

Improvement of Students Activity and Students Learning Outcome Using Group Investigation

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Abstract—The purpose of this research is to know : improvement of learning result and student activity. This research is a research type of Classroom Action Research . The population is all students in Koto Sani Elementary School of Solok Regency and the sample is V grade 2 students. Data from the results obtained from the final test. The results showed that the activity and student learning outcomes increased with cooperative learning model type group investigation.

Keywords—Group Invetstation, Activity, Science learning outcomes

I. INTRODUCTION

Science Learning has a variety of sense. James B.Conant describes science as a series of concepts and interrelated conceptual patterns resulting from experiments and observations [1]. Basically IPA gives the results of previous experiments and observations became provisions for further experiments and observations, enabling them to continue to grow. If using a more holistic viewpoint, science (science) should be viewed as a way of thinking in order to gain an understanding of nature and its properties, the way to investigate (a way of investigating) how natural phenomena can be explained, as a body of knowledge resulting from curiosity[1]. Then, science learning is one of the learning must be given to students because the experiences in science can change the way of thinking and shaping students' scientific attitude [2].

But the existing statement, Indonesia is weak in the application of science that they can in the process of learning in the field of technology. It can be seen that the country of Indonesia still can not compete optimally in the international arena. Data released by Global Competitiveness Report 2014-2015, Indonesia ranked 34 out of 144 countries. Southeastern Asia, Indonseia is under Singapore in the 20th position, and Thailand is positioned 31. This assessment is based on education, technology and innovation levels. To improve the quality of Indonesia's competitiveness at the international level, Indonesia must be able to develop innovative and creative human resources. One of the efforts that can be said is to instill awareness of understanding of science, so that knowledge obtained in the field of education can improve innovation in the field of science, technology and economics are beneficial to the life of Indonesian society. A recent survey by PISA in 2015 on average lierasi

science of Indonesian students is 403 from the average of 493. Indonesia is ranked 62 out of 70 countries surveyed. This is the concern of education practitioners especially teachers in the development of students' science literacy related to the subject matter in school. The problem now is how the efforts of educators in finding new breakthroughs, so as to be able to change the student's starting force into power participate, it means how a teacher's effort to change the habits of students who are often silent, do not pay attention or have no interest, not enthusiastic about the lessons given teachers become more fun towards the lessons being taught and the students are active in the learning so that the activities and learning students increase from year to year [3].

Activity problems and learning outcomes become obstacles by teachers today. Though science is a subject that trains children to think rationally, logically, carefully, honestly and systematically. Such mindset as a need to have students as stock in everyday life. Rousseau explain that in the learning process all knowledge must be obtained by working alone, with self-created facilities, both spiritually and technically [4]. Furthermore, activity is required in learning because in principle learning is to do to change behavior, there is no learning if there is no activity [4]. The essence of learning is a change that occurs in a person after the end of learning activities [5]. While, increased student activity is the increasing number of students who actively participate in learning, the increasing number of students who ask and answer, the increasing number of students who berinteraksi discuss the subject matter [6]. Student activity in learning can be seen based on the participation and involvement in responding. Based on the above opinion it can be concluded that learning activities are all activities done students both physically, mentally, intellectually and emotionally and in the form of a combination of cognitive, affective and psychomotor aspects in the learning process maximally[7]

Cognitive aspects include learning outcomes from students, that learning outcomes are a result obtained by students in following learning, and the results of this study is usually expressed in the form of numbers, letters or words [8]. Learning outcomes are patterns of action, values, understanding, attitudes, appreciation, abilities and skills [9]. Further learning outcomes are patterns of actions, values, understandings, attitudes, apriations and skills [10]. Being an indicator of the success of a learning process are: (1) Absorption ability of the learning

materials delivered achieve high achievement, either individually or in groups, (2) Behavior outlined in the learning objectives has been achieved by students, either individually [11].

Therefore, teachers are guided to use interesting learning by using learning model. Group Investigation (*GI*) as one of the alternative teaching options is the teacher divides the students into several heterogeneous groups after which the students are given with different problems each group, after which the group is asked to discuss the problem, after discussing the problem each group is asked to present the results of the discussion, other groups were asked to give opinions, responses to the group who presented the results of their discussion [12]. Cooperative learning with *GI* type is ideally applied in science subjects with broad science material topics and design tasks or sub-topics that lead to the activities of scientific methods are expected in the group of students can contribute to each other based on Slavin's everyday experience [13]. Students can solve existing problems with Cooperative type model Group Investigation has high level academic information and inquiry skills with problem solving [14].

This research can be a consideration of the use of cooperative learning model of Group Investigation for other materials or subjects. This study is also expected to be used as a variation of learning models for teachers to improve the activity and learning outcomes in science learning.

