

# BENCHMARKING

JURNAL MANAJEMEN PENDIDIKAN ISLAM

## IMPROVING THE PROCESS AND LEARNING OUTCOMES IN MATHEMATICS USING THE COOPERATIVE LEARNING MODEL TYPE TGT

M. Mahdi<sup>1</sup>, Apdoludin<sup>2(\*)</sup>, Zulqoidi R. Habibie

Universitas Muhammadiyah Muara Bungo, Indonesia

Email: [muhammadmahdi5642@gmail.com](mailto:muhammadmahdi5642@gmail.com), [zulqoidi.rhabibie@gmail.com](mailto:zulqoidi.rhabibie@gmail.com)  
[apdoludinstkipmb@gmail.com](mailto:apdoludinstkipmb@gmail.com)

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### Abstract

This study was motivated by the low learning process and outcomes of mathematics among fifth-grade students at SDN 196/II Taman Agung, as indicated by the lack of student involvement in classroom activities and the average exam scores that were still below the Learning Objective Achievement Criteria (KKTP) of 70. The purpose of this research is to describe improvements in the learning process and outcomes through the application of the Teams Games Tournament (TGT) Cooperative Learning Model. The research employed a Classroom Action Research (CAR) method carried out in two cycles, each consisting of planning, implementation, observation, and reflection. The subjects of the study were 20 fifth-grade students, with data collected through observation and testing using observation sheets and test instruments. Observation data were analyzed descriptively, while test data were analyzed using simple statistical formulas. The findings indicate that the implementation of the TGT Cooperative Learning Model in learning fractions and integers was categorized as Very Good, where teacher performance in Cycle I reached 83.33% and student participation increased from 60% in Cycle I to 80% in Cycle II, exceeding the success indicator of 75%. Furthermore, student learning outcomes improved significantly above the KKTP standard of 70, with mastery learning scores increasing from 75% in Cycle I to 85% in Cycle II. These results show that the application of the TGT Cooperative Learning Model can effectively enhance both the learning process and outcomes of mathematics for fifth-grade students at SDN 196/II Taman Agung.

**Keywords:** Process, Learning Outcomes, Teams Games Tournament

(\*) Corresponding Author: M. Mahdi/ [muhammadmahdi5642@gmail.com](mailto:muhammadmahdi5642@gmail.com)

## INTRODUCTION

Education is the main means of shaping a generation that is intelligent, skilled, and noble in character. Through education, students are guided to develop their potential so they can face the challenges of an ever-changing era. (Hidayat, R., 2019) According to Law No. 20 of 2003 on the National Education System, education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential. Therefore, education is not merely a process of transferring knowledge, but also includes character formation, the development of thinking skills, and the training of social abilities. In this context, the teacher's role is vital as a facilitator, motivator, and innovator who creates a conducive and meaningful learning environment for students.

One of the important subjects in the \*Merdeka Curriculum\* at the elementary level is mathematics. Mathematics plays a strategic role in developing logical, systematic, analytical, and critical thinking skills. As stated by the NCTM (National Council of Teachers of Mathematics), mathematics learning should equip students with the ability to solve problems, think logically, and make rational decisions in daily life (Siregar et al., 2024). Mathematics is not only important as a discipline but also as a tool for understanding other fields such as science, economics, and technology. Therefore, mastery of mathematics is a key requirement for the overall success of education (Sofiyah et al., 2025).

At the elementary school level, mathematics learning becomes the foundation for understanding basic concepts needed at higher levels. Thus, mathematics learning must be fun, meaningful, and in accordance with the cognitive development stage of children. According to Piaget, elementary students are at the concrete operational stage; therefore, mathematics learning should involve direct experiences and concrete activities to help them gradually build conceptual understanding. In reality, however, mathematics learning at the elementary level is often still abstract and lacks context, making it difficult for students to understand the material.

In general, many problems remain in elementary mathematics learning, such as low student motivation, lack of active participation, and monotonous teaching models. Teachers tend to use lectures and assignments without involving students actively, causing boredom, fear of mathematics, and difficulties in grasping basic concepts. As a result, student achievement in mathematics often falls below the Learning Objective Achievement Criteria (KKTP). This is consistent with Bruner's view that learning processes that are not aligned with cognitive development hinder students' understanding and retention of concepts.

Similar problems were found at SDN 196/II Taman Agung, particularly in grade IV. Based on preliminary observations on June 21, 2025, several issues were identified, especially regarding group work and concept understanding. Some students struggled to work collaboratively, with poor communication, uneven task distribution, and dominance by one or two students while others remained passive. The classroom atmosphere also reflected a decline in learning outcomes, shown by unenthusiastic expressions, lack of participation in Q&A, and students losing focus during lessons. Some even ignored the teacher's instructions. Such low motivation hinders learning achievement, particularly in mathematics, which requires focus, persistence, and consistent practice.

