

Improving Students Understanding Of The Concept Of Sound Propagation Through Cooperative Learning The Student Team Achievement Division (STAD) In Class IV SD IMPRESS 12/79 BIRU 1 Tanete Riattang, Bone District

Titin

SD INPRES 12/79 Biru 1

Email: dratitin12@yahoo.co.id

(Received: 28 Oktober 2020; Revised: 14 January 2021; Published: 28 March 2021)

ABSTRACT

This study aims to find out cooperative learning is a learning model where students learn in small groups to share ideas/opinions and work together to solve problems and take responsibility individually and in groups to achieve common goals. The cooperative learning process for students is needed to express ideas and develop cognitive, affective, and psychomotor abilities to improve students' understanding in the form of science process skills including observing, classifying, predicting, and communicating. Improve students' understanding of group learning in the science learning process, it has a positive impact on students. This is in line with that, students can be interested in learning science if they are allowed to carry out activities in the science learning process through real observations or by experimental science processes that have been prepared rather than being taught verbally. The purpose of learning science in elementary schools is to develop attitudes and skills as well as the ability to increase knowledge and think critically.

Keywords: Improving Student, Sound Propagation, Achievement Division

INTRODUCTION

In the 2006 Education Unit Level Curriculum (KTSP) IPA grade IV elementary school (Haryanto, 2007: 141-143) several material studies must be mastered by elementary school students. One of the fields of study is the propagation of sound that must be mastered by elementary school students where the concept of this material is very close to the daily lives of students and is related to the daily activities of students in their environment. In understanding the concept of sound propagation through constructing their thoughts so that students can understand sound propagation well. The development of student understanding is an effort that must be made in learning. This is in line with the opinion of Dimiyati (2006: 96) who states that efforts that can be made to improve the quality of learning in the implementation of KTSP are increasing student activity and understanding through various interactions and learning experiences in improving cognitive, affective, and psychomotor abilities.

Therefore, how to provide process skills for students, so that they can find their own, especially in developing students' cognitive, affective, and psychomotor as well as

developing creativity and training students to think critically. This is in line with Abruscato's view, (Khaeruddin 2005: 15) suggests that science learning in the classroom is seen as an active process, especially in (1) developing students' cognitive, (2) developing students' effectiveness, (3) developing students' psychomotor, (4) develop students' creativity, and (5) train students to think critically. Based on these expectations, the researcher assumes that with the effort to increase students' understanding through cooperative learning, the development of this learning method can be further improved as it should be. In connection with this phenomenon, Semiawan (1998/1999: 23) reveals that: In the teaching and learning environment of science in schools, there are problems, namely students get high scores, but they are less able to apply their acquisitions, both in the form of knowledge, skills, and attitudes. in real life. This is because science subject matter is received through verbal information. They are not accustomed to actively try the knowledge or information themselves in real life. In addition, from the results of the pre-research that the researchers conducted in December 2017 through interviews and observations of teachers and fourth-grade students of SD Inpres 12/79 Biru I, it was found that there were several problems in science learning, especially on the subject of sound propagation.

It was revealed that the teacher: (1) in the science learning process did not involve students in group learning only using classical learning so that students' knowledge was solely what was conveyed by the teacher and students did not directly express the ideas they got, resulting in a lack of student understanding on the subject. sound propagation learning, (2) the teacher in teaching the sound propagation material only gives examples of objects that are around students and displays picture media from cardboard, so students are only limited to listening to the image media displayed by the teacher, not directly involved in conducting experiments so that students get fewer ideas, understanding, and patterns in thinking to understand the object being observed, (3) the teacher gives questions only limited to questions of memory and knowledge, does not lead to questions that refer to the development of students' thinking to understand by connecting sound propagation and the surrounding environment, (4) the teacher gives group learning, distributes the material being taught, besides that the teacher leaves the classroom to let students work on completing assignments. This means that the teacher does not guide students in groups, resulting in students who can work fully in groups, while less capable students do not try to do anything.

