IMPROVING STUDENT LEARNING OUTCOMES USING THESURROUNDING NATURAL ENVIRONMENT APPROACH

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ABSTRACT

Application of the Surrounding Natural Environment Approach (PLAS) to improve student learning outcomes in Class IIb Theme 2 Playing in My Environment Sub-theme 2 Playing at Friends' Houses, SD Negeri 1 Cangkreplor, Purworejo. From these activities it can be seen that the meaning of the SurroundingNatural Environment Approach (PLAS) is an activity that involves students with the environment, the natural surroundings as a source of student learning. Obstacles from the learning activities being taught at this time have increased, the material that educators convey is even more difficult, the methods and approaches toteaching teachers are still conventional. For this reason, teachers need to innovate in learning, one of which is using the Surrounding Natural Environment Approach (PLAS) which can be used in sciencematerial. The subjects of this study were students of Class IIb Theme 2 Playing in My Environment Sub-theme 2 Playing at Friends' Houses at SD Negeri 1 Cangkreplor as many as 17 students. The object of this study was learning using theSurrounding Natural Environment Approach (PLAS) in natural science material, the shapes and forms of objects in surrounding environment. Data collection techniques used in the form of observation, student observation sheets, and documentation.

The results of this study implied that there was an increase in student learning outcomes for Class IIb Theme 2 Playing in My Environment Sub-theme 2 Playing at Friends' Houses at SD Negeri 1 Cangkreplor using the natural environment approach (PLAS) which is significant for student learning outcomes. So it can be concluded that there is a significant relationship between the PLAS Approach (Natural Environment Approach) and student learning outcomes in Class IIb Theme2 Playing in My Environment Sub-theme 2 Playing at Friends' Houses, SD Negeri 1 Cangkreplor, Purworejo, especially on science material.

Keywords: Surrounding Natural Environment Approach (PLAS), learning outcomes, science

INTRODUCTION

Learning activities are efforts made by educators to convey and organize subject matter to students to achieve learning objectives. The success of learning in the students themselves can be seen from the achievement of learning objectives. Meanwhile, to achieve learning objectives, learning must be carried out effectively (Djamarah, 2000). However, sometimes the learning processsometimes makes students boring. This is because educators use a monotonous learning method.

According to the results of observations and interviews with class IIb teachers, SD Negeri1 Cangkreplor, the teacher's learning process only uses the lecture method and the learning seemsteacher-centered. In addition, teachers sometimes only give

assignments to students without accompanying students in doing the task. From the results of these observations and interviews, it can be concluded that class IIb teachers have not been able to create an active, creative, innovativeand fun learning atmosphere. If students feel bored, students' attention to the learning process will decrease, and havean impact on student achievement of learning objectives.

Learning activities that do not involve students cause low learning outcomes in learning activities. Over time, student academic achievement will decrease. So, it is necessaryto hold internal learningimprovements to improve student learning outcomes. This is in line with the opinion of Rohim & Asmana (2018) who argued that low student learning outcomes affect learning outcomes because learning outcomes are interactions between learning and teaching actions which are manifested by values.

One solution to increase student learning motivation in learning activities that involvestudents actively is to apply learning outside the classroom with the concept of playing while learning.Suherdiyanto (2014) states, "Out door learning is one way how we increase children's learning capacity. Children can learn more deeply through real objects and situations. Learning outside the classroom can help students to apply the knowledge they have, between the theory in the book and the existing reality so that students can take advantage of the surrounding environment as a means to gain knowledge.

The natural environment approach (PLAS) is a form of learning outside the classroom. PLAS is a learning approach that emphasizes children's learning experiences with the surrounding natural environment (Fitriana, 2016). Barlia (2006) stated, "The process of teaching and learning by applying PLAS is an effort to develop the existing school curriculum, by including all existing facilitiesin the surrounding natural environment as learning resources. Teaching with PLAS can be defined as using or utilizing existing facilities in the natural environment around the school, as a laboratory for learning."

Based on the opinions of Uno & Mohamad (2013) and Sudjana & Rivai (2015) it can be concluded that the advantages of learning using the environment include: 1) Learning activities are more interesting, (2) Learning will be more meaningful because students are faced with natural situations, (3) Materials that can be studied are more factual so that the truth is more accurate, (4) learning activities are more comprehensive and (5) students' learning motivation increases because students experience a different learning atmosphere. Learning outcomes are hierarchical relationshipsbetween the affective, cognitive, and psychomotor fields (Sudjana, 2009). This study focused on cognitive aspects of learning outcomes.

