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The Effect of Student Team Achievement Division (STAD) on Student Learning Outcomes of SMP Negeri 1 Tinondo

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Abstract

The learning model is very influential on the success of learning. the right learning model can affect learning outcomes in the classroom. This study aims to determine the effect of the model Student Team Achievement Division (STAD) on the Learning Outcomes of Class VIII Students of SMP Negeri 1 Tinondo. The type of research used in this study is a Quasy Experiment type of research. The total population in this study were 48 students of class VIII at SMP Negeri 1 Tinondo. The sample used in this study consisted of two classes, namely: the experimental class (Class VIII A totaling 24 students), and the control class (Class VIII B totaling 24 students). With the research design Control Group Pretest-Posttest Design. The instrument used to measure learning achievement tests is an essay test in the form of a pretest and posttest. The instrument used to measure learning achievement tests is an essay test in the form of a pretest and posttest. data analysis technique using independent sample t-test. The results showed that, After the pretest and posttest were carried out in the experimental class using the STAD learning method, the independent t-test value of the N-gain sample t-test was obtained with the t-count value > t-table. Based on the table above, it is known that the t count is 7,926 with a significance of 0.000. The t-table obtained from df = 46 at a significant level of 5% is 2.018. So t-count > t-table. So there are differences in student learning outcomes scores in different ways significantly between the experimental class and the control class. Based on the results of the study, it can be concluded that the model Student Team Achievement Division (STAD) learning can affect the learning outcomes of science at SMP Negeri 1 Tinondo.

Keywords: STAD learning model, Student learning outcomes.

A. Introduction

The learning model is very influential on the success of learning, with the use of inappropriate learning models that can affect activities and learning outcomes in the classroom. Where in the learning process in class problems are generally experienced by students. which problems faced by students are uniquely different from one another. For example, activity problems and student learning outcomes still tend to be low, this is due to various factors including limited ability to speak and lack of confidence from students. With so many problems experienced it is necessary the use appropriate learning models, this aims to be able to increase student learning activities and outcomes (Pangestu, 2017).

Teaching and learning process activities in school are an effort to improve the quality of national education because the school is an educational tool (Lubis, 2012). Biology is one eye important lesson at all levels of education, then naturally the eyes Biology lessons are developed and cared for by all educators. Biology is one of the subjects in school that can develop Skills, and make students aware of its importance in preserving nature. Various attempts have been made by the teacher to develop the potential of students and create learning quality, but in reality, there are still many students who get low Biology learning outcomes (Arimadona, 2017).

Based on the results of initial observations at SMP Negeri 1 Tinondo, facts were obtained that the learning process applied is still conventional which is dominated by the teacher in learning activities. This learning tends to be passive so students and teachers are actively involved in the learning process not enough. For the learning objectives to be achieved, it is necessary to have student activity in the learning process in class. Student activity can be increased by using a learning model that can make students more active and enthusiastic in carrying out the learning process in class. Activity increased student learning, which is expected to improve student learning outcomes.

One way to increase student learning activity is to apply a cooperative learning model. According to Lie, (2010) five elements belong to cooperative learning namely positive interdependence, individual responsibility, direct interaction, communication among members, and evaluation of group processes. The main concept of cooperative learning is group rewards, individual responsibility, and equal opportunity for success, (Slavin in Trianto, 2010). There are several variations of cooperative learning including student team achievement divisions (STAD), Jigsaw, a structural approach that includes thinking pairs share (TPS) and numbered heads together (NHT) as well as group investigations (TGT).

One of them is models cooperative learning type Student Team Achievement Division (STAD), where This learning model can increase activity and learning outcomes. This matter because this learning model can make students responsible towards themselves and their group, exchange ideas, and cooperate with the group so that it will have an impact on increasing activity and results in more effective and efficient learning (Hardini, 2012). The results of Hidayah's research (2019) show that learning STAD type cooperative model can improve activity and result in studying biology students on the genetic material in class XII IPA 2 SMA Negeri 2 Siak Hulu, Kampar Regency. Research by Apriadi et al (2013) shows that giving a pretest and posttest in learning cooperative type STAD effect significantly positive on the results study biology.

Based on the results of field observations, information was obtained that the teacher at SMP Negeri 1 Tinondo had never previously implemented a learning model cooperative type Student Team Achievement Division (STAD) so researchers are increasingly interested in raising titles related to the effect of applying Student Team Achievement Division (STAD) learning on Dan's activities Science Learning Outcomes of Grade VIII Students of SMP Negeri 1 Tinondo.

B. Literature Review

1. STAD Model

The STAD model is the most cooperative learning variation widely researched and highly adaptable. This learning model has been used in Mathematics, Science, Social Studies, English, Engineering and many other subjects at the elementary to university level (Slavin and Rusman 2011). Cooperative learning model type STAD students are divided into groups consisting of four to six people of varying ability, gender, and tribe. The most important thing about learning is using the learning model. This is a collaboration between groups where students who know more teach students who don't know. As revealed by Utami (2015), STAD is considered acceptable to solve learning problems in class. The main idea of learning methods STAD is to motivate students to help each other in understanding a subject matter and help each other in solving problems (Rusman, 2011).

