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IMPROVEMENT OF JAS-BASED LEARNING OUTCOMES IN THE PLANT MATERIAL AND ITS LIFE IN PGSD PRODUCTS, MUHAMMADIYAH UNIVERSITY, KUPANG

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Abstract: The aim of the study is to foster attitudes to preserving biodiversity and improve learning outcomes for prospective educators through outside classroom learning. The subjects of this study are students of Elementary School Teacher Education Study Program-participants in science lesson elementary school (Biology aspect) in academic year 2017 as many as 33 students, 6 male students, 27 female students. The type of this research is Classroom Action Research conducted for 2 cycles, the research approach is descriptive qualitative. Data analysis is done by data triangulation and percentage. Attitude observation used a Likert scale, observation sheets, and field notes results of a pre-cycle, cycle I and cycle II survey showed an increase in student learning outcomes in the first cycle as much as 77.30% to 100% in cycle II, with an increase in learning outcomes natural science of Elementary School (Biological aspect) Biodiversity material based on presentation of values in the initial condition is only 30.39%, in cycle I it increases to 77.30% and in cycle II it increases to 100%.

Keywords: Exploring the Nature Around, Plants and its Life, Learning Outcomes

INTRODUCTION

The implementation of learning is an activity in which students are included in either the management of learning or where there are situations that are created in the form of interactions that take place between various factors or components such as teachers or lecturers, students, curriculum, methods, facilities and media and other required components . Learning currently faced by students (students) is not encouraged to develop thinking skills. The learning process in the classroom is directed at students' ability to memorize information. The brain of students is forced to remember and memorize information that is reminded to connect it to everyday life (Made, 2009).

The active role of students (students) is expected in the learning process. Educators (lecturers) and students are expected to be involved in an interaction with teaching materials used as the medium so that more active students are not lecturers. In this case, the educator is required to be more innovative in determining the source of the media and the approach taken in learning. The elementary science learning course (Biology Concept) is science learning in which there are sub-material plants and their life. Talking about environmental plants around the campus or the surrounding environment can be used as learning media, especially in the East Nusa Tenggara

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Province, where Muhammadiyah Kupang University has many local plants that have not been explored so that they can be used as learning media.

Rifai (2004) suggests Biology is one part of science learning that studies the life of living things. Talking about learning biology, environment and the surrounding environment can also be used as a learning resource for students, so that the biology learning process that takes place emphasizes more on students' direct experience of their learning objects. Therefore, it is necessary to apply a learning approach that is in accordance with biological material, one of which is the JAS approach.

The surrounding natural roaming approach (JAS) can improve the skills of process and learning outcomes of students because this learning approach is suitable to be applied because it is designed to increase independence and a sense of responsibility, especially in approaching biology (Yuniastuti, 2013). Learning in the environment can make students' moods like recreation, for example students learn about various types of plants and can interact directly with the surrounding environment. Characteristics of plant material and its surroundings in which there is scope for discussion of morphological and ecological structures can be studied by utilizing the surrounding environment from real objects or those found in the environment around the students themselves.

Based on the results of preliminary observations conducted at the Muhammadiyah Kupang Elementary School Teacher Education Study Program (PGSD) in the second semester when learning activities related to plants and their lives, for example, are related to plant morphology, lecturers use conventional learning which leads to teacher centered approaches namely lecture methods and taking place in class only the average learning outcome has not yet achieved the desired results. So based on this description the researcher who is also the lecturer conducts research on the influence of the Surrounding Natural Exploration approach (JAS) on the skills of process and learning outcomes of semester 2 students of PGSD University Muhammadiyah Kupang to measure process skills in aspects of observing, classifying, measuring, concluding and present, while measured learning outcomes are from the cognitive domain.

APPROACH & RESEARCH METHOD

This research is an experimental study with a design in the form of an experimental control group with modifications. The first group was influenced by the Surrounding Natural Exploration approach (JAS) as the experimental group, and the second group as the control group. The research design can be seen in Table 1.

Tabel 1. Research Design

GROUP	*PRE-TEST*	TREATMENT	*POST-TEST*
EXPERIMENT (X.I)	O_1	X	O_2
CONTROL (X.8)	O_3	-	O_4

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Explanation :

O1 : Pre-test in the experimental group

O3 : Pre-test in the control group

X : Treatment (Treatment)

O2 : Pos-test in the experimental group

O4 : Pos-test in the control group

For the interpretation of the percentage value of the process skills of students (students) according to Purwanto (2012) are presented in Table 2. as presented below.

Tabel 2. Interpretation of Percentage of Process Skills

PERCENTAGE	INTERPRETATION
86% < NP ≤ 100%	VERY GOOD
76% < NP ≤ 85%	GOOD
60% < NP ≤ 75%	ENOUGH
55% < NP ≤59%	LESS
NP ≤54%	VERY LESS

Process skill analysis techniques using formulas:

NP = x 100% with: R (Purwanto, 2012)

Explanation:

NP : Percentage of process skills

R: Score average aspects of process skills

ΣST : Total score from aspects of process skills

N : Number of subjects

The population in this study were Semester 2 Elementary School Teacher Education Study Program students in elementary school (Biology aspects) in 2017 as many as 33 students, 6 male students, 27 female students, using random sampling techniques. The treatment is done once on plant material and its life.

