

THE EFFECT OF STAD-TYPE COOPERATIVE LEARNING MODEL (STUDENTS TEAMMS ACHIEVEMENT DIVISION) ON ONE-VARIABLE LINEAR EQUATION MATERIAL ON LEARNING OUTCOMES VIEWED FROM THE SELF EFFICACY OF SMP N 2 GODEAN

Nanang Khuzaini^{1,*}, Hilliyani²

¹Pendidikan Matematika, Universitas Mercu Buana Yogyakarta, Indonesia

²IAIN Takengon, Indonesia

e-mail: nanang@mercubuana-yogya.ac.id^{1*}, hilliyani@iaintakengon.ac.id²

Abstract: The background of this research is based on the researcher's interviews with teachers in the field of mathematics who teach at SMP N 2 Godean, it is known that students' understanding of mathematics is still low, it is known from the scores of assignments and students' daily tests that are still below the KKM, namely 75. Even though learning outcomes are often used as a benchmark for achieving educational goals. In order for student learning outcomes to be better, the teacher requires students to be more confident in working on math problems, such as working on one-variable linear equation problems, students are expected to foster the self-efficacy of each individual. One alternative learning model that supports self-confidence is using STAD type cooperative learning model. This study aims 1) to determine the type of STAD cooperative learning model affects learning outcomes. 2) to determine self-efficacy influences learning outcomes. 3) to determine the interaction between the STAD cooperative learning model and self-efficacy on learning outcomes. This study used a quantitative approach. The subjects of this study were class VII students of SMP N 2 Godean, taking samples using a purposive sampling technique. This research included the type of pretest-posttest group design experimental research. The instruments used were learning achievement tests and self-questionnaires. efficacy. The data analysis technique used is the Two Way ANOVA test. The results showed that 1) there was an influence of the STAD type cooperative learning model on learning outcomes with $F_{count} 5.428 > F_{table} 3.991$. 2) there is an effect of self-efficacy on learning outcomes with $F_{count} 40.804 > F_{table} 3.140$. 3) there is an interaction between the STAD cooperative learning model and self-efficacy on learning outcomes $F_{count} 4,387 > F_{table} 3,140$ The conclusions in this study are 1) There is an influence of the STAD type cooperative learning model on learning outcomes. 2) There is an effect of self-efficacy on learning outcomes. 3) There is an interaction between the STAD cooperative learning model and self-efficacy on learning outcomes. It is recommended that teachers use the STAD type cooperative learning model which can be used as an alternative learning model for teachers to improve student learning outcomes.

Keywords: Cooperative learning model, STAD, learning outcomes, self efficacy

INTRODUCTION

Education is a vehicle for improving and developing the learning quality of every human being, therefore education must be developed systematically in learning (Cotton, 2010; Roblyer & Doering, 2013). Learning plays an important role in the development, habits, attitudes, beliefs, goals and perceptions of every human being. According to Gronlund et al. (2009) argues that the learning process occurs when someone shows different behavior when someone has not

experienced the learning process.

While the success or failure of a learning depends on the learning process experienced by every human being (Cattel, 1931). Factors that influence human success in learning are: external factors (which come from outside the human self) and internal (from within the student) (Ma, 2010). In this case the researcher focused his research on students who lacked confidence which tended to interfere with their concentration. Because students who are disturbed by their self-confidence can make learning outcomes less than optimal and tend to be unsatisfactory.

Learning outcomes are often used as a benchmark for achieving educational goals, this is in accordance with the opinion expressed by Kotval (2003). Considering that learning outcomes are used as a benchmark for achieving learning objectives, a process is needed to determine whether learning outcomes are in accordance with learning objectives. According to Novianti (2017) learning outcomes are results achieved by individuals in the form of mastery of knowledge or skills embodied in the form of letters, numbers, symbols and sentences. One material that uses letters, numbers and symbols is a one-variable linear equation.

In order for student learning outcomes to be better, the teacher requires students to be more confident in working on math problems, such as working on one-variable linear equation problems, students are expected to grow each individual's self-efficacy. According to Eggen & Kauchak (2016) defines self-confidence as a person's belief in his ability to organize in carrying out a series of actions needed to achieve the goals set desired. According to Santrock (2016) said that self-confidence has a big influence on behavior.

For example, a student who has low self-confidence may not want to make the effort to study for a test because he does not believe that studying will help him with the questions. One of the reasons for the lack of self-confidence is the selection of an inappropriate learning model. In order for student-centered learning, a change in the learning model is needed by Lesh & Doerr (2003). One alternative learning model that supports self-confidence is using the STAD (Student Teams Achievement Division) cooperative learning model. This model is a student-centered teaching and learning activity. Especially in solving or overcoming problems given by the teacher in increasing the self-efficacy of each student. According to Joyce & Weil (2003) the application of the STAD type cooperative learning model can improve student learning outcomes.

