APPLICATION OF STAD (STUDENT TEAM ACHIEVEMENT DIVISION) MODEL IN MATHEMATICS LEARNING AT MA RASYIDIYAH KHALIDIYAH

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Abstract: This study aims to determine the mathematical ability of high school students using a STAD (Student Teams Achievement Division) type cooperative learning model. This research took place at Rasyidiyah Khalidiyah High School. The approach used in this study is a qualitative approach with a type of description research. The data source is students who have carried out learning activities using the STAD (Student Teams Achievement Division) model with the population of grade X students at Rasyidiyah Khalidiyah High School in the 2023/2024 school year. The sample in this study was 36 students with standard values above KKM (70); the range of values obtained by students using the STAD model showed values of 100-72. The technique used for data collection in this study was an interview. The research results showed that the STAD-type cooperative learning model plays a role in increasing students' learning activity and can increase the mathematics scores they get through tests so that using the STAD method in learning Mathematics produces good and effective grades.

INTRODUCTION

Learning is a process, way, or action to make people (students) want to learn. Learning is attracting students with educators and learning resources in a learning environment. Learning is defined as the process, way, the act of slaughtering or teaching mentioned teaching. Learning is the process of making people want to learn and be able to learn through various experiences so that their behaviour can change for the better (Ihsana El Khuluqo, 2022: 99). Learning can be defined as a process of learning students has been planned, implemented, and evaluated so that students/students achieve learning goals effectively and efficiently. Learning consists of several structured components, including learning objectives, learning media, strategies, approaches and methods, class organization, learning evaluation, and follow-up learning in remedial and enrichment (Dini Damayanti, 2021: 15).

Mathematics is one of the basic sciences that significantly influences life because it can prepare and develop students' ability to think logically, flexibly, and appropriately to

solve a problem in their daily lives. The United Nations Educational, Scientific and Cultural Organization (UNESCO) establishes four pillars of learning that can be used as guidelines in mathematics learning, namely: (1) learning to know, which means that the learning process must lead students to master techniques in acquiring knowledge; (2) Learning to Do which means that the learning process must provide opportunities for students to develop their thinking skills in solving a problem; (3) learning to live together which means that learning must require cooperation between people to achieve goals; and (4) learning to be which means learning must make students who are personable, responsible, and independent. One of the factors of low mathematics learning outcomes is the need for precise learning methods, resulting in students needing more time to understand, explore, and do assignments well. Mathematics learning methods can focus on more than lecture or question-and-answer methods, which makes some students passive and less participate in learning. One must use excellent and feasible methods to make students active in learning, including the Student Temas Achievement Division (STAD) method (Muhammad Frendrik, 2019: 2).

Mathematics provides lessons to have the ability to think logically. Using the proper learning method will make all participants active and more helped by the support and teaching from other friends. Math tasks done in groups produce better grades. Using the STAD method resulted in a mathematical score above KKM (70) from the evaluation results. Of the 36 students who were divided into five groups with absolute value inequality material in class XI MA Rasyidiyah Khalidiyah, students scored above KKM were 36 students. It shows that using the STAD method at MA Rashidiya Khalidiyah achieved 100% success with a range of values of 100-85.

STAD (Student Team Achievement Division) is a type of cooperative learning strategy that is carried out by dividing students into small groups of four to six people with academic abilities and types to work together and complete learning objectives. In this strategy, learning is packaged in groups with different levels of achievement. Thus, this strategy can foster an attitude of tolerance for the differences of each individual in one group. STAD (Student Team Achievement Division) consists of five main components, namely class presentation, group work, quizzes, individual progress, and class recognition (appreciation) (Isnu Hidayat, 2019: 141). This type is a learning model that maximises cooperation in one group. Students who have the best ability become tutors for other friends in their group and then evaluate to increase the knowledge of each individual in the group. According to Slavin (2009), they were told that "STAD is the simplest type of cooperative

learning". The essence of STAD is that the teacher delivers the material, and then students join groups of four to six people to complete the LKS given by the teacher. When finished, they hand over their work to each group to the teacher. In addition to excelling in helping students understand complex concepts, this model is also helpful in helping students cultivate abilities, cooperation, critical thinking, and the ability to help friends. STAD, in general, has excellent benefits for improving the quality of learning and can develop learning that can improve the quality of student achievement (Suci Handayani, 2019: 14-15). One cooperative learning that is suitable for being used as a start in stimulating students to learn in groups is the Student Teams Achievement Division (STAD). The learning was developed by Robert Slavin and his friends at John Hopkins University (Nur Asma, 2006: 51).