The natural environment around SD Negeri 1 Cangkreplor can support the science learning process. The school's large yard and strategic school location also support the implementationof learning outside the classroom. However, the utilization of the surrounding natural environment in the science learning process in class IIb SD Negeri 1 Cangkreplor in the 2022/2023 academic year is still not optimal. This is because the teacher has never applied the natural environment approach(PLAS) to support the science learning process in class IIb SD Negeri 1 Cangkreplor. The application of the natural environment approach (PLAS) is felt to be able to have a positive impact on the learning process, namely increasing science learning outcomes in class IIb. The several methods used in the PLAS approach are assignment methods that stimulate students to learn more and cultivate the habit of seeking and processing

information. Then the observation method can stimulate students to find information and learn while playing related to learning material in the surrounding environment. In addition, the playing method describes the understanding of the concept in the form of a fun game. The game methodcan also instill the value of honesty in students, instill enthusiasm in solving a problem, develop interest, creativity and a sense of cooperation among students. The learning process will be more meaningful because students learn to obtain information directly by observing, asking, reasoning, trying and communicating.

Several studies also state that the natural environment approach can improve learning outcomes, including research by Efriani, Alibasyah and Paudi (2017), Isnanto (2016), Syahputra,Barlia & Fitriani (2016), Garnasih (2018), Karmila (2016), and Lisdayeni, Darsono, & Sinaga (2015). The difference between this study and other studies lies in the indicators of learning outcomes which focus on the cognitive field. In addition, the PLAS applied in this study has been modified so that it is suitable for elementary school students. Based on the introduction above, problems can be formulated including: 1) How is the application of PLAS to improve student learning outcomes?; and (2) Can theapplication of PLAS improve student learning outcomes?.

METHOD

Types of research

The type of research used is Classroom Action Research (PTK) because this researchaims to improve student learning outcomes in science subjects in class IIb SD Negeri 1 Cangkreplor.

Time and Place of Research

This research was conducted in December 2022. This research was carried out at SD Negeri 1 Cangkreplor which is located at Jl. Semawung No. Km. 0.3, Hamlet III, Cangkreplor,Purworejo District, Purworejo Regency, Central Java.

Target/Research Subject

The subjects of this study were all class IIb students of SD Negeri 1 Cangkreplor, whose address is Jl. Semawung No. Km. 0.3, Hamlet III, Cangkreplor, Purworejo District, Purworejo Regency, Central Java. A total of 17 students, consisting of 12 male students and 5 female students. Taking into account that the learning outcomes of class IIb students at SD Negeri 1 Cangkreplor in science subjects are still low. Procedure The several stages in the Classroom Action Research design are as follows:

a. Planning
   The planning stage in this research is in the form of an activity plan that determines the steps to solve the problem as an effort to fix problems in the science learning process. At this planning stage, a learning implementationplan is prepared by applying the natural surroundings (PLAS) approach. By using the implementation plan of learning activities it is hoped that learning objectives will be achieved. In addition to the learning implementation plan, the researcher also prepared a research instrument consisting of evaluation test questions as a measuring tool for learning achievement in the cognitive domain, as well as observation sheets for teacherand student activities.
b. Implementation of Class Actions (actions) The teacher explains the activity plan by carrying out the learning scenarios that have been made based on the lesson plan. The learning steps byapplying the natural environment approach (PLAS) are as follows:
   1. Initial activities

a. Preparation of physical conditions, namely teacher activities at this stageabsent students and prepare study materials.
b. The teacher conveys learning objectives and informs aboutlearning activities to be carried out.
c. Apperception, namely the teacher tells briefly about the personal experience related to learning materials.

2. Core Activities
   a. Material development In the core activities of the teacher's activity convey the materiallearning is about energy sources.
   b. Application of the natural environment approach (PLAS) with the method of observation,assignment and play.
   c. Observation

      Observation of the surrounding environment by observing and noting the shape and form of objects in the surrounding environment ingroups. In this activity students write up a maximum of 10 objects and their forms and are accompanied by teachers and observers.
   d. Presentation

      Students after observing and noting the shapes and forms of objects in the surrounding environmentin groups, students then make presentations in front of the class and other group mates listen to students who are presenting.
   e. Analysis and reflection

      At the analysis stage the teacher evaluates the learning process at each meeting, then reflects it asa reference material in carrying out the next cycle.

Collection Method

Data and Instruments The methods used to collect research datain order to achieve the research objectives are as follows:

1. Observation
   Observations in this study were in the form of observations of teacher and student activitiesas well as learning outcomes in the affective and psychomotor domains for each student during the learning process that applied the natural environment approach (PLAS).
2. Student Observation Sheet
   Student observation sheets were carried out to measure the increase in science learning outcomes in class IIb SD Negeri 1 Cangkreplor. The form of the test used is an objective test(multiple choice).
3. Documentation
   The data obtained from the documentation study are in the form of photographs which providea concrete description of the student's activities during the learning process, as well as data in the form of other documents. The instruments used in this study are as follows:
   a. Observation sheet rating scale
      This technique is used to collect data about the application of the natural environment approach (PLAS) and student activities in the learning process. Data collection through observations conducted by collaborating researchers

with observers to get a direct picture of the cognitive development and skills of students during the learning process.

