



## Improving Water Introduction Learning Outcomes at SD Negeri Bubutan IV Surabaya Using Problem-Based Learning Model

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Received:1 October 2023, Accepted:12 October 2023, Published:31 October 2023

### ABSTRACT

**Objectives.** The primary objective of this research is to explore how the problem-based learning (PBL) model can be implemented to improve students' achievement in the basics of swimming and enhance their learning outcomes. Additionally, the research aims to investigate the impact of the performance method on students' motivation to learn the basics of swimming. By implementing PBL and performance methods, this research aims to provide a more engaging and effective learning experience for students, thus enhancing their achievement and proficiency in the basics of swimming.

**Materials and methods.** This study aims to investigate the academic performance of fifth-grade students at SD Negeri Bubutan IV, Surabaya. The study employed an action research methodology, comprising two rounds, each consisting of two stages - design and implementation. The research seeks to address the challenges of low student engagement and proficiency in swimming, which can have negative impacts on their overall wellbeing. The research data was gathered from the results of tests, practices, observation sheets, and learning activities. The focus of this research is on reflection and revision to enhance the learning outcomes of the students.

**Results.** The analysis results indicate that there was a significant increase in the learning achievement of students from cycle I to II. Specifically, there was a rise from 48.72% in cycle I to 87.18% in cycle II for the psychomotor domain. Similarly, there was a notable increase in the active domain, with cycle I recording 69.23% and cycle II recording 94.87% achievement. These findings suggest that the teaching approach implemented during the study was effective in enhancing students' learning outcomes.

**Conclusion.** The findings of this research suggest that the demonstration method can have a positive impact on students' learning motivation. This is particularly true for students in Class V at Elementary School State Bubutan IV in Surabaya. Additionally, problem-based learning models can be used as an alternative teaching approach in Physical Education (PJOK). These results indicate that educators can benefit from using a combination of these methods to enhance student engagement and motivation in the classroom.

**Keywords:** Learning Outcomes, Problem Based Learning, Learning Motivation

DOI: 10.35724/mjpes.v6i1.5572

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## Introduction

Basically, in the life of a nation, education plays a very important role in ensuring the development and survival of the nation. Directly or indirectly, education is a conscious effort to prepare children to grow and develop through activities, instruction, instruction and training for future life. (Syawaly & Hayun, 2020) . Of course, this is a shared responsibility between the government, community members and parents. Achieving this success requires support and active participation from all parties. Teachers have a tough task to achieve national education goals, namely improving the quality of Indonesian people, complete human beings who have faith and devotion to God Almighty, have noble character, are disciplined, hardworking, tough, responsible, independent, intelligent and capable and are physically and mentally healthy. , must also be able to strengthen and deepen feelings of love for one's country, strengthen the national spirit and a sense of loyalty to society (Hakim et al., 2016) . In this view, national education must be able to achieve development goals human and self-development and be responsible for nation development.

Swimming is one type of sport taught at school. In swimming there are many elements of movement and this swimming sport is very good for body formation and fitness, because swimming helps all parts of the body move from head to toe (Arifin, 2013) . We often encounter almost every time where there is a swimming pool there will definitely be people swimming, whether in pools that do not have standards or in pools that have national standards (Erni & Roepajadi, 2020) . Even on normal days there are always people swimming in the swimming pool, on holidays the swimming pool will usually be filled with people.

This proves that sports activities are not carried out under the orders or coercion of other people. However, it arises by itself, then evaluate it, try and feel the changes to improve health which can finally be accepted as part of life, living to maintain and improve one's own health (Yudha Prawira et al., 2021) . Seeing the above reality, it is appropriate to make every effort to develop and cultivate sports achievers as much as possible. This is also mentioned in the GBHN, MPR Decree No II/MPR/1998 which reads; "Physical education and sports need to be further improved and popularized as a way of fostering physical and spiritual health for every member of society. Furthermore, achievements in various sports need to be improved." (Saputra et al., 2020).

Based on the descriptions above, this sport is an interesting branch to study together, so that the development of Indonesian swimmers is increasingly of interest to the public and at the same time they are able to sit on an equal footing with swimming athletes from abroad. Based on this fact, in this research the researcher chose the title "Efforts to Improve Learning

## Results of Water Introduction Activity Material Using Learning Models Problem Based Learning at Bubutan IV Public Elementary School, Surabaya

### Materials and Methods

#### *Study participants*

The participants in this research comprised 31 students from class V at SD Negeri Bubutan IV in Surabaya, consisting of 15 males and 16 females. The research was conducted at the aforementioned school.

#### *Statistical analysis*

The data for this research was gathered through various methods, including observation of student and teacher activities, questionnaires, motivation assessments, and practice tests. This study utilized descriptive qualitative analysis techniques. To evaluate the success rate of students after each round of learning, a practical test was conducted. The analysis was performed using simple statistical calculations:

##### 1. To assess practice tests

Researchers add up the scores obtained by students which are then divided by the number of students in the class so that the average required for practical tests can be formulated (Tajulfitri, 2019)

$$\bar{X} = \frac{\sum X}{\sum N}$$

With  $\bar{X}$  = Average value

$\sum X$  = The sum of all student grades

$\sum N$  = Number of students

##### 2. For complete learning

There are two categories of learning completeness: individual and classical. According to the instructions for implementing teaching and learning (Dharmayana et al., 2012), a student is considered to have completed their learning when they achieve a score of 65% or a grade of 65 in class. To calculate the percentage of learning completeness, the following formula is used:

Percentage of Learning Completeness = (Score or Grade Achieved / 65) \* 100:

$$P = \frac{\sum \text{Siswayangtuntasbelajar}}{\sum \text{siswa}} \times 100\%$$