The STAD-type cooperative learning model has advantages and disadvantages. Where the advantages of this STAD model can facilitate teaching and learning activities with students who discuss with each other, increase a sense of solidarity, conclude different differences of opinion, increase confidence when presenting classes and account for the results of their understanding of the material provided with quiz scores that are done by themselves. However, the STAD type also has weaknesses; where in using this model, teachers must be more active in checking ongoing discussion activities because some students do not take part, and teachers must also motivate group leaders so as not to feel bored with members who are difficult to understand quickly and members who are not interested in learning.

RESEARCH METHODS

This research is incorporated into qualitative research. Qualitative research is descriptive and tends to use analysis with an inductive approach. The prominence of the research process and the use of theoretical foundations are carried out so that the research process is based on the facts in the field. In addition, the theoretical foundation is also helpful in providing an overview of the research background and as a discussion of research results (Rukin, 2021:10). Qualitative research is a method for exploring and understanding meanings that some individuals or groups of people consider to be derived from social or humanitarian problems. This qualitative research process involves essential efforts, such as asking questions and procedures, collecting specific data from participants, analyzing data inductively ranging from specific to general theme, and interpreting the meaning of the data. The final report for this study has a flexible structure or framework (Cresswell, 2010: 5).

Denzin dan Lincoin dalam Meleong (2017: 5) states that qualitative research uses a natural setting to interpret phenomena that occur and is carried out by involving various existing methods. With various distinctive characteristics, qualitative research has its own uniqueness, so it is different from quantitative research. Qualitative research, from the other side of the definition, utilizes open interviews to examine and understand the attitudes, views, feelings, and behaviours of individuals or groups of people. It turns out that this definition only questions what is studied, namely efforts to understand the attitudes, views, feelings, and behaviours of either individuals or groups of people (Umrati & Wijaya: 7).

The subject of the study was MA Rasyidiyah Khalidiyah students who had previously done assignments using the STAD method, consisting of 36 female students. Researchers selected classes teachers had previously taught their subjects using the STAD method in August 2023. Researchers select this subject to get valid information results according to what researchers want. The test instrument used to determine mathematical ability using the STAD method uses description questions made by mathematics teachers based on material that has been taught and explained before. To find out the analysis of learning outcomes, researchers use the following formula:

PK = SP/SM x 100% (Syahrilfuddin, 2011)

Information:

PK: Individual Completeness Presentation

SP: Score obtained by students

SM: Maximum score obtained by female students

Mathematics subjects use Minimum Completeness Criteria (KKM) 70 set in schools.

According to Sugiono (Sugiyono. 2013: 24), qualitative research methods can be intended as research methods based on the philosophy of postpositivism, which is used to examine natural object conditions, where researchers are the key instrument, data collection techniques can be triangulated (combined), data analysis is inductive or qualitative, and qualitative research results emphasize meaning rather than generalization.

Data collection techniques using interviews. Slamet (2011) states that interviews are a way to obtain information through social interaction between researchers and those studied. The interview used in this study is an unstructured interview, where researchers are free to conduct interviews and refrain from using interview methods that are arranged systematically and not based on interview guidelines. Here, the researcher uses the outlines of the problem topic asked through interviews.

In this study, researchers used qualitative descriptive data analysis techniques with the following stages:

1. Data Reduction

   Data Reduction is the technical stage of qualitative data analysis. A form of analysis that secures, classifies, directs, and discards data that should not be used and best organizes data collection. This is done to select whether or not relevant data has been obtained. Data reduction is the main component in analysis; for example, determining the range of values and measuring instruments and rating scales is a process of selecting, focusing, simplifying, and abstraction of data. To get research that can draw conclusions and be verified.