Analysis Techniques

Data The steps of the data analysis technique used in this study are as follows: data obtained through evaluation tests were analyzed quantitatively, while data from observations and documentation were analyzed descriptively qualitatively. The results of the evaluation test data were collected and the total value of each student was calculated.Then the next step is to determine the class average. The formula is as follows:

The formula for the average value of students:

$$\bar{X} = \frac{\Sigma f X}{N}$$

Description :
$\bar{X}$ = Mean (average value)
Σ f X = Number of values already multiplied by frequency respectively
N = Number of individuals

From the calculation of the value obtained by each student, the number of students who achieve KKM is calculated to determine the percentage of learning completeness. Here's the formula for calculating the success rate.

$$P = \frac{\Sigma students\ who\ complete\ learning}{\Sigma total\ students} \times 100\%$$

Description: P = Percentage of student completeness

Mastery learning is declared successful if the percentage of students who complete learning is greater than or equal to 80% of the total number of students. The results of this analysis are used as a reflection to carry out furtherplanning in the next cycle if it does not meet the specified criteria.

RESULTS

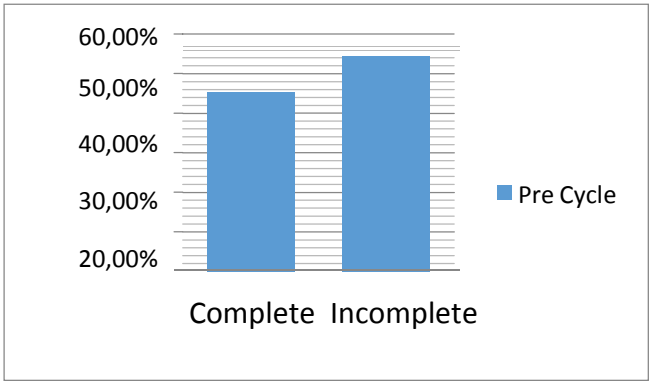
This study began with conducting preliminary observations to identify problems and interviews with IIb teachers at SD Negeri 1 Cangkreplor, Purworejo District, Purworejo Regency regarding science subjects. Based onthe results of interviews and observations it is known that learning material is only explained through lectures and assignments so that students do not understand the subject matter explained by the teacher.

The researcher then *pre-tested* the observation worksheets for each class IIb student which aimed to find out the initial value data before applying the surrounding natural environment approach (PLAS) which would later be used tocompare with research data obtained after applying the surrounding natural environment approach.

Table 1. Initial Test Results in the Cognitive Domain of the Pre-Action Stage *(pre-test)*

Learning Outcome Criteria Student	**Pre Action**	
	F	**%**
Incomplete (≤75)	12	54,55
Complete (≥75)	10	45,45
Total	22	100
Minimum Value	50	
Maximum Value	80	
Average Value	68,59	

Based on the table, it is known that only 7 students have met the Minimum Completeness Criteria (KKM), while 10 otherstudents have not met the KKM. The percentage for the level of completeness is 45.45% and those who are not complete are 54.55%. The following is a bar chart regarding the results of the *pre-test* on the material shape and form of class IIb objects at SD Negeri II Cangkreplor. Learning outcomes in the pre-cycle cognitive domain are shown in the diagram below :



The average results for the entire class show that the score for science subjects is still

below the Minimum Completeness Criteria (KKM), which is 65. The value of 65 is the minimum completeness criterion score for science subjects set by the school, by looking at the results obtained by students, researchers conducted research class action as an effort to improve student learning outcomes in class IVb SD Negeri 1 Cangkreplor using the surrounding natural environment (PLAS) approach so that class completeness can be achieved, namely at least 80% of the total number of students with grades ÿ75. If you haven't got 80%, then the learning is said to have not reached the completeness criteria. Based on the results of the implementation of cycle I actionswhich were carried out in four meetings. Student completeness in cycle I can then be seen in the following table.

