investment in efforts to improve the quality of human resources. Therefore, physical education and sports continue to be improved and carried out using patience and sincerity (Metidesiana et al., 2021). Now, there has always been talk about the quality of education and the learning achievement of students in a certain field of science (Arisman & Noviarini, 2021). So, the government together with education experts are trying to further improve the quality of education for the long term, in an effort to improve the quality of human resources, therefore physical and sports continue to be improved and carried out using patience and sincerity (Pratama et al., 2024). Until now, there has always been talk about the quality of education and the learning achievement of students in a certain field of science, so the government together with education experts are trying to further improve the quality of education (Taufik et al., 2021). from Fadhli (2017) "The quality of education is the quality of graduates and services that satisfy those related to Education". The quality of education is very closely related to the quality of students. It is because students mean the central point of the learning process (Okilanda et al., 2021). To support these improvements, education requires the presence of a teacher who able to improve the quality of students (Arisman & Agun Guntara, 2021). The quality of graduates is related to graduates with good grades (cognitive, apektif, and psychomotor) accepted to a higher level who are qualified and have a good personality (Arisman, 2019). Many efforts to reform

education have been carried out by the government, including through seminars, workshops and coaching training in terms of consolidating subject matter and learning methods for exclusive fields of study (Okilanda et al., 2018). There have been many efforts made by the world of education in Indonesia to improve the quality of Indonesian education, especially Physical Education, Sports and Health in schools but it is not shown satisfactory results. It can be seen from the learning process and the results of the students' learning achievements.

The level of passing skills under grade IV of SDN 2 Sendangharjo is still low. This can be seen from the results of the assessment carried out. There are still many students who get scores below the Minimum Completeness Criteria (KKM). It can be seen that the percentage of students who scored above KKM in volleyball bottom passing material was 8 (34.78%), while score below KKM was 15 (65.22%). The role of teachers in improving learning processes and outcomes is very important. It is because can improve lower passing skills in volleyball learning

In order to improve student learning outcomes in Physical Education, Sports and Health, especially in big ball games, classroom action efforts are needed. In this case actions related to bottom passing in volleyball games are carried out using cycles in the application of the Problem Based Learning (PBL) learning model as a suitable model to use. Problem based learning (PBL) is a cooperative learning model that has five steps: orientation of students to problems, organizing students to learn, guiding investigations of 5 individuals or groups, developing and presenting the results of work, and analyzing and evaluating the problem-solving process.

According to Amin, 2017 explained that the first stage is the orientation of students to problems, the teacher explains the learning objectives, explains the necessary needs and motivates students to be involved in the problem-solving activities they choose. The second stage is to organize students to learn. Teachers

help students define and organize learning tasks related to the problem. The third stage is to guide individual and group investigations, teachers encourage students to collect appropriate information, to get explanations and solve problems. The fourth stage is to develop and present the work, the teacher assists students in planning and preparing reports and helps students for various tasks in their groups. The fifth stage is to analyze and evaluate the problem-solving process. The teacher helps students to reflect or evaluate their investigation and the processes they use.

## **METHOD**

Using a quantitative method based on the existence of semantic relationships between the variables being studied. This research method is an experimental research, The model used to find the effect of certain treatments on others under controlled conditions (sugiyono, 2015). The design of this study is a pre-experimental design of this study is One-group pretest-posttest design (Putra et al., 2020). This design involves 1 class, namely an experimental class that is carried out by comparing the results of the pre-test and post-test.

The research was conducted on grade IV students of SDN 2 Sendangharjo with a sample of 23 students. For the pre-test and post-test, the first meeting used Problem Based Learning learning and the second meeting did not use the Problem Based Learning learning model. It is to see the effectiveness of the PBL learning model on the learning outcomes of passing under grade IV of SDN 2 Sendangharjo, the data calculation was assisted by the help of Microsoft excel.

## **RESULT AND DISCUSSION**

After the research was carried out and obtained the results of the pre-test and post-test, the data was processed using the help of Microsoft excel.

**Tabel 1.** Pre Test Results

Category	Pretest
Number of students	23
Average	60
Complete	60,87%

	(14 siswa)
Not yet completed	39,13%
	(9 siswa)

From the results of the pre-test, there was an increase of 60.87% in the completion score and incomplete category there were 39.13% (9 students) with an average of 60 out of 23 students

**Tabel 2.** Post Test Results

Information	Pos-test
Number of Students	23 students
Average	76,6
Complete	91,30% (21 student)
Incomplete	8.70% (2 student)

From the results of the post-test, The students who has complete criteria were 91.30% (21 students) while the students which has incomplete criteria the test were 8.70% (2 students) with an average of 76.6

### Discussion

From the results of the discussion, it was explained that the learning method given to each group has an effect. From the initial data of students who completed only 34.78%, the students who did not complete is 65.22% and the pre-test increased to 60.87% for students who completed. While those who had not completed it were 39.13. Meanwhile, the post-test is 91.30 for students who are in the complete category. The student who have not completed is 8.70%. Based on the results of the discussion, it shows a difference in the accuracy of the bottom passing before and after. The results of the post-test accuracy of the lower passing are higher than the results of the pre-test. It happens because of the treatment or training method provided so that affects the final test or post-test. In the same case appropriate with previous research from (Adi Atmojo, 2022) which states that the teaching model using based learning is appropriate to use in lower passing or bottom passing learning. It is appropriate with research from (M. Evitaningsih, 2024) that the application of the problem-based learning model can improve the results of learning to volleyball underpass in grade V students of SDN 1 Sambu for the 2023/2024 school year.

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## CONCLUSION

Based on the results of the research and discussion, the following research conclusions were obtained: 1) There is a significant influence on the PBL learning model on the learning outcomes of bottom Passing of grade IV students of SDN 2 Sendangharjo. 2) PBL learning is very effective for the results of bottom passing volleyball learning in grade IV SDN 2 Sendangharjo.

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