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ANALYSIS OF IMPROVING STUDENT LEARNING OUTCOMES IN SCIENCE LEARNING PHOTOSYNTHESIS MATERIALS FOR CLASS IV PAYA DUA STATE ELEMENTARY SCHOOL USING THE PjBL MODEL

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ABSTRACT

This study aims to examine the application of the PjBL model in improving student learning outcomes on photosynthesis. The research subjects were 36 students in class IV of Paya Dua Public Elementary School for the academic year 2022/2023. This research is qualitative research, which focuses on a deeper understanding of the phenomenon being studied, in this case the use of the PjBL model in improving student learning outcomes. The research results show that the implementation of PjBL can improve student learning outcomes. It can be shown that the average mastery score before using the PjBL model was 49.36 and increased after using the PjBL model, namely reaching 67.91. Student learning outcomes increased by 18.55 from before and after using the PjBL model. However, even though there has been an increase, student learning outcomes are still below the Minimum Completeness Criteria score of 70. So it can be concluded that the PjBL model is believed to be effective and has a positive effect on learning that is able to improve student learning outcomes in photosynthesis material in fourth grade students of Paya Dua public elementary school, but from the results of the analysis, the increase in students still has not reached the Minimum Completeness Criteria score of 70. Thus, it is necessary to carry out follow-up actions to address the problem, so that the average student learning outcomes can reach the Minimum Completeness Criteria value in science learning for Grade IV elementary school students' country of Paya Dua.

Keywords: *Learning Outcomes, Science Learning, PjBL Model.*

INTRODUCTION

Law Number 20 of 2003 concerning the National Education System, Article 3, the aim of national education is to develop the potential of students to become good human beings believe in and fear God Almighty, have noble character, be healthy, knowledgeable, capable, creative, independent, and be a democratic and responsible citizen. The development of creativity and potential in learning activities needs to be emphasized, because with increased student creativity, student learning outcomes can also increase, this can improve the quality of education, so that educational goals will be achieved. However, this is inseparable from the teacher's role in developing appropriate learning models to be applied in teaching and learning activities in schools.

The use of this learning model will be applied to the existing 2013 curriculum. In 2023 there will be a change in educational institutions, namely a change in curriculum. Now the Minister of Education and Culture calls for the implementation of an independent curriculum which demands the implementation of learning to be more active. The use of learning models greatly influences the implementation of learning *(Filina et al., 2022)*. The learning model is a must in order to fulfill the learning objectives *(Megawati, 2019)*. The learning model is a type of long-term planning that seeks to direct activities, create lesson plans, or compile teaching materials *(Agustin & Anwar, 2017)*.

Teachers are required to have the ability to choose a model that fits the class or student scenario when delivering the subject. It is very important to use a learning model where students can actively participate in learning and educators only act as facilitators. The use of learning models should encourage students' desire to learn, especially if using a variety of learning models, giving them the opportunity to find their own problems and show whether their actions are related to subject learning *(Sumiyati, 2017)*.

Elementary school level educational institutions use theme-based learning. This theme-based learning not only encourages students to actively participate in their education, but also challenges them to attentively address the difficulties that arise from their learning that are encountered in classroom activities based on experiences that can be trained. Based on the results of a literature review in the form of previous research along with a survey of several elementary schools, in fact the results of the implementation of learning are still not optimal in using methods and adjusting what models and methods suit student criteria, in order to improve student learning outcomes.

Based on the results of the preliminary survey on January 23, 2023 at Public Alementary CchoolPaya Dua in Class IV has not implemented a project-

based learning model, namely PjBL. Then on February 2, 2023, based on the results of interviews with the class IV teacher, especially in science learning, learning has been carried out using the PjBL model. Based on the second review, the researcher wanted to analyze the learning outcomes in the cognitive domain of students before implementing learning using the PjBL model and learning outcomes after learning using the PjBL model.

Project-based learning is a useful paradigm for enhancing one's talents in problem solving and creative thinking (PjBL). Students can work alone or in groups using this PjBL learning strategy. PjBL (Project-based learning) emphasizes student initiatives such as collecting and using data for create everything that is relevant to basic skills and achievement indicators, beneficial to the lives of students themselves and others, and beneficial to both. According to *(Magdalena et al., 2020)* the environment that is formed during the educational process is a way for students to actively participate in their learning. The learning paradigm of the PjBL (Project Based Learning) model *(Sumarni et al., 2019)* encourages students to deepen their understanding of knowledge or abilities so that learning activities are more focused. The PjBL model offers students hands-on experience and has many advantages for increasing academic achievement.