Based on research conducted by Kilbane & Milman (2014) showed that the results of the study showed that there were significant differences in learning independence between students who took the STAD type cooperative learning model and students who took

conventional learning. Meanwhile, research conducted by Nyoman et al. (2021) shows that the results of applying the STAD type cooperative learning model can improve student learning outcomes. While research conducted by Zulkha & Setyawan (2022) showed the following results: (a) the level of student self-efficacy of 69.331246% was included in the medium category (b) the level of student learning outcomes of 77.31% was included in the good category (c) a significant value of 0.000, therefore $0.000 < 0.05$, then H_0 is rejected and H_a is accepted, meaning that there is a significant effect of self-efficacy on learning outcomes.

The objectives of the research are: (1) to find out the STAD type cooperative learning model has an effect on learning outcomes (2) to find out self-efficacy has an effect on learning outcomes (3) to find out the interaction between STAD type cooperative learning model and self-efficacy on learning outcomes. This is because the STAD type cooperative learning model is an effective cooperative learning model.

Using the STAD type cooperative learning model can create a classroom atmosphere that is more conducive and affective, making students more active in participating in learning, so that student learning outcomes become better. It is believed that self-efficacy can affect student learning outcomes. Because, students who have self-efficacy will believe in their abilities, it is this belief that encourages students to prepare themselves to face the tasks given. It can be said, the existence of self-efficacy makes learning outcomes good. If the absence of self-efficacy results in students not being confident in the learning outcomes obtained and students tend to surrender to the results obtained.

This is because the STAD type cooperative learning model can create an atmosphere in the classroom become more conducive and effective and students are more active in participating in learning. Self-efficacy is believed to affect student learning outcomes because students who have self-efficacy will believe in their abilities, and it is this belief that encourages students to prepare themselves to handle the tasks given. In addition, the STAD type of cooperative learning model fixes students in several

groups and discusses, besides that students will do presentations in front of the class so that students who have high self-efficacy will fit into this learning model so that their learning outcomes will be better.

METHODS

This research is using experimental method. The main material used in this study is a one-variable linear equation. The research design used was the pretest-posttest group design (Heale & Twycross, 2015). The population in this study were all students of class VII SMP N 2 Godean, consisting of 11 classes, each class having 32 students. The sample in this study was determined using a purposive sampling technique because the students were not taken randomly but for a specific purpose. Of the eleven existing classes, two classes were selected, namely VII C and VII D. These classes were selected because they considered the criteria for the respondents sought in this study. In this research the independent variable is STAD type cooperative learning model and self-efficacy, while the dependent variable is learning outcomes.

Data collection techniques and instrument development in this study were tests and questionnaires. The test is used to find out that student learning outcomes are in accordance with the problem solving steps based on the question indicators (Heriyanto, 2018). The learning outcomes test is in the form of a description of five questions, and is given learning with the STAD type cooperative learning model with one variable linear equation material. Questionnaires are used to classify students based on high, medium, and low self-efficacy. The questionnaire is given before learning.

There are two data analysis techniques used, namely descriptive and inferential analysis. Descriptive analysis is used to categorize student learning outcomes from high, medium, and low self-efficacy. Meanwhile, inferential analysis is used to determine sample data and the results are applied to the population. This analysis includes normality testing, homogeneity testing, and ANOVA testing.

RESULT & DISCUSSION

Data from the effect of the STAD type

cooperative learning model on learning outcomes were obtained by using an ANOVA test analysis of the pretest and posttest data of experimental class students. This can be seen from Fcount 5.428 which is far greater than Ftable 3.991 with an error rate of 5% and df1 1 and df2 64, or sig values. (2-tailed) of 0.023 <0.05. This means that there is an influence of the type STAD cooperative learning model on learning outcomes.

The results of the data from the effect of self-efficacy on learning outcomes were obtained using an ANOVA test analysis of self-efficacy questionnaire data and posttest experimental class students. This can be seen from Fcount 40.804 which is far greater than Ftable 3.140 with an error rate of 5% and df1 2 and df2 64, or sig values. (2-tailed) of 0.000 <0.05 then the null hypothesis (H0) is rejected and the working hypothesis (H1) can be accepted. This means that there is an influence of self-efficacy on learning outcomes.

The results of the data from the interaction between the STAD type cooperative learning model and self-efficacy on learning outcomes were obtained by using the Anova test from the interaction data that Fcount 4.387 is much greater than Ftable 3.140 with an error rate of 5% and df1 1 and df2 64, or a sig value. (2-tailed) of 0.017 <0.05, the null hypothesis (H0) is rejected and the working hypothesis (H3) can be accepted. This means that there is an interaction between the STAD type cooperative learning model and self-efficacy on learning outcomes.

CONCLUSION

Penutup terdiri dari kesimpulan dan Based on the results that are in line with the objectives of this research problem. So the following conclusions can be drawn: (1) there is an effect of the STAD type cooperative learning model on learning outcomes with Fcount 5.428 far greater than Ftable 3.991 (2) there is an effect of self efficacy on learning outcomes with Fcount 40.804 far greater than Ftable 3.140 (3) there is an interaction between the STAD type cooperative learning model and self-efficacy on learning outcomes Fcount 4.387 far greater than Ftable 3.140.

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