Table 3. Learning Outcomes in the Cognitive Domain Cycle I

Learning Outcome Criteria Student	**Cycle I**	
	F	**%**
Incomplete (≤75)	4	18,18
Complete (≥75)	18	81,82
Total	22	100
Minimum Value	22	
Maximum Value	100	
Average Value	84,59	

The table shows that the minimum value in the first cycle is 73 and the maximum value is 100, the average value in thefirst cycle is 84.59. Completeness of learning science in the realm cognitive cycle I experienced an increase from the pre-cycle to 81.82% of students completing and18.18% of students not completing. These results illustrate that science learning outcomes in the cognitive domain have reached the success target of 80%. Data on increasing learning outcomes inpre-cycle and cycle I are shown in the diagram below:

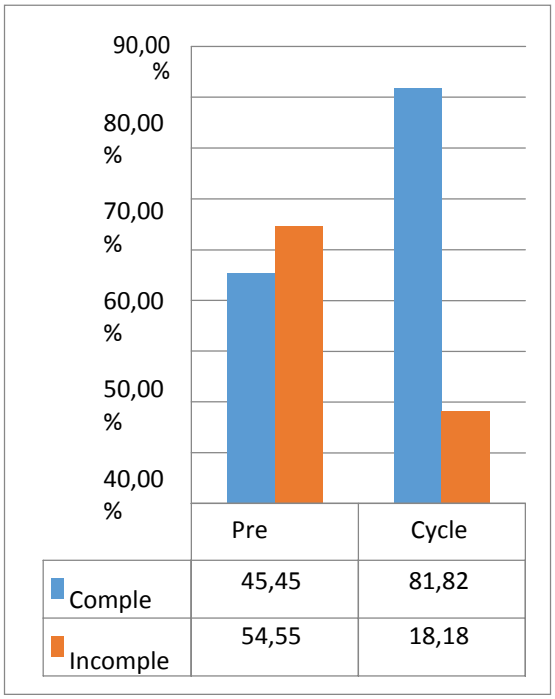


Figure 3. Comparison of pre-action and cycle I cognitive learning outcomes

Observations on student learning outcomes in the cognitive domain are carried out by observers during the learning process taking place from beginning to end individually. Based on the results of observations made by observers during the learning activities in cycle I, the process skills of taking action naturally and compiling in science learning with PLAS were good, namely theclass average reached in cycle I of 84.59. Science learning completeness in the cognitive domain of cycle I experienced an increase from the pre-cycle to 81.82% of students completing and 18.18%of students not completing. These results illustrate that science learning outcomes in the cognitive domain have reached the success target of 80%.

DISCUSSION

Surrounding Natural Environment Approach

Based on the results of observations during the learning process, it can be seen that there was an increase after the implementation of PLAS learning. The application of PLAS to science learning activities can create active, creative, innovative and fun learning and has succeeded in improving students' science learning outcomes in class IIb SD Negeri 1 Cangkreplor, Purworejo District, Purworejo Regency.

How to improve these learning outcomes by conveying intellectual and emotional apperception, conveying learning objectives, dividing students into small groups heterogeneouslyand having a clear role for each member, providing direct learning resources in the natural surroundings, guiding in group observations by making study instructions that are clear, giving theopportunity to ask questions about the material, facilitating active observation and educational games, guiding in concluding material, giving evaluation questions, and motivating students to grow an interest in being aware and responsible for their surroundings.

The increase in learning outcomes can be seen from the value of the *pre-test* observations and cycle I successively for the cognitive domain by 45.45% to 81.82%. Aunurrahman (2016) which. stated, "When students often achieve success in carrying out tasks, in completing a job especially accompanied by general recognition of the success achieved, students' self-confidence will be stronger."

Learning outcomes

Based on the research results, it can be seen that student learning outcomes increased by 36.37%. The results of the analysis of students' answers on learning outcomes can be seen from the observation *pre-test* scores and cycle I respectively for the cognitive domain of 45.45% to 81.82%. This is because in previous learning students always used monotonous approaches and methods so that students became more bored with learning activities and without understanding the learning material. This is reinforced by the opinion of Barlia (2006) which states, "Children often learn concepts at school only at the verbal level, without knowing the true meaning (of the term) so that they are often only able to say it without being accompanied by an understanding and understanding of what is meant." they say (foreign terms)". The results of this study are also in line. with research. Lamasari, Mestyawaty, & Paudi (2013) and Nofita, Gusmaweti, and Satria (2014) stated that the use of the surrounding natural environment as a learning resource can improve the learning outcomes of elementary school students.

CONCLUSION

The application of PLAS to science learning can create active, creative, innovative andfun learning and has succeeded in improving students' science learning outcomes in class IIbSD Negeri I Cangkreplor, Purworejo District, Purworejo Regency.

How to improve these learning outcomes by conveying intellectual and emotional apperception, conveying learning objectives, dividing students into small heterogeneous groupsand having a clear role for each member, providing direct learning resources in the natural surroundings, guiding in observations by making clear learning instructions, providing opportunities to ask questions about material, facilitating active observation and educational games, guiding in concluding material, giving evaluation questions, and motivating students to grow interest in being aware of and responsible for their surroundings. The increase in learning outcomes can be seen from the *pre-test* scores of the observation sheets which were carried out in groups and the first cycle in a row for the cognitive domain by 45.45% to 81.82%.

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