PIONIR Jurnal Pendidikan
P-ISSN 2339-2495
E-ISSN 2549-6611

PIONIR: JURNAL PENDIDIKAN
VOLUME 14 No 1 2025
P-ISSN 2339-2495/E-ISSN 2549-6611

INCREASING STUDENT LEARNING INTEREST USING THE PROBLEM BASED LEARNING (PBL) LEARNING MODEL ASSISTED BY PUZZLE MEDIA IN SCIENCE LEARNING FOR GRADE IV OF KAYUAPU ELEMENTARY SCHOOL

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Received 23 August 2024, Accepted 30 April 2025, Published 30 April 2025

Abstract

This research aims to increase students' interest in learning science and science by implementing the Problem Based Learning (PBL) learning model assisted by puzzle media for class IV at Kayuapu Elementary School. This research uses Classroom Action Research (PTK). The number of respondents in this research was 15 grade IV students at Kayuapu Elementary School. The instrument used to collect data was a student interest questionnaire. The data obtained was analyzed using descriptive analysis which was used to determine students' interest in learning. The results of the research show that learning using the Problem Based Learning (PBL) learning model assisted by puzzle media can increase the learning interest of fourth grade students at Kayuapu Elementary School. This can be seen from the activities before the action, the average completion of students' learning interest results reached 60.4% in the low category. In cycle I, the average completion of learning interest results reached 72.4% in the "good" category. And in the second cycle, students' interest in learning increased to 85.6 in the "very good" category. Thus, it can be concluded that the application of the Problem Based Learning (PBL) learning model assisted by puzzle media can increase the learning interest of fourth grade students at Kayuapu Elementary School.

Keywords: Interest in Learning, Problem Based Learning (PBL) Learning Model, Puzzles.

Abstrak

Penelitian ini bertujuan untuk meningkatkan minat belajar siswa dalam mempelajari IPA dan IPA dengan menerapkan model pembelajaran Problem Based Learning (PBL) berbantuan media puzzle untuk kelas IV di SDN Kayuapu. Penelitian ini menggunakan metode Penelitian Tindakan Kelas (PTK). Jumlah responden dalam penelitian ini sebanyak 15 siswa kelas IV di SDN Kayuapu. Instrumen yang digunakan untuk mengumpulkan data adalah angket minat belajar siswa. Data yang diperoleh dianalisis menggunakan analisis deskriptif yang digunakan untuk mengetahui minat belajar siswa. Hasil penelitian menunjukkan bahwa pembelajaran dengan menggunakan model pembelajaran Problem Based Learning (PBL) berbantuan media puzzle dapat meningkatkan minat belajar siswa kelas IV di SDN Kayuapu. Hal ini dapat dilihat dari kegiatan sebelum tindakan, rata-rata ketuntasan hasil minat belajar siswa mencapai 60,4% dengan kategori rendah. Pada siklus I, rata-rata ketuntasan hasil minat belajar mencapai 72,4% dengan kategori "baik". Dan pada siklus II, minat belajar siswa meningkat menjadi 85,6 dengan kategori "sangat baik". Dengan demikian dapat disimpulkan bahwa penerapan model pembelajaran Problem Based Learning (PBL) berbantuan media puzzle dapat meningkatkan minat belajar siswa kelas IV SDN Kayuapu.

Kata Kunci: Minat Belajar, Model Pembelajaran Problem Based Learning (PBL), Puzzle.

INTRODUCTION

Education is closely related to learning, namely from not understanding anything to understanding and understanding (Ardianti et al., 2024). Basic education (SD) is the initial stage in the education process. Students begin to build the foundations of knowledge and skills that will form the basis of their success in subsequent education. In building the basics of knowledge, of course there are factors that influence students' academic achievement. One factor that is very influential in students' academic achievement in elementary school is their interest in learning. Interest in learning plays a key role in motivating students to actively participate in the learning process.

Interest in learning is an inner drive that grows from a student to improve study habits. The main tasks of interest in the learning process are very important, such as providing pleasure or a sensation of excitement, having options to improve students' focus or consideration, bringing out certain and valuable perspectives of students' learning, helping students by strengthening their memory capacity, and low fatigue (Hilyana et al ., 2022). (Rahmi et al., 2020) stated that indicators of interest in learning include feelings of joy, student interest, student attention and student involvement.