Based on the final semester exam scores, only about 55% of fourth-grade students reached the KKTP standard in mathematics, while most scored below, especially in arithmetic operations and word problems. This shows that students not only struggle to understand material but also fail to apply concepts in complex problem contexts. This condition requires serious attention since it will affect future learning success.

To address these problems, innovative, interactive, and engaging learning strategies are needed to enhance active participation. One promising approach is the cooperative learning model known as Teams Games Tournament (TGT), developed by Robert E. Slavin. TGT emphasizes teamwork, healthy competition, and active engagement through educational games. In this model, students are divided into small heterogeneous groups to learn together and participate in tournaments testing their understanding of the lesson. TGT combines game elements with learning, creating a fun and less stressful classroom environment (Anggraeni & Alpian, 2019). According to Lie, TGT increases motivation as students feel challenged and engaged, while healthy competition encourages effort and cooperation. Peer discussions also enable peer teaching, strengthening comprehension (Putra et al., 2017).

(Setyaningrum & Asrofah, 2024) states that TGT creates an enjoyable atmosphere where students show positive behaviors during learning. Similarly, Putu Yogik Suwara

(Mahardi et al., 2019) argue that TGT makes lessons less monotonous and more attractive. According to (Nela Avrilia Salsabila et al., 2024), TGT also allows students to learn actively through structured competition and games, boosting intrinsic motivation by adding fun elements. Another strength of TGT is its ability to improve cognitive, affective, and social skills. (Slavin, 2019) emphasizes that TGT not only raises academic achievement but also builds social skills such as cooperation, responsibility, and tolerance. Students become more active, confident, and accustomed to expressing their ideas. Research by (Erika et al., 2024) also shows that TGT significantly enhances mathematics learning outcomes and creates a more engaging classroom environment.

Based on the above background, it is important to conduct classroom action research with the title: Improving the Process and Learning Outcomes of Mathematics Using the Cooperative Learning Model Type Teams Games Tournament in Grade V of SDN 196/II Taman Agung.

## RESEARCH METHOD

This study employed a Classroom Action Research (CAR) design. CAR is a scientific approach conducted by teachers within the classroom learning context by implementing specific actions aimed at improving the quality of instruction:

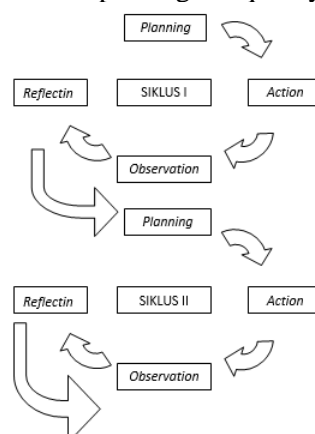
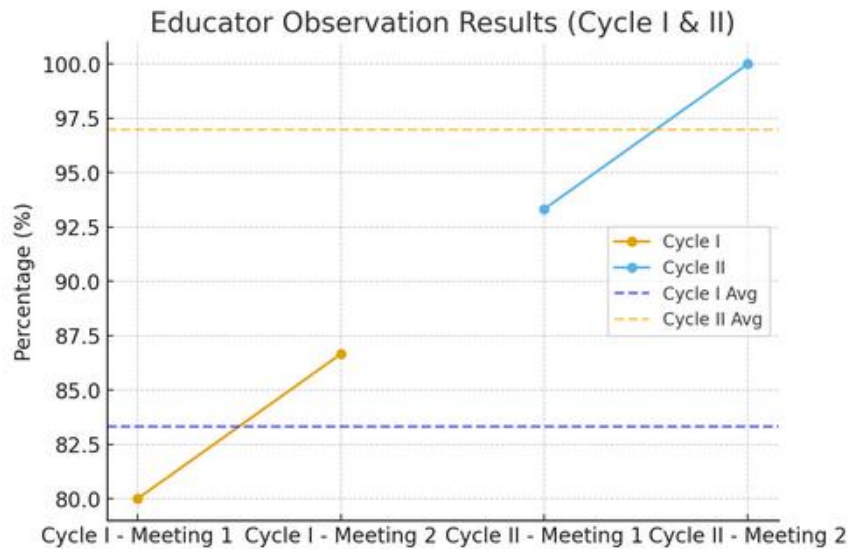


Chart 1. Classroom Action Research (Arikunto & Suhardjono, 2020)

This classroom action research was conducted in the fifth grade of State Elementary School 196/II Taman Agung. This setting was chosen based on the consideration that State Elementary School 196/II Taman Agung had problems with low student learning outcomes in mathematics. According to the academic calendar, this study was carried out during the first semester of the 2025–2026 school year. This is because classroom action research (CAR) necessitates multiple cycles in order to accomplish its goals, which include an efficient learning process in the classroom. This Classroom Action Research was conducted at SDN 196/II Taman Agung in the Mathematics (MTK) subject for class V with 20 students, 9 boys and 11 girls. The goal of this classroom action research project is to enhance the learning outcomes for mathematics in class V of SDN 196/II Taman Agung by implementing the TGT model. Methods for gathering data include testing, documenting, and observation. Both quantitative and qualitative data analysis methods are employed.