RESULTS AND DISCUSSION

a. Description of Research Implementation

Before conducting research, observations were carried out. The purpose of observation is to find out the activities of students in the class when participating in learning activities. Subject learning SD Science learning (the Biology concept) runs smoothly and the students are quite enthusiastic. At the time of research planning researchers also prepared research instruments, in the form of guidelines for evaluating tests, observation sheets and interview guidelines

b. Description of Cycle I Implementation

Elementary School Science Learning Course (Biology concept) is conducted once a week as much as 3 x 55 minutes. The implementation of the first cycle was on March 13, 2018 which was attended by 33 second semester students of Class B PGSD Study Program at Muhammadiyah University Kupang. The lecturer explains

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the learning steps that use the JAS (Natural Exploration) method and divides students into several groups and then distributes the MFI to each group so that each group member can work together with students while still being controlled by lecturers to keep orderly so as not to disturb class next to it.

Based on the results of observations carried out in Cycle I, it is known that the level of learning implementation from the aspect of the lecturer is not maximal, because it only reaches 77.30% in the good category. While from the aspect of students only reached 40.39% with very less categories. So that the level of implementation of learning with the Surrounding Natural Exploration (JAS) method is generally said to be not optimal.

c. Description of Cycle II Implementation

Planning in this second cycle is an attempt to correct weaknesses that occurred in the previous cycle. One of the improvements in Cycle II was to conduct a demonstration while exploring the surrounding area with the help of assistant laboratory staff. In addition, the formation of new groups to work on MFIs and the implementation of learning. Group formation still considers heterogeneity in terms of cognitive abilities and gender. The new group that is formed is expected to anticipate the boredom that can be felt by students during the lessons, and provide opportunities for students to cooperate with other friends.

The second cycle of learning activities carried out in two meetings namely on Tuesday on May 8 and May 15 2018. The material discussed at the first meeting was related to plant morphology. Students in groups do Nature Cruises Around in the Oelsonbai Kupang educational forest environment with the MFI guide provided. In the Surrounding Natural Exploration activities, students are asked to complete a table in the form of habitus and morphological stature as well as scientific names, local names and the benefits of the plants found in the field and explain them.

Learning activities in the second meeting on May 15, 2018 discussed the plant ecology around the Oelsonbai Kupang educational forest area. Students work on MFIs that contain problems or ecological damage in groups. Then each group was asked to present the MFI that had been done and invited other students to ask questions or respond to it.

After all the series of Cycle II learning activities were carried out, the Cycle II learning outcome test was conducted again and a questionnaire was distributed to measure the final learning motivation in the SD Science Learning subject (Biology concept). Measurement of learning motivation and learning outcomes tests in Cycle II was also attended by 33 second semester students of Class B PGSD Study Program at Muhammadiyah University Kupang.

The results of observations or observations of the learning process based on student activities during Cycle II learning obtained better data than the previous cycle. Based on the results of analysis of student observation data it is known that the level of feasibility of learning Natural Exploration Around the aspect of students is 100% in very good category. While the results of observations on the

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activities of lecturers during learning revealed that the level of implementation of Natural Exploration learning around the lecturer aspect lasted around 100% also with very good categories. These results also experienced an increase or improvement compared to Cycle I. Thus the level of implementation of learning around Natural Exploration generally took place in a very good category.

d. Discussion

Based on the results of this study it is known that the application of the Surrounding Natural Exploration approach (JAS) can increase the motivation and learning outcomes of second semester students of Class B PGSD Study Program at Muhammadiyah Kupang University in the elementary science learning subject (Biology concept) especially in plant material and life. Improved learning outcomes can be seen from student learning outcomes in the first cycle which has increased in cycle II.

Improved learning outcomes with the Surrounding Natural Exploration (JAS) approach are caused by a more interesting and enjoyable learning process because this learning has the character of bioedutainment. This is in accordance with the opinion of Mulyani, et al. (2008) which states that JAS (Natural Exploration) as a method has a pleasant character, expressed exclusively in terms of bioedutainment which is an entertaining and fun learning strategy involving elements of science or science, the process of scientific discovery (inquiry), work skills, collaboration, educational games, competition, challenges and sportsmanship. The achievement of learning motivation results in this study is the influence of the Surrounding Exploration learning model which is a form of extrinsic motivation given by the lecturer to improve the learning outcomes of class B students of PGSD Muhammadiyah Kupang Study Program in plant material and their lives. Siregar and Hartini, (2010) suggest that JAS learning is learning that is directly related to the environment and makes students more active.

The high student learning outcomes in learning using the approach (JAS) is also inseparable from the high learning motivation of students. As some research results reported by Siregar and Hartini (2010) which states that motivation is a factor that has a lot of influence on learning processes and outcomes. This is also proven from this study which shows that the JAS learning approach influences motivation and learning outcomes, so that high learning outcomes are obtained. Likewise, Sanjaya (2009) states that participants who have high learning motivation tend to have high performance too, whereas students with low learning motivation will also have low performance. Furthermore Suciati (2001) argues that motivation is a factor that influences many processes and student learning outcomes

The application of the Surrounding Natural Exploration approach (JAS) can increase student enthusiasm in the implementation of learning activities and students become more focused on learning activities. This is different from other lectures with more lectures, where lecturers are more enthusiastic while students tend to passively listen to the delivery of material.

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CONCLUSION

Based on the results of the research and discussion, conclusions can be drawn that: (a) the application of the Surrounding Natural Exploration (JAS) learning approach can increase student motivation and learning achievement in the learning of SD Science Learning (Biology concepts) especially in plant material and life until students are able to themselves build a concept map of plants and their lives. Student motivation in high and very very poor categories before JAS learning was 40.39% and after learning at 77.30% in cycle I and in cycle II to 100% it showed that approaching the surrounding natural roaming method (JAS) could be made reference in improving learning achievement.

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