

The Effect of the Student Teams Achievement Division (STAD) Cooperative Learning Approach on Mathematics Learning Outcomes at SDN 6 Sokong

¹Lalu Husnul Hadi ²M. Taufik, ³Maulida Arum Fitriana
STKIP HAMZAR, PGSD

Article Info

Article history:

Received: 30 June 2024

Publish: 13 July 2024

Keywords:

STAD Cooperative Model, Mathematics Learning Outcomes, Influence.

Abstract

The aim of this research is to determine the effect of the STAD (Student Teams Achievement Division) cooperative learning approach on the mathematics learning outcomes of grade 2 students at SDN 6 Sokong, Betumping Hamlet, Sokong Village, Tanjung District, North Lombok Regency. This type of research is quantitative with a one group pre-test and post-test design approach. This research consists of two variables, namely the independent variable and the dependent variable. The independent variable in this research is cooperative learning with the STAD (Student Teams Achievement Division) model. Meanwhile, the dependent variable is mathematics learning outcomes. The sample size was 25 students. The collection technique that researchers used was pre-test and post-test, pre-test to see students' initial abilities, while post-test was used to see the extent of students' development after treatment, with t-test analysis the research results showed that the approach The STAD (Student Teams Achievement Division) model of cooperative learning on learning outcomes has a significant influence. This is proven by the average pre-test score of 56.4%, while the average post-test score is 70.4%. Likewise, the calculation results obtained from $t\text{-count} > \text{from } t\text{-table}$ or $8,573 > 0.496$, thus it can be stated that the cooperative learning approach using the student teams achievement division (STAD) model has an influence on mathematics learning outcomes in addition material.

This is an open access article under the [Creative Commons Attribution-ShareAlike 4.0](https://creativecommons.org/licenses/by-sa/4.0/)



Corresponding Author:

Lalu Husnul Hadi

STKIP HAMZAR, PGSD

Email: husnuloara45@gmail.com

1. INTRODUCTION

Learning approaches have an important role in the teaching and learning process. Apart from attracting students' attention, the learning approach can also convey the message you want to convey in each subject. Applying learning approaches in schools, teachers can create a learning atmosphere that attracts attention by utilizing creative, innovative and varied learning approaches so that learning can take place in an optimized and oriented manner towards learning achievement.

Cooperative learning strategies are a series of learning activities carried out by students in certain groups to achieve formulated learning objectives (Masyudi et al, 2018). The cooperative learning model is a form of learning in which students learn and work in small groups collaboratively whose members consist of four to six people who are heterogeneous. Cooperative learning is a learning strategy that involves student participation in groups to interact with each other, so that in this model students have two responsibilities, learning for themselves and helping fellow group members to learn. (Ariani et al, 2022).

Constructivism is an approach to learning that believes that people actively construct or construct their own knowledge and that reality is determined by their own experiences. According to the constructivist school, knowledge is a construction (formation) of people who know something (schemata). According to constructivist learning theory, knowledge cannot simply be transferred from the teacher's mind to the student. This means that students must be mentally active in building their own knowledge structures based on their

cognitive maturity. Learning that refers to constructivist learning theory focuses more on student success in reflecting on what the teacher orders. Students are more encouraged to construct their own knowledge through assimilation and accommodation activities.

Constructivist learning theory is based on generative learning, namely the act of creating meaning from what has been learned. The characteristic of constructivist learning is that it prioritizes building one's own understanding actively, creatively and productively based on previous knowledge and also meaningful learning experiences (Nurlina et al, 2021). Vygotsky emphasized the importance of the relationship between the individual and the social environment in the formation of knowledge, that social interaction, namely the individual's interaction with other people, is the most important factor that can trigger a person's cognitive development. Vygotsky argued that the learning process will occur efficiently and effectively if children learn cooperatively with other children in a supportive atmosphere and environment, under the guidance of someone who is more capable, a teacher or an adult. (Tamrin et al, 2011)

In cooperative learning there are various learning models including jigsaw, STAD, TAI and so on. In this case the researcher uses the STAD model of cooperative learning. The Student Teams Achievement Division (STAD) method is a learning method that is useful for developing cooperative, creative, critical thinking skills and the ability to help friends. (Setyowati and Fitriana, 2022).

The results of observations and observations during teaching are that students still have very little active role in the learning process, for example there are still many students who do not pay attention when teaching and learning activities are taking place, and do not respond to activities. From the results of observations of the student learning process in grade 2 students at SDN 6 Sokong, there are still many students who do not understand how to solve mathematical problems of addition, many students are still less active, for example there are still many students who do not pay attention when the teacher delivers the material, while the learning outcomes are also it is still lacking and there are also many people whose mathematics scores are below the KKM, namely 70.