Based on this phenomenon, the researchers conducted classroom action research through the STAD cooperative learning model. One of the cooperative learning models to improve students' understanding. Where this learning model students learn in groups interact with each other to express opinions, cooperate and be responsible for achieving common goals. In line with opinion (Nurasma, 2006: 4) cooperative learning is a learning model where students learn in small groups to share ideas or opinions and are responsible for achieving individual and group learning outcomes to achieve common goals. Cooperative learning utilizes students' tendencies to interact.

Some studies have shown that in a classroom setting, students learn more from one friend to another among their fellow students than they learn from the teacher. Research also shows that cooperative learning has a very positive impact on students with low learning outcomes. The benefits of cooperative learning for students with low learning outcomes according to Lundgren (Nurasma, 2006: 60) include: (a) can increase motivation, (b) improve learning outcomes, (c) improve understanding, and (4) increase retention or deviations. Older subject matter. Based on the description above, the researchers carried out Classroom Action Research (CAR) through STAD cooperative learning model with the title Improving Student Understanding of the Concept of Sound Propagation through Cooperative Learning Model Students Team Achievement Division (STAD) in Class IV SD Inpres 12/79 Biru I District Tanete Riattang, Bone Regency.

METHOD

This type of research is qualitative research, namely research that is expressed in verbal form and analysis without using statistics. Based on the research that has been found, the research that uses a qualitative approach expressed by Licon and Guba (Moleong: 2001: 4-8) has the following characteristics: (1) natural setting, (2) human as a tool, (3) qualitative method, (4) analysis or inductively, (5) theory and basis, (6) descriptive, (7) more concerned with the process than the results, (8) the existence of "boundaries" determined by: focus ", (9) the existence of criteria specifically for the validity of the data, (10) the design is temporary, (11) the research results are negotiated and mutually agreed upon. This qualitative approach examines whether the efforts made by teachers can improve students' understanding through cooperative learning in grade IV SD Inpres 12/79 Biru I, Tanete Riattang District, Bone Regency.

Observations were made during the activation process using the prepared observation sheet. Observations were made on the behavior and activities of students during the learning process and the impact of the teacher's behavior on students during the learning process using the STAD model cooperative learning steps. Evaluation is carried out at the end of each cycle of action implementation. The evaluation is shown to determine whether or not there is an increase in students' understanding of the subject of sound propagation being taught. The evaluation tool used is a learning outcome test compiled by the researcher. If all students get a score of 7.0 then the action is considered to have been successfully implemented. To follow up on the observations, interviews were conducted with the research subjects.

Reflection is carried out based on the results of data analysis, both observation data and evaluation data (Meolong, 2001: 23-23). The researcher and the class teacher analyze and reflect on the results of action I. The reflection will be used as a consideration of whether the predetermined criteria have been achieved or not. If it has been successful then the action cycle ends or does not continue to the next cycle. But on the contrary, if it has not been successful, the researcher continues the next cycle by

improving learning performance in the next action and so on until the success has been determined. The activities carried out at each stage in the second cycle are the same as the activities in the first cycle. The fundamental change is in the type of action given as previously stated, the action plan in the second cycle is prepared based on the results of reflection and data analysis in the first cycle (Suharsimi, 2007: 45-46).

RESULTS OF RESEARCH AND DISCUSSION

On Monday, May 6, 2014, the researcher discussed the results of the initial test with the fourth-grade teacher and science teacher to determine all fourth-grade students as research subjects. On the same occasion, it was also agreed that the implementation of Cycle I would start on Thursday, May 9, 2014. After the initial test was carried out, the results of student work were corrected to form groups. Based on the initial tests obtained, the students were then included in the formation of the STAD group. From these groups, it can be seen which group a student is in (Wina, 2007: 14-15). Based on the formation of groups obtained 5 groups, each consisting of 4 students.

According to the method of forming the STAD group, students with low abilities will be grouped with students with high abilities, and are added with 2 students with medium and low abilities. The group formation was also based on gender which consisted of 2 male students and 2 female students because there were 10 male and female students. Based on the results of the initial test, it was found that almost all students still made mistakes in solving the questions given. It was concluded that they did not understand the prerequisite material and needed to remind students about the prerequisite material. So the next step for the researcher is to prepare materials and tools for teaching and provide observation sheets to the classroom teacher to be known and studied as a basis for making observations during the research. This is intended to provide an opportunity for teachers to discuss things that are not clear in the teaching preparation and observation sheets before Cycle I is given.

