

APPLICATION OF TGT TYPE COOPERATIVE LEARNING MODEL IN LEARNING ANGLES IN ELEMENTARY SCHOOL

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ABSTRACT

The application of TGT (Team Games Tournament) to corner material allows learners to explore these concepts collaboratively, with game support designed to strengthen their understanding. In addition, this model also contributes to the development of students' social skills, such as cooperation, communication, and mutual respect for each other's opinions. The author uses the literature study method in conducting research. The author also uses a descriptive method in describing the data that has been obtained. The results and discussions we got The implementation of the TGT (Teams Games Tournament) type cooperative learning model proved to be effective in increasing students' understanding and activeness in learning corner material in elementary school The TGT model involved students in small groups to cooperate, play, and compete through academic tournaments. This helps to increase material understanding, motivation, participation, and students' social skills. Various studies show that the use of TGT in corner learning is effective in improving learning outcomes and student motivation. The application of TGT encourages students to collaborate, compete healthily, and understand concepts through activities that are relevant to daily life.

Keywords: cooperative learning model, angle, TGT, Mathematics

A. BACKGROUND

Mathematics education in elementary school plays an important role in forming the foundational knowledge of students regarding mathematical concepts that they will use in their daily lives. The purpose of mathematics education itself is to train thinking and reasoning skills, develop creative activities, enhance problem-solving abilities, and improve the ability to convey information or communicate ideas, making mathematics a strategic field of study to shape a generation ready to face the competitive global era.

Mathematics is one of the fields of study taught at all levels of education. This is because mathematics is a very important field of knowledge for students and serves as a basic knowledge foundation for the formation of their attitudes and mindset in the future. In addition, mathematics also serves as a tool and service for knowledge not only in the field of mathematics but also in other fields of science.

Mathematics is also a fundamental knowledge that can be used and applied in daily life, because in our daily activities, we will certainly encounter problems related to mathematics. One of the subjects taught is angles. This material is often considered difficult for students to understand because it is abstract in nature and requires a good understanding of geometric shapes. Therefore, a learning model is needed that is not only effective in enhancing students' understanding but also engaging and enjoyable.

The TGT (Team Games Tournament) type of cooperative learning model is one of the strategies that can be implemented in mathematics education at the elementary school level. This model is based on group cooperation, where students are divided into small

heterogeneous teams, and then engaged in games and tournaments. Through this approach, students are encouraged to learn in a more interactive and competitive manner, which can enhance their motivation and engagement in the learning process.

The application of TGT (Team Games Tournament) in angle material allows students to explore these concepts collaboratively, with the support of games designed to reinforce their understanding. In addition, this model also contributes to the development of students' social skills, such as cooperation, communication, and mutual respect for each other's opinions.

B. RESEARCH METHOD

The author uses the literature study method in conducting the research. Literature study is a research method where the author analyzes and reviews as well as obtains data from journals used as the foundation or theory supporting the research. The author uses this method to analyze the application and influence of the TGT-type cooperative learning model in teaching angles in elementary schools. In analyzing and reviewing the implementation, various journals are needed as a foundation for the author's thinking and to support the author's research.

The author also uses the descriptive method in describing the data that has been obtained. Descriptive Method is a data presentation method where the writer describes the existing data with clear descriptive sentences.

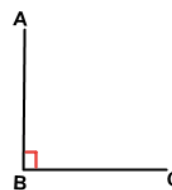
C. HASIL DAN PEMBAHASAN

Learning is an interactive process that occurs between learners, educators, and learning resources within a learning environment. This process aims to facilitate the acquisition of knowledge, mastery of skills, as well as the formation of attitudes and confidence in learners. In the context of education, learning is often understood as a more active activity compared to traditional teaching, where the teacher acts as a facilitator who encourages students to actively engage in the learning process. Learning is not just about the delivery of information, but also encompasses various strategies and methods designed to create meaningful learning experiences.

Mathematics learning is an educational process aimed at developing understanding, skills, and the ability to think logically and analytically through mathematical material. In mathematics education, students are taught basic concepts such as numbers, arithmetic operations, geometry, algebra, statistics, and others. In this article, the material to be discussed is related to the learning of angles. An angle is a geometric shape formed by the intersection of two straight lines at a single point. The intersection point is called the vertex, while the two straight lines that form the angle are called the sides of the angle. Here are the types of angles:

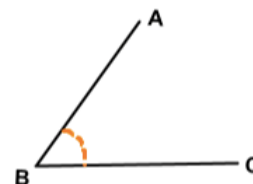
1. Right Angle

An angle measuring 90° . In addition, a right angle can also be represented by the letter L. Examples of right angles in everyday life include the corners of a table, the corners of a book, or the corners of a room.