Mathematics is a subject that is very important and useful for everyday life, from elementary school, high school and even to college, this subject has always been there, but it turns out it is still a difficulty for some students. This is also due to several obstacles faced both from the methods used in teaching and factors from the students themselves. In the learning process, of course, students need to be given the opportunity to collaborate and experiment with basic mathematical concepts so that learning can be maximized.

2. RESEARCH METHOD

In terms of the existing problems, the research used a type of experimental quantitative research. The quantitative research is a process of finding knowledge that uses data in the form of numbers as a means of finding clarity about what we want to know (S. Margono, 2004). The research design that the researcher used in this study was single group design. In this design there is only one group/class for experimentation. In this research, the experimental group received a pre-test and post-test. Thus, the results of the treatment can be known more accurately, because it can be compared with the condition before and after the treatment. The success of the treatment is determined by comparing the pretest and posttest scores.

The population in this study was a group of class 2 students at SDN 6 Sokong consisting of 25 students, consisting of 11 female students and 14 male students. The sample in this study used saturated sampling. According to Sugiyono (2017: 85) saturated sampling is a sampling technique when all members of the population are used as samples, this is done

when the number of populations is relatively small, less than 30. The data collection techniques that researchers use in this research are using tests and documentation.

3. RESEARCH RESULT

Reliability test is an index that shows the extent to which a measurement tool can be trusted or reliable (IEflendi: 2011). A measurement instrument is said to be reliable if the measurement is consistent, careful and accurate. The basis for taking decisions in the reliability test is as follows: If the Cronbach's Alpha value $> r$ table then the instrument is declared reliable or consistent. Then the results of Cronbach's Alpha .747 and N of Items 10. Meanwhile, if Cronbach's Alpha $< r$ table then the instrument is declared not reliable.

Learning outcomes are confirmed by the results of t-test analysis with $df(n-2) = 25-2 = 23$ and thus the t-table is $23 = 0.496$ with t-count of 8.573, so it can be concluded that if t-count $>$ from t-table or $8.573 > 0.496$ then H_0 is rejected and H_1 is accepted, thus it can be stated that the cooperative learning approach of the student teams achievement division (STAD) model has an effect on the results of learning mathematics of class 2 SDN 6 Sokong for the 2023/2024 academic year.

4. BIBLIOGRAPHY

- Anas Sudjono. (2005). *Pengantar Evaluasi Pendidikan*. Jakarta: Rajagrafindo Persada.
- Ariani Hrp Nurlina dkk. (2022). *Buku Ajar Belajar dan Pembelajaran*. Bandung: Widina Bhakti Persada Bandung.
- Arikunto, Suharsimi. 2014. *Prosedur penelitian suatu pendekatan suatu praktis*. Jakarta: Rineka Cipta
- Djamaludin Ahdar dan Wardana. (2019). *Belajar dan Pembelajaran 4 Pilar Peningkatan Kompetensi Pedagogis*. Parepare: CV. Kaaffah Learning Center.
- Inanayah Wulandari. (2022). Model Pembelajaran Kooperatif Tipe STAD (Student Teams Achievement Division) dalam Pembelajaran MI. *Jurnal Papeda*, 18-19.
- Ismawati Esti. (2011). *Metode Penelitian Pendidikan Bahasa dan Sastra*. Surakarta: Yuma Pustaka.
- ismun ali. (2021, Januari-juni). *Pembelajaran Kooperatif (Cooperative Learning) Dalam Pengajaran Pendidikan Agama Islam*. *jurnal muhtadiin*, 7 .
- Magdalena Ina. (2021). Analisis Validitas, Reliabilitas, Tingkat Kesulitan Dan Daya Beda Butir Soal Ujian Akhirsemester Tema 7 Kelas Iii Sdn Karet 1 Sepatan. *BINTANG : Jurnal Pendidikan dan Sains*, 3,
- Masyudi dkk. (2018). *Strategi Pembelajaran Kooperatif Model Student Teams Achievement Division (Stad) Terhadap Hasilbelajar Bahasa Arab*. *TAWAZUN*, 11.
- Mohammad Syarif Sumantri. (2015). *Strategi Pembelajaran : Teori dan Praktik di Tingkat Pendidikan Dasar*. Jakarta: Rajawali Pers.
- Neli Laa dkk. (2017). Pengaruh model pembelajaran kooperatif tipe student teams achievement division terhadap minat belajar siswa. *JURNAL Pendidikan Manajemen Perkantoran*.
- Nur'aeni. 2012. *Tes intelegensi dan tes bakat*. Hal 2(Yogyakarta): Universitas Muhammadiyah Purwokerto Press
- Nurlina dkk. (2021). *Teori Belajar dan Pembelajaran*. Makasar: LPP UNISMUH MAKASSAR.
- Ghozali, imam. 2018. *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25*. Universitas diponegoro: Semarang