2. Data Presentation

   After getting the results of the reduction data, the next step is presenting the data. The presentation of data is a set of organized information that allows conclusions and actions to be taken. The presentation of data is carried out to clarify naturally to make conclusions, both descriptively and inferentially.

3. Conclusion

   Conclusion-making is the final stage in qualitative data analysis techniques carried out by researchers from seeing data reduction results still referring to the analysis objectives to be achieved. Conclusion is the process of taking the essence and presentation of data organized in statements, sentences, and formulas that are short but contain a broad understanding.

RESULTS AND DISCUSSION

In this chapter, the researcher describes the data and research results regarding the problems that have been formulated in Chapter 1, namely the description of the mathematical ability of MA Rasyidiyah Khalidiyah students in the application of the STAD (Student Teams Achievement Division) learning model in solving mathematical problems that can use the STAD model. This research is supported by interviews of subject teachers who have applied the previous STAD model to determine students' abilities on the results and abilities obtained through the learning model. Data collection includes data preparation, retrieval, and data analysis. The ability of a group of students to apply the STAD learning model through group assignments includes mastery of the material and problem-solving skills from the knowledge gained to be used in solving problems that occur in everyday life.

The results of interviews obtained from mathematics subject teachers were 1 group of 7 people who obtained a score of 100. 1 group of 7 people scored 93. 1 group of 7 scored 78. The other seven people scored 7. and seven others scored 72. The characteristics of the STAD-type learning model are: (1). Team learning, (2) Based on cooperative management. (3) Cooperation skills. The phase of implementing the STAD-type learning model is namely: (1). The teacher forms the students into four heterogeneous groups. (2). The teacher gives lessons. (3) The teacher assigns tasks to each group for the group members to do. (4). The teacher gives questions to all students. (5). Evaluation. (6). The teacher gives awards.

Based on the data obtained by researchers, 36 female students were divided into five groups with a range of values obtained from 100-72 using mathematical material of equations and absolute value inequalities. The results of the research that has been done show that the ability of female students to apply the STAD learning model can produce scores above KKM (70), but the scores in the application of this model have not been able to produce student scores reaching perfect scores. Applying the STAD model is excellent and feasible because students can get scores above KKM (70) and answer questions with more truth than the error rate. Applying the STAD-type learning model becomes an exciting and fun learning model because, in the process, students tend to be more active in participating in the learning process.

CONCLUSIONS AND RECOMMENDATIONS

The STAD-type learning model is a cooperative learning model that contains four to five members of each group, where each group member has a different background and type. The essence of STAD is that the teacher delivers the material, and then students join groups of four to six people to complete the LKS given by the teacher. When finished, they hand over their work to each group to the teacher.

The STAD learning model has several advantages and disadvantages. Where the advantages of the STAD learning model facilitate teaching and learning activities with students who discuss with each other, increase a sense of solidarity, conclude different differences of opinion, increase self-confidence when presenting classes and account for the results of their understanding of the material provided with quiz scores that are done by themselves. However, the STAD type also has weaknesses; where in using this model, teachers must be more active in checking ongoing discussion activities because some students do not take part, and teachers must also motivate group leaders so as not to feel

bored with members who are difficult to understand quickly and members who are not interested in learning.

This research is incorporated into qualitative research. Qualitative research is descriptive and tends to use analysis with an inductive approach. The prominence of the research process and the use of theoretical foundations are carried out so that the research process is based on the facts in the field. In addition, the theoretical foundation is also helpful in providing a general overview of the research background and a discussion of the research results.

Based on research that has been conducted at MA Rasyidiyah Khalidiyah, it can be concluded that the ability of class X to solve mathematical problems with the use of the cooperative learning model of the STAD method has been able to increase students' scores and understanding of the mathematics learning outcomes of female students in class X, especially in the learning material of equations and absolute value inequalities. This method can be used well and is suggested to be used in mathematics learning.

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