2. Acute Angle

An angle that measures less than 90° . As its name suggests, this acute angle is pointed like a pencil that has been sharpened. For example, like the angle formed by the hands of a clock at 3:00 or the angle formed by a roof.



3. Obtuse Angle

An angle that measures more than 90° but less than 180° . For example, the angle formed by the clock hands at 2:00 or the angle formed by a wide-open door.



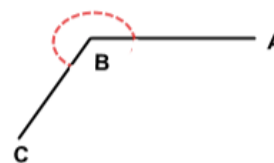
4. Right Angle

An angle measuring 180° . For example, like the angle formed by a straight line or the angle formed by two parallel lines.



5. Reflex Angle

An angle that measures more than 180° but less than 360° . For example, an angle formed by the hands of a clock at 8:00 or an angle formed by a circle.



Angle measurement is performed using a tool called a protractor. A protractor is a device that allows the measurement of angles in degrees, generally from 0° to 180° . The simplest degree arc consists of a semicircular disk with graduated markings ranging from 0° to 180° . Learning about angles can be found in everyday life, such as the angles on a bicycle wheel, a wall clock, animals when they open their mouths, or road intersections. Students are invited to see the usefulness of angles in real-life contexts. In the learning of angles in elementary school, students can identify types of angles based on their degree, students can use a protractor to measure the degree of an angle, and students can use practical examples such as measuring the angle of clock hands to understand the concept of angles in everyday life.

Mathematics learning also involves problem-solving, mathematical reasoning, and the

application of these concepts in real-life situations. Mathematics teaching methods can vary, ranging from traditional approaches to innovative ones, such as the use of technology and problem-based strategies.

One of the models that can be used in the mathematics learning process is the Cooperative model. The cooperative learning model is an approach that emphasizes student collaboration in small groups to achieve shared learning goals. In this model, students from various backgrounds and abilities work together, help, and interact with each other to complete the assigned tasks.

Characteristics of Cooperative Learning:

- a. Small Groups: Students are divided into small groups consisting of 4 to 6 members.
- b. Social interaction: students listen to each other and exchange ideas.
- c. Joint Responsibility: Each group member is responsible for the group's learning outcomes.
- d. discussion-based activities: Learning activities include discussions and collaboration.

The main goal of this model is to enhance students' academic, social, and interpersonal skills. Working in groups allows students to develop critical thinking, communication, and leadership skills. Moreover, cooperative learning can also enhance students' motivation by creating a supportive and inclusive environment. In addition to improving academic achievement, this model also helps students recognize differences, boosts self-confidence, and encourages the development of social skills that are important in everyday life.

The cooperative learning model is divided into several types, one of which is the TGT type. The cooperative learning model of the TGT type (Team Game Tournament) is a type of cooperative learning that includes activities for all students without distinguishing status, involves students as peer tutors, and incorporates elements of games and reinforcement. In TGT, students are divided into several teams consisting of four to five people with different skills. After the teacher presents the material, the teams meet to study the activity sheets and other materials. An academic tournament was then held where students played academic games with other team members and contributed points to their team's score. The main objective of TGT is to equip students with the concepts, understanding, skills, and knowledge they need to contribute to the team. In addition, TGT aims to:

- a. Training a sense of responsibility and self-confidence, appreciating differences, collaborating, and helping each other.
- b. Training critical thinking in solving important problems and challenges
- c. Developing students' communication skills
- d. Improving Motivation, Activity, and Learning Success

The advantages of the TGT learning model

- a. The increasing time spent on completing tasks
- b. Acceptance of individual differences
- c. In the competition, it allows students to learn more relaxed.

- d. Encouraging responsibility, cooperation, healthy competition, and participation in learning.

The implementation of the cooperative learning model type TGT (Teams Games Tournament) has proven effective in enhancing students' understanding and activity in learning angle material in elementary schools. Here are the implementation steps of the cooperative learning model type TGT (Teams Games Tournament):

1) Delivery of Material

The educator began with an explanation of the basic concept of angles, including the types of angles and how to calculate angles in flat shapes.

2) Formation of the Team

Students are divided into small groups (4-5 people) considering the diversity of abilities so that each team has members who complement each other.

3) Game Activities

After understanding the material, students engage in game activities related to the concept of angles, such as drawing flat shapes with specific angles or using props to demonstrate angles.

4) Tournament

Each team competes in the tournament by solving questions or tasks related to the material. The assessment is based on the speed and accuracy of the answers.

5) Awards

The team with the highest score receives rewards, such as praise or small gifts, to enhance students' motivation to participate actively.

