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# Learning Outcomes Using The Problem-Solving Learning Model Based Learning On The Material Of Volleyball Overhead Passing Class VII. 5 State SMP Negeri 33 Palembang

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## ABSTRACT

The learning outcomes of physical education, sports, and health (PJOK) students are still relatively low due to the lecture method and one-way learning or teacher-centred learning used in learning, making students feel bored and sleepy. This study aims to improve the learning outcomes of physical education, sports, and health (PJOK) students of class VII.5 SMP Negeri 33 Palembang on the material of volleyball overhead passing through the Problem-Based Learning (PBL) learning model with the Teaching at the Right Level (TaRL) approach. This study uses the Classroom Action Research (CAR) method, which is carried out in 2 cycles, and each cycle consists of 2 meetings. The subjects in this study were 31 students of class VII 5 SMP Negeri 33 Palembang, with 14 male students and 17 female students. The data collection technique in this study used a written test technique. The data analysis technique used is quantitative descriptive analysis. The results of the analysis showed that student learning outcomes increased from 54.83% in cycle I to 87.09% in cycle II. Based on the research results, it can be concluded that the Problem Based Learning (PBL) learning model with the Teaching at the Right Level (TaRL) approach can improve the learning outcomes of physical education, sports, and health (PJOK) of class VII.5 students of SMP Negeri 33 Palembang on the volleyball overhead passing material.

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## INTRODUCTION

School is a place where learning and teaching activities can take place through a gradual educational process (Aang & Muhaemin, 2020). Education is a form of effort to develop and grow the potential in humans through the teaching process (Panjaitan et al., 2017). Education can also be interpreted as an effort to create a learning atmosphere and learning process so that students have spiritual strength, religious values, self-control, personality, intelligence, noble morals, and skills needed by society, nation, and state (Farida et al., 2019).

Education is implemented as a process of acculturation and empowerment of students that continues throughout life (Priyanti & Nurhayati, 2023). Education includes

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all forms of learning experiences that occur in the environment and in various life situations that influence the development of the individual (Yuliana, 2023). Education is very important in life because it is one of the main indicators in assessing the level of progress and development of a nation (Desriyanti & Lazulva, 2016).

Learning is an activity that cannot be separated between students who learn and teachers who teach, where in the process the teacher acts as a facilitator and also a motivator who determines the success of learning activities (Zahroh, 2018). The learning process carried out by teachers in schools is learning that is carried out with structured planning and is carried out consciously (Nur Rezky Mauliana J et al., 2024).

Physical education is a subject that can help students improve critical thinking patterns, help stabilize emotions, and foster positive values contained in sports activities such as discipline, honesty and sportsmanship (Sutopo & Sukoco, 2020). Physical Education has a very important role, namely providing space for students to directly engage in systematic learning experiences through physical activities (Mubaligin et al., 2018). Conscious learning of Physical Education can stimulate the growth and development of students by emphasizing movement activities so that students have healthy bodies in terms of action, mentality, and behaviour. Physical Education, Sports and Health (PJOK) is a school subject that packages or becomes a platform for children to get to know various kinds of movements and games.

Student learning outcomes play a very important role in the learning process because they can show the extent of students' understanding and ability in constructing the concepts they find during the learning process. However, the reality in the field shows that student learning outcomes do not always show good achievements and do not follow expectations (Murdani et al., 2023). Various factors influence student learning outcomes, including the condition of the learning environment, the level of learning motivation, and the learning methods used by the teacher (Rais et al., 2023).

Based on the results of the cognitive diagnostic test, data obtained showed that students in class VII.5 were divided into two ability categories, namely, 9 people were at the advanced ability level, and 22 people were at the ability level that still needed guidance. In the learning process in the classroom, teachers still apply lecture methods and teacher-centred learning. This situation causes low student participation during learning activities, so that students tend to feel bored and less interested. As a result, the learning outcomes achieved by students are not optimal, as evidenced by the large number of students who have not achieved the minimum passing grades.

Seeing these problems, a learning model and approach are needed that can accommodate differences in student abilities and create a student-centred learning process. One strategy that can be applied is the use of the Problem-Based Learning (PBL) learning model combined with the Teaching at the Right Level (TaRL) approach. The PBL learning model is an approach that confronts students with real problems that are relevant to the subject matter. In its implementation, the PBL model is expected to be able to develop students' abilities in solving problems, thinking critically, working collaboratively, communicating effectively, and finding and processing information

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(Ferdiansyah, 2022). Meanwhile, the TaRL approach is a learning approach that adjusts teaching methods based on the level of student ability. This approach encourages students to be more actively involved in learning activities, which ultimately has a positive impact on improving their learning outcomes (Edizon & Maharani Zan, 2023).