To observe the activities of teachers (researchers) and learning students used observation sheets (Poedjiani, 1996: 23-24). Observations of learning activities in this study involved two observers, namely the fourth-grade teacher and the science teacher. In implementing the learning activities, the researcher acts as a teacher. The learning stages of each action are adjusted to the learning stages based on the STAD cooperative learning model, namely the learning preparation stage, material presentation, group learning activities, checking the results of group activities, working on individual test questions, examining individual test results, and group awards.

Learning exposure to improve students' understanding of sound propagation through STAD cooperative learning model. The details of each learning action are as follows: the implementation of the STAD model of cooperative learning in the learning of sound propagation through liquids and solids is presented in one learning action. The learning material carried out in the first cycle of action is learning the propagation of

sound through liquids and solids. At the beginning of the lesson, students are reminded again of the various sounds. The first cycle of action learning is carried out in one meeting with a time allocation of 2 X 35 minutes.

The general purpose of learning is to describe the heat energy and sound energy contained in the surrounding environment and their properties while the specific objectives of learning are (1) students can mention examples of liquids and solids, (2) students can explain the process of sound propagation through liquids and solids. solid objects, (3) students explain why sound can propagate, (4) students can prove that sound can propagate through liquids and solids by conducting experiments. The evaluation given is to give a test orally and in writing. Orally students were given questions related to the propagation of sound while in writing were given questions based on the results of their practice in proving that sound can propagate through liquids and solids (Nurkancana, 1986: 45-46).

Following the stages of implementing the STAD cooperative learning model, the implementation of the action begins with the presentation of sound propagation material through liquids and solids which is carried out classically. In the preparation of learning carried out by researchers are (1) designing materials in such a way for group learning, (2) placing students into groups, (3) determining scores based on their academic abilities so that there are high, medium, and low abilities. In addition, it is balanced by gender. The basic score is taken from the results of the student's prior knowledge test. During the implementation of the presentation of the material, the fourth-grade teacher and the science subject teacher were made colleagues observe the learning process. The material presented is to prove that sound can propagate through liquids and solids by using props from a basin, 2 stones, water, and a pencil/ruler, and a table.

Learning enters the next stage of STAD activities which is the most important activity, namely group learning. Before starting to study in groups, the teacher first provides opportunities for students to socialize with their groups. This opportunity is also used by researchers to find out the possibility of conflicts that arise in the group. From the observations made by the researcher on the research group, it turned out that no conflict could result in the group not being able to cooperate. Each group was given a Student Worksheet (activity 1) with material on the propagation of sound through liquids and solids (Hamalik, 2001: 67-68). Group members work on assignments under the worksheets given and use existing equipment under the specified material. The group worked according to the procedure and completed the sentences in the LKS and finally they were able to prove that sound can propagate through liquids and solids by using props from stones, basins, water, pencils/rulers, and tables and can solve problems in the LKS.

CONCLUSION

Based on the formulation of the problem, the results of data analysis and discussion, the results of this study can be concluded that through cooperative learning the STAD model can improve students' understanding of the concept of sound propagation in class IV SD Inpres 12/79 Biru I, Tanete Riattang District, Bone Regency. The results showed that the STAD cooperative learning model was effective for sound propagation learning. Therefore learn cooperative learning with the STAD method can be used as an alternative for teachers to increase students' motivation in learning activities. Based on the results of this study, some suggestions are put forward as follows.

For teachers or other education practitioners to apply the STAD model during class presentations, students are placed in groups, so that students who have difficulty understanding the material when it is presented can immediately get help from their group mates. This is more beneficial because students often do not dare to ask the teacher if they have difficulty. For teachers who apply the STAD model, they should hold a test at the end of each study material and immediately announce the test results and give group rewards so that students are more active during learning activities. In this case, students will compete to give the best contribution to their group. For researchers who are interested in researching the application of STAD model cooperative learning, it is hoped that they can develop other science materials besides sound propagation materials.

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