With the implementation of the TGT type Cooperative learning model on angle learning material, educators can also use angle clock media as a supporting tool for successful learning. This angle clock media is a type of concrete media that can help students understand the material on angles. The angle clock teaching aid is a tool that measures time and angles in one concrete medium. The angle clock teaching aid is made as attractive as possible to make students interested and motivated to learn mathematics. The selection of appropriate teaching strategies can influence mathematics learning. The use of angle clock teaching aids can be considered a learning strategy that demonstrates the natural condition of knowledge. The use of angle clock teaching aids makes the experience more meaningful for students in building the knowledge they apply in mathematics learning. Elementary school students prefer teaching aids because with the presence of these aids, students feel like they are not learning but playing.

Based on previous research in the form of interviews with several fourth-grade elementary school students, the researcher found that all students had almost the same answers in choosing the learning method. Then, the learning resources used at their school are textbooks and student worksheets. Students tend to be less interested in learning using student worksheets. They agree that the presence of teaching aids can make students more interested in learning mathematics. Here is a study related to the learning of angle material using an angle clock media that has been conducted by several researchers.

- 1) Nurhuda & Hendrawan (2021), based on their research, learning the angle material using the Angle Clock media has an impact on the learning outcomes of third-grade students.
- 2) Hakim (2021) stated that there was an increase in the average score between the pretest and posttest. In addition, it shows that the Corner Clock Media has a significant impact on students' learning outcomes.

An example of the implementation of the TGT type cooperative learning model is found at SD Negeri 03 Cibelok. The results of the research in the journal indicate that the learning outcomes of third-grade students at SD Negeri 03 Cibelok on the topic of angles, after using the TGT model with the aid of the Angle Clock Learning Media, have reached the learning completeness. This is known from the value of $t\text{-count} > t\text{-table}$, namely $17.327 > 1.690$, thus there is a significant difference in student learning outcomes after using TGT with the aid of the Angle Clock Learning Media.

The TGT (Team Game Tournament) type cooperative learning model has been proven to improve student learning outcomes in various subjects, including elementary school mathematics and science. The impact of the TGT Model on learning angles in elementary schools as analyzed by the author from several journals:

A. Improving Learning Outcomes

1. Research from several journals shows that the use of TGT can improve students' learning outcomes. For example, in a study at SD Negeri 2 Tira, Buton Selatan Regency, the average student score increased from 71 to 75, and the completion rate improved from 57.14% to 85.72%.
2. Another study at SD Negeri 70 Kutaraja Banda Aceh also shows an improvement in student learning outcomes using the TGT model, with an increase in the average teacher activity and student participation, and a learning outcome at KKM 65 achieved at 77.27%.

B. Improving Student's Participant

The TGT model also increases student participation in the learning process. For example, a study at Jaraban Public Elementary School showed that student engagement increased from 72% to 89%.

C. Improving Learning Motivation

The TGT model can also enhance students' learning motivation. Students who participate in cooperative activities tend to be more motivated because they have to work together and follow tournaments, which increases their engagement and understanding of the material.

The TGT model strategy on angle material can be applied as follows:

1. Implementation Strategy

To implement the TGT Model on Angle Material, the teacher should divide the students into several teams and explain the basic concepts of angles, types of angles, and flat planes. to calculate angles on slopes. The teacher can then hold a tournament to test students' understanding of angles, such as drawing shapes at specific angles or using props to illustrate angles.

2. Activities and Tournaments

The TGT model activities include various activities such as: Examples: group discussions, presentations, tournaments. Students must work together to achieve their goals and compete in tournaments to demonstrate their understanding.

With the right model, strategic methods, and media, it is hoped that students can understand the learning of angle material in elementary school. In addition, an enjoyable learning process can enhance learning outcomes, active participation, and student motivation in the learning process. However, it requires proper attention, guidance, and supervision so that the classroom conditions run smoothly. Educators need skills in managing the classroom because the TGT type cooperative learning model is considered non-conductive, noisy, and seemingly disorganized.

D. CONCLUSION

The importance of mathematics learning in elementary school, especially on the topic of angles, as well as the use of the TGT (Team Games Tournament) cooperative learning model, is considered an effective learning model to improve students' understanding. Mathematics education is expected to develop critical thinking, analytical, and problem-solving skills. The topic of angles is considered difficult for students because it is abstract, so an interactive and enjoyable method like TGT is needed.

The TGT model involves students in small groups to collaborate, play, and compete through academic tournaments. This helps improve students' understanding of the material, motivation, participation, and social skills. Various studies show that the use of TGT in corner learning is effective in improving students' learning outcomes and motivation. The application of TGT encourages students to collaborate, compete healthily, and understand concepts through activities relevant to everyday life.

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