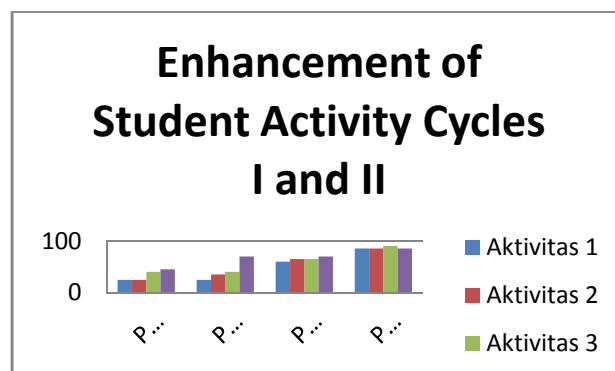
Method

This type of research used in this research is a classroom action research that aims to improve activity and learning outcomes. Itian Penel was conducted at SDN 32 Koto Sani Solok District in the even semester of the academic year 2017/2018. The research was conducted in second semester of academic year 2017/2018. By cycling that starts from cycle I. It is planned to be implemented on March 6-15, 2018, on the material of soil formation due to weathering, rock types, soil types, earth structure and atmosphere. The subjects of this research are the students of grade V of SD Negeri 32 Koto Sani of Academic Year 2017/2018, which is 20 students, with the composition of 10 male students and 10 female students enrolled in 2nd semester of FY 2017/2018 1 researcher and teacher of class V SDN 32 Koto Sani and 1 peers act as observers. This classroom action research is conducted through two cycles to see the improvement of student activity and learning outcomes in science learning with four series of Kemmis activities (1992: 21) Formulating problems and planning actions, Implementing actions, Observation / monitoring, and Reflection

Results and Discussion

This research is focused on the average score of students' activity on cycle I and II. The following data presented test results:

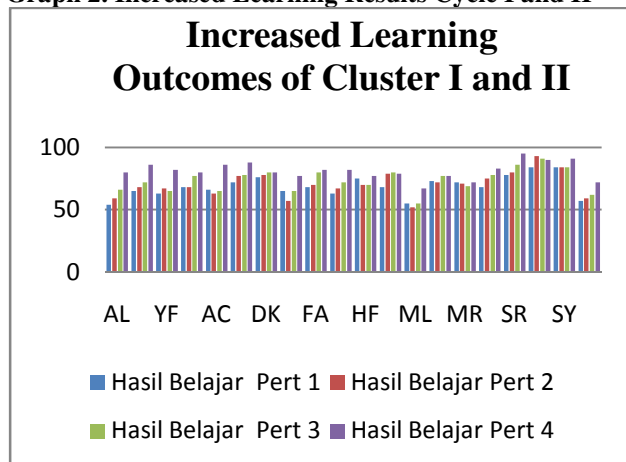
Graph 1 . Graph of Student Activity Increase Cycle 1 and II



Student activity in cycle 1 meeting 1 is classically the average percentage earned by Oral activities (25%), Writing Activity (25%), Visual Activity (40%), Emotional Activity (45%). Further activities at the meeting are 2 Oral activities (25%), Writing Activity (35%), Visual Activity (40%) Emotional Activities (70%). Students who perform activities in cycle 1 are still dominated by students who have more ability. Average score of 46% cycle activity 1. Can be seen activity Students who just silent, sitting, ignorant, indifferent, sebahagian one is busy joking with his friend. There is a problem that is considered important enough to cause student activity has not been achieved is the students are not accustomed to learning in groups, it also seen students wonder to the teacher, because they do not understand with the work steps submitted by teachers, many students who do not play an active role in groups when conducting investigations, because they have not understood and do not understand. Looking at the circumstances that occur as well as the average classical average of the percentage of student activity in cycle 1 is only 64%, then this is far below the indicator of success set ie 75%.

In the second cycle has been a lot of students who want to ask, issuing opinions, discuss and pay attention to teachers explain learning materials. Students continue to be given motivation so as to make student participation becomes increasing. The horizon thinks students become more widespread in peeling a problem. Overall it can be said that student activity has reached the expected indicator. The description of student activity in cycle 2 of meeting 1 is as follows Oral activities (65%), Writing Activity (65%), Visual Activity (65%), Emotional Activities (70%) with an average of 66%. Further activities at the meeting 2 Oral activities (86%), Writing Activity (80%), Visual Activity (90%) Emotional Activities (85%) with an average of 76%. Activity in cycle 2 has increased when compared with siklus 1. This is above the success indicator that has been established by teachers in managing learning also there is an increase when compared with cycle 1.