Based on observations on April 27 2024 that researchers carried out at Kayuapu Elementary School for the 2023/2024 academic year. The teacher in delivering the material is good, the teacher has used a learning model. However, the learning model chosen is not appropriate. The teacher in delivering the material is good, the teacher has used a learning model. However, the learning model chosen is not appropriate. So students are less enthusiastic when the teacher delivers the material. In learning there are still students who are less active, students just stay quiet and listen to the teacher. During the discussion there were still students

who had not actively expressed their opinions. The student pre-cycle interest questionnaire showed a result of 60.4% in the sufficient category. Students' interest in learning in this case is still relatively low.

Based on the results of the initial interview, the lack of interest in learning was caused by students easily getting bored with teaching and learning activities because the learning model used was less attractive to students. So students feel bored, unmotivated, and less enthusiastic about attending class. Learning models or methods that are less attractive can result in students having difficulty understanding the concepts being taught. So students may just memorize information without really understanding it. Students who are not interested in learning tend to have low motivation. This can have a negative impact on their academic achievement and personal development.

To produce optimal learning quality, educators must have creative and innovative ideas when teaching in class (Ardianti et al., 2023). In this situation the teacher's role is very important in forming elementary school students' interest in learning. With a good role and dedication in forming students' interest in learning, teachers can help create an environment that supports students' academic and personal development in elementary schools.

With the various problems above, new innovations are needed to produce learning that is encouraging, active and creative. In this research, the researcher chose to use the Problem Based Learning (PBL) learning model assisted by puzzle media in class IV science learning at Kayuapu Elementary School. Learning with Problem Based Learning provides a meaningful learning experience for students which is focused on bridging students to gain learning experience in organizing, researching and solving complex life problems so that they better understand the material (Ardianti, Amalia, et al., 2020).

This is in accordance with the opinion (Putra et al., 2022) that Problem Based Learning can increase students' interest in learning because implementing this learning model will make students fully involved in the process of searching for information and gaining knowledge from experience and developing the knowledge they already have. Ardianti et al. (2023) also argue that by implementing the problem based learning model, it trains students in solving problems, gives students freedom to express their opinions and students can develop the material that has been presented by educators. Ratnasari et al. (2023) Problem Based Learning (PBL) has quite a good influence on students when completing projects where students can process the material well. This is because students actively participate in the learning process to solve problems and investigate various material facts.

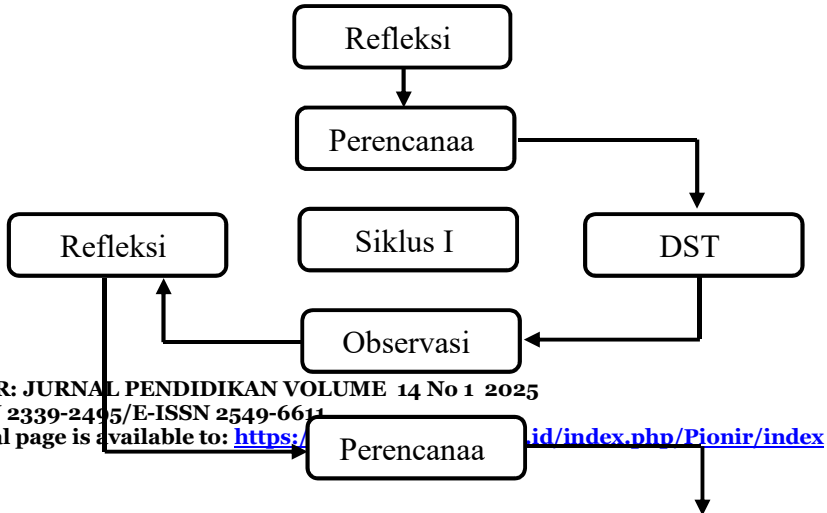
Apart from using learning methods, to maximize results, appropriate media is needed so that the formulated objectives are achieved. The process of teaching and learning activities will be meaningful if teachers actively and creatively apply learning models and media to make it easier for students to understand the material presented by the teacher (Ardianti, et al., 2020). This is in line with research conducted by (Antoro et al., 2023) that the use of fraction puzzle media can be used as a learning medium. This is shown by the existence of student interest during PkM activities which has an impact on student motivation and learning outcomes. Other research conducted by (Margareta, 2023) shows that puzzle-shaped media has proven successful in stimulating students' interest in learning, especially in the context of Citizenship Education (PKN) lessons.

Based on the background explained above, the researcher will conduct classroom action research with the title "Increasing Student Interest in Learning Using the Problem Based Learning (PBL) Learning Model Assisted by Puzzle Media in Class IV Science and Science Learning at Kayuapu Elementary School". The aim of this research is to increase students' interest in learning science and science using the Problem Based Learning (PBL) learning model assisted by puzzle media for class IV at Kayuapu Elementary School.