Based on the description of the problems above, the researcher intends to solve the learning problems by conducting Classroom Action Research entitled "Improving Student Learning Outcomes Using the Problem-Based Learning Model on Volleyball Upper Pass Material for Class VII.5 SMP Negeri 33 Palembang".

## METHODS

This research is a Classroom Action Research (CAR) which aims to make improvements in the learning process to improve student learning outcomes. The subjects in this study were students of class VII.5 of SMP Negeri 33 Palembang, consisting of 31 students. The data analysis technique used in this study is quantitative descriptive analysis. The research was carried out in two cycles, which included four stages, namely the planning stage, implementation stage, observation stage, and reflection stage.

In this Classroom Action Research, each learning outcome achieved by students in each cycle will be analysed. If the student's learning outcome has reached the Minimum Completion Criteria (KKM), which is 75, then it indicates that the student has succeeded and is considered complete in learning. To calculate the value and average learning of students, you can use the following formula:

$$Nilai = \frac{Jumlah\ skor\ yang\ diperoleh}{Jumlah\ skor\ maksimal} \times 100 \qquad (1)$$

To calculate the percentage of learning completion classically, the following formula is used:

$$P = \frac{Jumlah\ peserta\ didik\ yang\ tuntas}{Jumlah\ peserta\ didik} \times 100\% \qquad (2)$$

Students are said to have completed their studies if they have achieved a score $\geq$ 75and are declared successful if they have achieved classical completeness of $\geq 80\%$.

## RESULTS AND DISCUSSION

### Result

The results of this study indicate that there is an increase in student learning outcomes after participating in Physical Education, Sports, and Health (PJOK) learning on volleyball overhead passing material by implementing the Problem-Based Learning (PBL) learning model combined with the Teaching at the Right Level (TaRL) approach. The selection of the PBL learning model with the TaRL approach in this study is based on the results of the analysis of cognitive diagnostic tests that have been conducted previously. From the results of the diagnostic test, it is known that in class VII.5, there are two groups of abilities, namely students with high abilities (proficient) and students

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who still need guidance, with significant differences in ability levels between the two. The grouping of students based on the level of ability can be seen in the following table:

**Table 1.**

Student Categories Based on Cognitive Diagnostic Test Results

| No | Mark | TaRL Category | Number of Students |
|---|---|---|---|
| 1. | 70 – 100 | Very Proficient | 0 |
| 2. | 50 – 69 | Proficient | 9 |
| 3. | 0 – 49 | Need Guidance | 22 |
| **Total** | | | **31** |

Based on the table above, it can be seen that 9 students are in the advanced group and 22 students are in the group that needs guidance. Furthermore, students will be grouped based on their ability level, so that students can achieve learning objectives according to their abilities.

The implementation of PTK in cycle I was carried out during two meetings, namely on Monday, March 10, 2025, and Monday, March 17, 2025. Before the implementation of cycle I, the researcher conducted observations to see the initial conditions of the research subjects, class conditions, and prepared a learning design as a reference for carrying out the learning process in class. The teaching module is designed following the curriculum used in class VII, namely the independent curriculum. After the implementation of the PTK cycle was completed, data on student learning outcomes were obtained, which are contained in the following table:

**Table 2.**

Student Learning Outcomes in Cycle I

| No | Mark | Category | Frequency | Percentage |
|---|---|---|---|---|
| 1. | 85 – 100 | Very high | 4 | 12.90% |
| 2. | 65 – 84 | Tall | 13 | 41.93% |
| 3. | 55 – 64 | Currently | 8 | 25.80% |
| 4. | 35 – 54 | Low | 3 | 9.67% |
| 5. | 0 – 34 | Very Low | 3 | 9.67% |
| **Total** | | | **31** | **100%** |

Based on the table above, it can be seen that the learning outcomes obtained by students in cycle I were, 12.90% of students who obtained very high scores, 41.93% of students who obtained high scores, 25.80% of students who obtained medium scores, 9.67% of students who obtained low scores, and 9.67% of students who obtained very low scores.