Graph 2. Increased Learning Results Cycle I and II

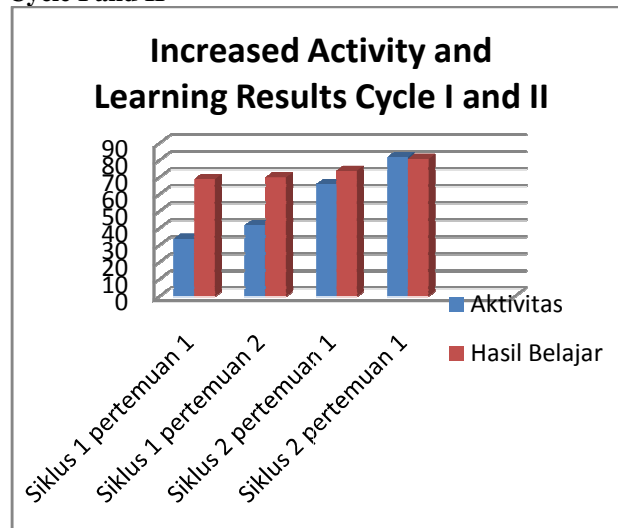


In cycle 1 meeting 1 students ability In cycle I meeting 1 ability of student in science learning by using learning strategy Model Cooperative Learning Group Investigation unfinished. It can be seen from the value obtained by the students. The average value of first cycle students first meeting with the completeness reaches 68.7 reached 30%. Assessment results of learning science using active learning strategies Model Cooperative Learning Group Investigation obtained during the execution of the first cycle 1 meeting completeness targets have not been achieved, because the target is expected completeness is 75%. In the first cycle 2 meeting student learning outcomes in learning science by using cooperative learning strategies Group Investigation learning mode has been increased. It can be seen from the results of students' grades. The average value obtained with a percentage of 70.4 students learning completeness students 40%. Assessment of science learning outcomes by using the learning strategy Model *Cooperative Learning Group Investigation* obtained during the implementation of the first cycle meeting 2 target completeness has not exceeded the minimum mastery criteria of 75%.

In the second cycles of meeting 1 student learning outcomes in science learning by using *Cooperative Learning Group Investigation* Model also experienced improvement. This can be seen from the results of student scores. The average score obtained by students 74 with the percentage mastery learning students 50%. Assessment of science learning outcomes by using *Cooperative Learning Group Investigation* Model obtained during the implementation of cycle II meeting 1 target completeness has not exceeded the minimum mastery criteria of 75%. In the second cycle of meeting 2 students' ability in science learning by using *Cooperative Learning Group Investigation* Model has been completed. This can be seen from the value obtained by students. The average score of students on cycle II of meeting 2 reached 82 with 90% completeness. Assessment of science learning outcomes by using learning strategy Model *Cooperative Learning Group Investigation* obtained during the implementation of cycle II meeting 2 target completeness has been achieved, because the target completeness is expected to be 75%. So that research is sufficient until the second cycle only.

Increasing the activity and learning outcomes of students on science learning by using *Cooperative Learning Group Investigation* Model in class V can be seen in the graph below:

Graph 3 . Increasing Activity And Learning Outcomes Cycle I and II



The results of the analysis showed an increase in student activity and learning outcomes through the *Cooperative Learning Type Group Investigation (CLGI)* model of grade V SDN 32 Koto Sani . Students are motivated to learn because they can demonstrate their active participation and high learning spirit during the learning process . Cooperative learning model does not generate boredom for these students to learn. This, of course, is very influential on the learning process and the level of mastery of the material that has been studied. So by using CLGI learning model can increase activity and result of student learning in science subjects in class V SDN 32 Koto Sani.

Conclusions

Through *Cooperative Group Investigation Model (GI)* can improve the learning activity of science students of grade V SDN 32 Koto Sani. This is seen in the average percentage of student activity classically from cycle I to cycle II. Through active learning strategy team type quiz can improve the learning outcomes of science students of grade V SDN 32 Koto Sani. This is seen in the percentage of mastery of student learning outcomes both cognitive, affective, and psychomotor aspects from cycle 1 to cycle II.

Suggestion

Preparing planning, teachers should pay attention to aspects such as, the formulation of indicators that must be adapted to the competency standards and basic competencies, the formulation of learning objectives that contain ABCD components, the selection of teaching

materials in accordance with the characteristics of students, in accordance with the materials to be taught.

Implementation of the action, carry out the action in accordance with the planning that has been designed. Implement the learning steps perfectly according to plan. Conditions the class before starting the learning activities, do apperception activities in a variety of ways that can generate student spirit and able to generate student schemata, convey the purpose of learning, convey the material to be presented, the form of group learning before starting the learning activities.

Activities that students can do at school are numerous and complex and varied. If all these activities can be created in the class of course the atmosphere will feel more fun and not boring. Therefore, teachers should be able to use a good learning model in order to increase student activity, one of which is learning strategy *Model Cooperative Group Investigation (GI)*.

Contemplate the change of learning outcomes from the first meeting to the next meeting. The learning outcomes should increase from previous meetings, both the cognitive aspects of learning, affective aspects, and psychomotor aspects.

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