METHODS

The research method is a procedure that describes the research carried out and is a research activity that aims to correct deficiencies in classroom learning, namely by carrying out certain actions in order to improve and increase the quality of learning that is expected to be achieved. This research requires participation and collaboration, meaning that the researcher is directly involved and there is collaboration between the researcher and the class IV teacher who is a partner in this research. The research that will be carried out uses the type of Classroom Action Research (PTK).

Parnawi (2020) stated that PTK is a form of action research that is applied in classroom learning activities. This research was carried out in class IV at Kayuapu Elementary School. The reason for choosing the location was because there was a problem with the low interest in learning of class IV students. This research was carried out in the even semester of 2024. This research was carried out in 2 cycles, namely: cycle I and cycle II, each cycle consisting of 2 meetings. Each cycle consists of planning, implementation, observation, reflection. The stages in the cycle can be described as follows:



PIONIR: JURNAL PENDIDIKAN VOLUME 14 No 1 2025
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Journal page is available to: https://.id/index.php/Pionir/index

Kemiss and Mc Tagart in (Abdillah et al., 2021).

The data collection techniques used in this research are:

1. Interview

Interviews are a method of collecting data used to find problems and information about respondents. Interviews are aimed at students who relate direct questions to learning using the Problem Based Learning (PBL) learning model assisted by puzzle media.

2. Observation

In this study the researcher used participant observation. In this observation the researcher was involved in daily activities at Kayuapu Elementary School, both learning and other things within the scope of school activities which were useful as a data source.

3. Test

A test is a series of exercises or tools used to measure the skills, knowledge or talents possessed by an individual or group. This test is used to determine the level of learning ability after the fourth grade science and science learning process at Kayuapu Elementary School. In this study, three tests were used, namely the initial test (before giving the action), the cycle I learning interest test (given at the end of the cycle I meeting) and the cycle II learning interest test (given at the end of the cycle II meeting).

4. Documentation

Documentation is a record of events that have occurred. The documentation method in this case means a way of collecting data that records data that already exists in documents and archives. Document study, namely managing document data from the results and evaluation of student thematic learning outcomes through a scientific approach.

5. Questionnaire or Questionnaire

Namely submitting several written statements to respondents to obtain data about students' learning interests. The questionnaire in this research consisted of 10 statements which were divided into 5 indicators in the classroom. The indicators include aspects of interest, attention, motivation, feelings of pleasure and knowledge. Questionnaires are used to assess students' interest in learning after implementing the Problem Based Learning (PBL) learning model assisted by puzzle media. Questionnaires are given at the end of each learning cycle.

Data regarding the student interest in learning questionnaire was obtained from the questionnaire sheets distributed after the end of the cycle and then calculated to obtain the

student's interest in learning index. The formula used to calculate the student interest index is as follows.

$$P = \frac{F}{N}\ x\ 100\%$$

Keterangan :
P = Presentase
F = Frekuensi
N = Banyaknya Responden

Table 1. Rating Scale

Rentang skor	Kriteria
81% - 100%	Sangat Baik
61% - 80%	Baik
41% - 60%	Cukup
21% - 40%	Kurang
0% - 20%	Sangat kurang

RESULTS AND DISCUSSION

The research data is data obtained from a questionnaire on students' interest in learning science in learning science using the Problem Based Learning (PBL) learning model assisted by puzzle media after the implementation of cycle I and cycle II actions. The results obtained from the two cycles of implementing this research can be described as follows.

1. Cycle I Reflection

Reflection is a step taken after knowing the results and actions in cycle I. Based on the results of this interest in learning, the researcher and teacher discussed taking further action in order to improve cycle I because in cycle I the learning was implemented using the Problem Based Learning (PBL) learning model.)) assisted by puzzle media has not run optimally. There are two factors that cause the implementation of learning using the Problem Based Learning (PBL) learning model assisted by puzzle media to not run optimally, namely the learning media used makes students feel new and the learning model used still confuses many students.

In cycle I, the teaching and learning process begins by introducing the learning media that will be used in the learning process, namely puzzle media. The learning media used makes students feel new to this because so far the learning used is a direct learning model so that students' interest in this learning is still lacking. Many students seem confused about the learning model used. Student confusion can be seen from student activities during the learning process where there are still students who do not pay attention to the teacher's explanations.