METHODS

This research is a qualitative research, which focuses on a deeper understanding of the phenomenon under study (Adlini et al., 2022), in this case the use of the PjBL model in improving student learning outcomes. The method in this study, namely the survey method, was used to collect data from a number of respondents who were the subject of research, in this case, namely the student scores before the implementation of learning using the PjBL model and after the implementation of learning using the PjBL model. The sample of this research was fourth grade students at Paya Dua Public Elementary School with a total of 36 students. The data collection technique was carried out by observing and collecting data on the value of student learning outcomes in science learning before using PjBL and after using the PjBL model to determine the value of increasing student learning outcomes in science learning using the PjBL model. Data analysis techniques with comparative analysis. Comparative analysis is used after the use of the PjBL learning model. This analysis is also used to compare student learning outcomes before and after using the PjBL model.

RESULTS AND DISCUSSION

Based on the results of research that has been carried out in science learning about Photosynthesis material with a maximum result of no more than

10 and photosynthesis material in class IV students of SD Negeri Paya Dua, the completeness of the assessment of student learning outcomes tests before using the PjBL model based on learning outcomes on daily tests with the class average value is 49.36 with students who complete, namely as many as 16 students out of 36 the number of class IV students so that the percentage obtained is 44.44% because students are less active in learning so that the scores obtained by students are still very many who have not reached The minimum completeness criterion is 70. In learning after using the PjBL model students are getting used to using science learning with the PjBL model so that student learning outcomes increase. It can be seen from the increase in class average scores after using the PjBL model which increased by 18.55. However, in this learning outcome, even though student learning outcomes have increased, they still have not reached the Minimum Completeness Criteria score, which is 70. Based on the results of data analysis, namely the daily test results of students who have reached the Minimum Completeness Criteria, students who pass are 23 students out of 36 total fourth grade students at Paya Dua public elementary school, so the percentage obtained was 63.88%. The percentage of daily test scores for learning outcomes after using the PjBL model was 67.91.

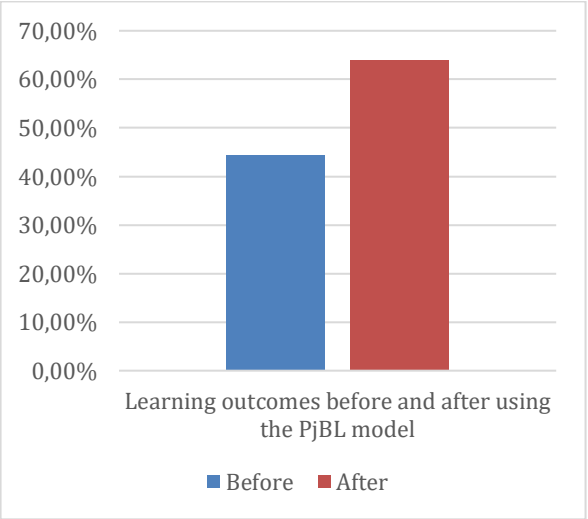

Figure 1. Student Learning Outcomes

Table 1. Student Learning Outcomes

No.	Aspect	Before	After
1.	Min	30	60
2.	Max	70	80
3.	Amount	1777	2445
4.	Average	49,36	67,92

5.	Percentage	49%	68%

Table 2. Student Completion

No.	Aspect	Before	After
1.	Complete	16	23
2.	Not Completed	20	13
3.	Total	36	36
4.	Completeness Percentage	44,44%	63,88%

The student's incompleteness was caused by several things, including: 10 students with an evaluation value of 10 because these students were still not optimal in understanding the material that had been presented, every time they worked on a question item they had to be accompanied because the student was always wrong in understanding the material. While 3 students scored 0 because these students could not follow the learning process, it can be seen from the several times the learning process these students only scribbled on in their work books without being able to do any of the questions given. So the researchers concluded that these students did have delays in terms of academics. The discussion above shows that learning natural sciences on photosynthesis using the PjBL model can improve student learning outcomes and be active in the learning process so that there is an increase in student learning outcomes, so that the use of the PjBL model is still not optimal, because the average student score is still below the Minimum Completeness Criteria, which is worth 67 .91 out of 70 scores of the Minimum Completeness Criteria for learning science in class IV of Paya Dua public elementary school. From the results of the research conducted, it can be seen that the PjBL model can improve student learning outcomes, but it is still not optimal because the average value of students' daily test results is still less than the Minimum Mastery Criteria score, which is 70.

CONCLUSION

Based on the results and discussion, it can be concluded that positioning the PjBL model in the classroom is highly recommended because it is able to increase the mastery score of learning outcomes on photosynthesis material in class IV of Paya Dua public elementary school in the 2022/2023 academic year. Judging from the data on daily test results before using the PjBL model and after using the PjBL model, it can be concluded that there is an increase in learning outcomes using the PjBL model. This shows that using the PjBL model can be a solution to effective learning with the result of an increase in completeness in learning outcomes, but even though there is an increase, the completeness of student learning outcomes is not optimal. Because the average value of student scores is still below the Minimum Mastery Criteria of 70, namely 67.91.

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