### ***Statistical organization***

The research employs the Problem Based Learning (PBL) model, which is a student-centered learning approach that emphasizes the development of critical thinking skills and problem-solving abilities. The more actively students engage in these skills, the more proficient they become in solving problems (Fitriady et al., 2020). The learning model challenges students to “learn to learn”, working in groups to find solutions to real-world problems. And a learning approach where students face authentic (real) problems to build their own knowledge, develop high-level inquiry skills and abilities, help students become independent and increase self-confidence. (Meilasari et al., 2020) . In implementing PBL (Problem Based Learning), there are 5 main steps that must be started by presenting the problem to students. After that, the learning method ends with the presentation and analysis of students' work (Hotimah, 2020). The following are the steps for implementing problem-based learning:

Here is a clearer version of the text with corrections made for any spelling, grammar, and punctuation errors: In the problem-based learning approach, the teacher has a crucial role in guiding and supporting the students throughout the entire process. The process begins with the teacher explaining the learning objectives, providing information on the necessary equipment and motivating the students to actively participate in solving the chosen problem. Once the problem is chosen, the teacher assists the students in defining and organizing the related learning tasks. Then, the teacher guides the students in collecting relevant information and conducting experiments to obtain explanations and solve the problem. Once the students have completed their investigations, the teacher helps them plan and prepare an appropriate report format to present their findings. This can be in the form of written reports, videos, or other models. Finally, the teacher assists the students in reflecting and evaluating the investigations and processes they have completed. By doing so, the teacher can help the students analyse and evaluate the problem-solving process, which can help them in their future endeavours.

### **Results**

At two cycles, I engage in general activities that involve learning and teaching through method demonstration and walking through the steps. Although my role as a teacher is still less prominent, providing explanations and directions is necessary, as this model is still being studied and is considered new to students. The results show that the students' practice tests are seen in the following table.

**Table. 1** Practical Test Result

No	Description	Cycle I
1	The Average.	72,31
2	Number of students who have completed their studies.	19
3	Percentage of learning completeness.	48,72

Data obtained from a table above explains that the average value of appearance and presentation of students when applying the method is 72.31, and the level of completeness of learning is 48.72%, which equals to 19 students out of 39 who finished the study. This result shows that it is not rare for students in cycle I to not complete their studies. Students who achieved grades of  $\geq 70$  only account for 48.72%, which is lower than the desired level of completion, i.e. 85%. This is because of a lack of understanding of the teacher's intentions and taking advantage by applying methods and forms of learning models. At the end of the teaching-learning process, students are given periodic tests I to determine the level of success of students in the teaching-learning process. The research data obtained in cycle I are as follows:

**Table 2.** Practical Test Results in Cycle II

No.	Description	Results Cycle II
1	The average score	79.48
2	The number of students who have completed their studies	34
3	Percentage of learning completeness	87.18

The table above shows that the average score for the practical test is 79.48. Out of the 39 students who took the test, 34 students have passed it and 5 students are yet to achieve mastery learning. This means that the completeness of learning achieved is 87.18%, including the complete category. The results of cycle II showed an improvement compared to cycle I. The increase in learning outcomes in cycle II is attributed to the teacher's ability to apply learning performance methods, making it easier for students to understand the material given.

From the table above, it is evident that the teaching and learning activities observed in cycle II were carried out well by the teachers who applied different methods like demonstrations and assessments. This resulted in good scores without any low marks. However, the assessment is not an optimal result as there are several aspects that need attention to refine the application of the next learning cycle.

## **Discussion**

The results of this research indicate that guided learning meetings have a positive impact on improving student learning achievement. This is evidenced by the students' better understanding of the material delivered by the teacher, as seen by an increase in completeness of learning from cycles I and II. For the psychomotor domain, the completeness of learning increased by 48-72% and 87.18%, respectively, while for the affective domain, it increased by 69.23% and 94.87%. In cycle II, students achieved completeness in classical learning. The analysis of the data shows that applying methods in the learning-teaching process improved students' performance in each cycle, leading to an increase in their average grades. This has a positive impact on students' learning achievements, which can be demonstrated by the continued improvement in their grades.

## **Conclusions**

Based on the results of the activities and learning that have been carried out during the three cycles, and the various discussions and analyses that have taken place, the following conclusions can be drawn:

1. The Demonstration method of learning has had a positive impact on improving student learning outcomes. This is reflected in the increase in the percentage of students who completed each cycle - 48.72% in cycle I, 87.18% in cycle II. For the emotional domain, the percentages were 69.23% in cycle I and 94.87% in cycle II.
2. The application of the visual method of learning also has a positive effect on increasing students' motivation to learn. The average results of student responses indicate that they are interested in learning physics and are motivated to learn. Based on the results of the activities and learning that have been carried out during the three cycles, and the various discussions and analyses that have taken place, the following conclusions can be drawn:
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### **Acknowledgment**

The researcher would like to express gratitude to the principal of SD Negeri Bubutan Iv Surabaya for giving permission to conduct research at the school. Also, a sincere thank you to the teachers who have assisted in completing the research and the students whose enthusiasm helped make it a success.

### **Conflict of interest**

Researchers have no conflict of interest

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**Cite this article as:** Bagas Budi Cahya Kharisma, et al (2023) Improving Water Introduction Learning Outcomes at SD Negeri Bubutan IV Surabaya Using Problem-Based Learning Model, *Musamus Journal of Physical Education and Sport (MJPES)* , 6(1), 259-266, <https://doi.org/10.35724/mjpes.v6i1.5572>