Students' interest in learning science and science in asking or answering teachers' questions is still not optimal because students are not yet accustomed to the learning process which involves asking questions. Students still feel reluctant and embarrassed to ask and answer questions. Apart from that, students are also not optimal in group discussion activities, such as not being interested in learning and there are still students who are not active because they don't understand the importance of cooperation in finding information for solving problems, solving problems in discussions, carrying out group discussions according to teacher instructions because students chat. with friends, not about material you don't understand.

Based on observations of students' interest in learning and these results, there are several things that need to be emphasized, namely that teachers can manage the time when the learning

process takes place so that the implementation of learning can be optimal and teachers provide direction to students to be more active and interested in learning science when teaching and learning activities take place, namely by asking questions, discussing and paying attention to the teacher's explanation.

Therefore, researchers and teachers agreed to continue cycle II. In cycle II, planning improvements is made by the teacher giving direction to students to be more active and have an interest in learning, that is, if there are still many students who are not active, the teacher will come to the students to ask questions. So that students actively discuss, students are given more time to discuss and all group members are involved in looking for information so that students can look for information in solving problems, students carry out group discussions according to the teacher's instructions. Apart from that, so that students focus. When the teacher explains, students are instructed to write and add material that is not in the book. This is expected to optimize the participation of students' unexplored interests so as to help achieve optimal student learning activity.

1. Cycle II Reflection

Based on the results of observations from cycle II, it shows that there is an increase in indicator scores from the previous cycle. The improvement plan planned in cycle I can be implemented well in cycle II. This can be seen from the student observation data in table 2 who have achieved the minimum criteria that have been determined, namely 88.2% with the criteria "very good".

Table 2. Recapitulation of pre-cycle, cycle I and cycle II learning interest questionnaires

No. Items	**Statement**	**Cycle I**	**Cycle II**
1		80	86,7
2		66,7	91,1
3		64,4	93,3
4		73,3	88,9
5		71,1	77,8
6		73,3	84,4
7		80	80
8		71,1	75,6
9		71,1	91,1
10		73,3	86,7
Amount		724,4	882,2

The learning model used in this research is the Problem Based Learning (PBL) learning model assisted by puzzle media. Actions taken using this model can increase students' interest in learning. The teaching and learning process begins by dividing students into 2 groups in cycle I consisting of 7-8 students. The teacher distributes worksheets, and students study in their respective groups. Then students are given puzzle media to put together with their group. In the LKS there are also several investigative activities that train, develop and improve students' abilities to further improve their understanding of the material that has been provided. In this research, the data obtained is in the form of quantitative data and qualitative data, the qualitative data is in the form of observation sheets and student response questionnaires, while the quantitative data is in the form of learning outcomes tests which are carried out at the end of each cycle.

Based on the results of research, data analysis and discussion, it can be concluded that using the Problem Based Learning (PBL) learning model assisted by puzzle media can increase the interest in learning of fourth grade students at Kayuapu Elementary School. This can be seen from the results of research carried out over 2 cycles, namely that the average learning interest questionnaire in cycle I reached 72.4% in the "good" category. However, the first cycle did not show any achievement of indicators of success in learning. Based on this, it is necessary to continue in cycle II. In cycle II, the average student interest in learning questionnaire reached 88.2% in the "very good" category. This shows that in cycle II students' interest in learning had reached indicators of success. The results of this research also support the research results of Putra et al. (2022) that the Problem Based Learning (PBL) learning model can increase students' interest in learning. (Wibowo, 2022) also found the same results that the application of the Problem Based Learning model was an effort to increase students' interest in learning.

Based on the results of the research and discussion above, it shows that the Problem Based Learning (PBL) learning model assisted by puzzle media can increase the interest in learning of fourth grade students at Kayuapu Elementary School. For subject teachers and all Kayuapu Elementary School teachers in general, researchers suggest that in future learning meetings use the Problem Based Learning (PBL) learning model assisted by puzzle media so that interest in learning further increases learning achievement according to expectations.

CONCLUSION

Based on the research results and the discussion in the previous chapter where classroom action research was carried out at Kayuapu Elementary School, it can be concluded that students' interest in learning science by applying the Problem Based Learning (PBL) learning model assisted by puzzle media which was implemented at Kayuapu Elementary School increased. In this case, it can be seen that there has been an increase in the average interest in learning of grade IV students at Kayuapu Elementary School starting from cycle I and cycle II. In cycle I it reached an average of 72.4% in the "good" category, while in cycle II it reached an average of 88.2% in the "very good" category.

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