The teacher provides the subject matter and group members make sure that each individual in the group can master the material. After each group ensures that its members can master the material, the teacher gives individual quizzes about the material and may not share one help among members. The score of the student's quiz result is compared with the average score their own previously earned average is then rewarded based on how much improvement they can achieve. Rate each The members are then summed to get the group and group scores. Those who reach certain criteria can get certificates or prizes. other prizes (Rusman, 2011).

2. Learning Outcome

Learning outcomes can be obtained through an assessment process, where the assessment of learning outcomes is to give a value that is determined by certain criteria to the learning outcomes that have been achieved by students. As is assessment, it will show the results of learning in the form of changes in the behaviour of students who have followed the learning process. That is, learning outcomes a person will not be seen directly without the person demonstrating the abilities acquired through learning. Learning outcomes will be optimal if teaching and learning activities are carried out effectively and in fun (Nissa, 2017).

Nana Sudjana in her book says learning outcomes are the abilities that students have after they received experience learning. Learning outcomes are a culmination of the learning process. Learning outcomes This happened mainly thanks to the teacher's evaluation. Learning outcomes can impact teaching and accompanying impact. Both impacts are beneficial for teachers and students (Nissa, 2017).

C. Methodology

1. Research Design

This type of research is Quasi Experiment involving two classes given a different learning model, namely in the experimental class using the Student Team Achievement Division (STAD) learning model and in the control class using conventional learning models.

The population in this study was class VIII at SMP Negeri 1 Tinondo which totalled 48 students. The sample in this study were all students of class VIII in junior high school Negeri 1 Tinondo with a total of 48 students with a control class of 24 students and the experimental class totalled 24 students who were determined as samples, all because the number of samples or subjects is less than 100 people, therefore in taking samples using total sampling technique, namely include all members of the population as a research sample.

Learning activities in the Student Team Achievement Division learning model (STAD) consist of six aspects, namely: conveying goals and motivation, division of groups, delivering material, learning activities in teams (teamwork), evaluating the results of discussions, and conveying conclusions as well as team achievement awards.

2. Instruments

The test of learning outcomes that will be measured in research is the domain cognitive through pretest and posttest with 20 choices of question doubles and 5 essay numbers. Before this test was used previously had performed expert validation tests. The test of learning outcomes that will be measured in research is the domain cognitive through pretest and posttest with 20 choices of questions doubles and 5 essay numbers. The problem of learning outcomes uses indicators of learning outcomes according to Bloom which has been revised by Anderson and Krathwoll. The questions used have been validated by a team of experts

3. The Technique of Data Analysis

The data analysis method used is descriptive analysis and analysis inferential, descriptive analysis was used to present the data in a systematic way simple. Student learning outcomes are presented in tabular form and contain data in the form of average, median, maximum value, lowest value, and the number of samples using the SPSS v24 application.

Meanwhile, on inferential analysis, we will choose one parametric and non-parametric analysis parametric. To choose one of them then we have to do the prerequisite test, namely the normality test and data homogeneity test using the SPSS v24 application. If the data obtained is normally distributed, then the data will be analyzed parametrically with the type of independent t-test (sample t-test), but if it is not normally distributed then it is analyzed with non-parametric type chi-square two independent samples.

D. Findings and Discussion

1. Findings

a. Descriptive analysis of student learning outcomes.

Based on the results of research conducted at SMP Negeri 1 Tinondo in classes VIII A and VIII B, data were obtained from groups of students who taught using the Student Team Learning model Achievement Division (STAD), and the group of students taught using the conventional learning model after doing the pretest and posttest (Table 1). Pretest and post-test scores from the control class and the experimental class can be seen in Table 1 as follows:

Table 1. Learning Outcomes of Experiment Class and Control Class

Number of samples (N)	Score	Experimental Group		N-gain	Score	Control Group		N-gain
		Pretest	Postest			Pretest	Postest	
24	Highest	60	90	.76	Highest	50	72	.54
24	Lowest	30	72	.42	Lowest	35	55	.18
24	Mean	46,54	79,29	.60	Mean	43,04	64,63	.37
24	Median	47,00	80,00	.6077	Median	44,00	65,00	.3923

The following Figure 1 graphs the average N-gain of the experimental class and class control as follows:

b. Hypothesis testing

The hypothesis test used in this study is the t-test independent N-gain can be seen in Table 2. as follows.