Meanwhile, the class completion values in cycle I are contained in the table below:

**Table 3.**

Class Completion in Cycle I

| Class Completion | Criteria | Frequency | Percentage |
|---|---|---|---|
| ≥ 75 | Completed | 17 | 54.83% |
| < 75 | Not Completed | 14 | 45.16% |

Based on the table above, it can be seen that in cycle I, 17 students met the completion criteria with a percentage of 54.83% and 14 students did not meet the completion criteria with a percentage of 45.16%.

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The implementation of Classroom Action Research (CAR) in cycle I showed an increase, where students began to get used to the stages in the *Problem-Based Learning* (PBL) learning model, although there were still some shortcomings in the learning process. In previous learning, students were not fully involved in observing problems and were not active in the problem-solving process. However, in this cycle I, the grouping of students has been done based on the level of ability possessed by each individual. Grouping based on similar ability levels allows group discussions to run more effectively and smoothly. With the same understanding in one group, students can complete the Student Worksheet (LKPD) based on problems given by the teacher. This success is also reflected in the learning outcomes at the end of cycle I learning, where the percentage of learning outcome completion increased to 54.83%, with 17 out of 31 students reaching the completion category.

The implementation of PTK in cycle II was carried out in two meetings, namely on Monday, March 17, 2025, and Monday, March 24, 2025. All learning activities were carried out by following the previously designed teaching module, while still considering the level of student ability during the learning process in the classroom. After the PTK activities in cycle II were completed, data were obtained regarding student learning outcomes, which are presented in the following table:

**Table 4.**
Student Learning Outcomes in Cycle II

| No | Mark | Category | Frequency | Percentage |
|---|---|---|---|---|
| 1. | 85 – 100 | Very high | 20 | 64.51% |
| 2. | 65 – 84 | Tall | 7 | 22.58% |
| 3. | 55 – 64 | Currently | 4 | 12.90% |
| 4. | 35 – 54 | Low | 0 | 0% |
| 5. | 0 – 34 | Very Low | 0 | 0% |
| **Total** | | | **31** | **100%** |

Based on the table above, it can be seen that the learning outcomes obtained by students in cycle II were 64.51% of students who obtained very high scores, 22.58% of students who obtained high scores, and 12.90% of students who obtained medium scores.

Meanwhile, the class completion values in cycle II are contained in the table below:

**Table 5.**
Class Completion in Cycle II

| Class Completion | Criteria | Frequency | Percentage |
|---|---|---|---|
| ≥ 75 | Completed | 27 | 87.09% |
| < 75 | Not Completed | 4 | 12.90% |

Based on the table above, it can be seen that in cycle II, 27 students met the completion criteria with a percentage of 87.09% and 4 students did not meet the completion criteria with a percentage of 12.90%.

The implementation of PTK in cycle II obtained better results than the previous cycle, as evidenced by systematic learning, students following teacher directions, and students together with their groups completing the problems in the LKPD well. This was

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also evidenced by the learning outcomes at the end of cycle II learning, where student learning outcomes experienced an increase in the percentage of learning outcome completion by 87.09% where 27 out of 31 students got the complete category.

The differences in student learning outcomes in Cycle I and Cycle II are shown in the table below:

**Table 6.**
Completion in Cycle I and Cycle II

| Cycle | Percentage |
|---|---|
| Cycle I | 54.83% |
| Cycle II | 87.09% |

Based on the table above, it can be seen that there is a significant increase in student learning outcomes from cycle I and cycle II. In cycle I, student learning outcomes in class completion were 54.83 % while in cycle II, student learning outcomes in class completion were 87.09%. Student learning outcomes increased by 32.86% after conducting classroom action research for two cycles or four meetings.

## CONCLUSION

Based on the results of the research that has been carried out, it can be concluded that the application of the Problem Based Learning (PBL) learning model combined with the Teaching at the Right Level (TaRL) approach can improve the learning outcomes of students in the Physical Education, Sports, and Health (PJOK) subject of class VII.5 SMP Negeri 33 Palembang on the volleyball overhead passing material. This can be seen from the increase in the percentage of student learning completion, namely from 54.83 % in cycle I to 87.09% in cycle II. Overall, the learning outcomes of PJOK subjects for class VII 5 students showed an increase of 32.86 % from cycle I to cycle II.

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