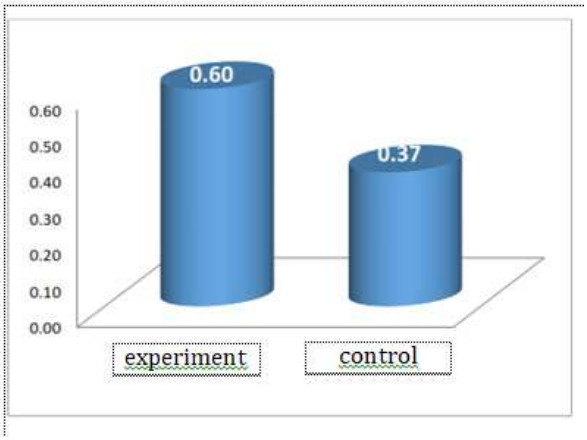

Figure 1. Graph of the average n-gain

Based on Figure 1., it can be seen that there is a difference in the average N-gain value in both classes. The experimental class gets more N-gain values larger than the control class. Based on the N-gain results, it can be seen that class in the experiment experienced a greater increase in learning outcomes compared to the control class with an average N-gain which is the difference between the two of 0.23.

Table 2. Independent N-gain t-test results for the experimental class and the control class

Independent Samples Test

	f	sig	T	df	Sig (2tailed)	Mean difference	Std. Error difference
N_Gain Equal variances assumed	.122	.729	7,926	46	.000	.23334	.02944
Equal variances not assumed			7,929	45,940	.000	.23334	.02944

Based on the table above, it is known that the t-count is 7,926 with a significance of 0.000. The table obtained from df = 46 at a significant level of 5% is 2.018. So t-count > t-table. So there

are differences in student learning outcomes scores in different ways significant between the experimental class and the control class.

2. Discussion

Based on student learning outcomes shows that there is an increase in student learning outcomes in the experimental class taught using the Student Team Achievement Division (STAD) learning model, compared to the control class using conventional learning. Because in the experimental class, students are led to think more, seen from Giving quizzes to students aims to see student understanding of the material that has been taught. Rusman (2012) states that the quizzes conducted by the teacher aim for students to complete quizzes individually to ensure students can be held accountable for understanding the lesson.

Submission of goals and motivation will make students enthusiastic about the learning process in class. The high student learning outcomes in the use of the STAD learning model are due to the high interest and student motivation to learn. Because learning is done in STAD, students are given learning in the form of teams, so they are motivated. This is the opinion of Sardiman (2016) saying that motivation and interest are as a whole the driving force within oneself students who will elicit, ensure continuity, and provide direction in learning activities, each student has different learning interests, and interests determine the success or failure of one's activities. It will affect student learning outcomes.

The results of this study are in line with the research conducted by Burhannuddin et al (2019) which says that this type of learning model STAD cooperative can improve student learning outcomes. Therefore it can be said that learning the STAD model influences student learning outcomes. Increased student learning outcomes can occur because the STAD learning model is one of the teacher's efforts to achieve the aspects of understanding concepts and others that encourage students to be active exchange ideas with others and understanding a subject matter so that student learning outcomes can increase (Esminarto et.al 2016).

In contrast to the control class, this is due to very low learning outcomes the learning model used is conventional, where the teacher does not allow students to ask questions and does not guide students in making conclusions so that students only accept what is conveyed by the teacher. Besides, the lack of interest and motivation to learn students cause a lack of attention and learning effort. This is due to conventional learning students are only fixated on the teacher, which resulted in students not understanding the material presented by the teacher.

According to Aine. N (2016), stated that decreased interest and motivation student learning outcomes are strongly influenced by two factors namely internal factors, and external factors, where internal factors lack the will and desire of students in learning, and students' lack of interest in reading while external factors namely learning less attractive methods, the facilities and infrastructure are incomplete this greatly affects the interest and motivation of student learning outcomes.

The results of this study are in line with Jafar (2021), who states that in conventional learning activities that take place in class, students have difficulty understanding or remembering various formulas, as well very lack of student enthusiasm during the learning process. students just sit and listen to what the teacher explained no one asked the teacher during the learning process, it is very rare for students to voluntarily come forward when asked by the teacher to solve the problem on the blackboard this is what causes students learning outcomes not to reach KKM.

Based on the description above, it is in line with the results of Febriati's research (2018), there is a significant difference between the learning outcomes of the experimental class using the STAD learning model, which has more learning outcomes Good. This is because the learning model used is group learning, which makes it easier for students to understand the material, as well as the emergence of motivation from students that will influence student learning outcomes. Compared with the control class using conventional learning models, this is due to the lack of interaction between teacher and student.

E. Conclusion

There is the influence of the Student Team Achievement Division learning model (STAD), on student learning outcomes that have increased in junior high school Negeri 1 Tinondo with a t count > t table with a significant level of value 0.000 <0.05 so there is a significant difference between the experimental classes and control class. Based on the results of the research, it is better if a teacher can use the Student Team Achievement Division (STAD) learning model, in the learning process, especially for science subjects and guide students to be active in activities learning.

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