## RESEARCH RESULTS AND DISCUSSION

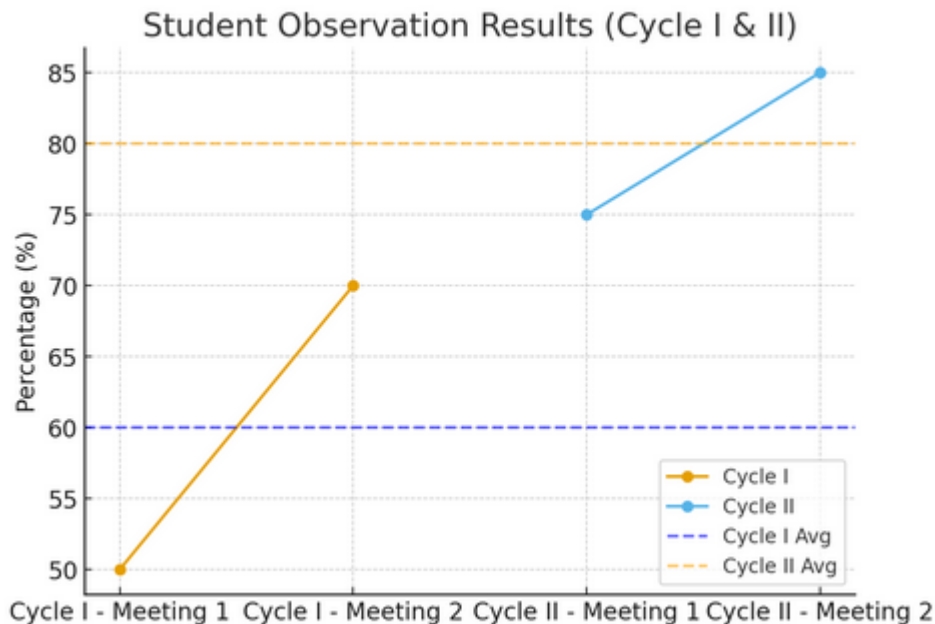
### Research Results



The success of students in learning is generally also seen from the management of learning activities carried out by the teacher. In this case, there was an improvement from Cycle I to Cycle II, as shown in the following table and diagram:

**Table 4.9 Recapitulation of Teacher Observation Sheets in Cycle I and Cycle II**

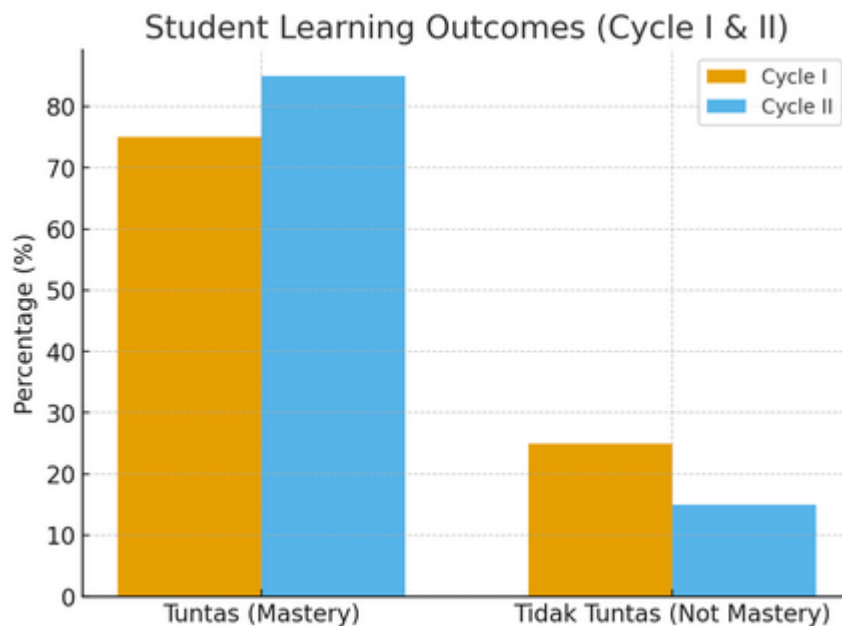
Cycle	Percentage Score of Teacher Observation Sheet Average		
Cycle I – Meeting 1	80%		
Cycle I – Meeting 2	86.66%	83.33%	
Cycle II – Meeting 1	93.33%		
Cycle II – Meeting 2	100%	96.99%	



The individual success of students in learning can also be observed through the learning process using student observation sheets. In this case, there was an improvement from Cycle I to Cycle II, as shown in the following table and diagram:

**Table 4.10 Recapitulation of Student Observation Sheets in Cycle I and Cycle II**

Cycle	Percentage Score of Student Observation Sheet Average	
Cycle I – Meeting 1	50%	
Cycle I – Meeting 2	70%	<b>60%</b>
Cycle II – Meeting 1	75%	
Cycle II – Meeting 2	85%	<b>80%</b>



The data obtained in Cycle I showed that the average percentage of student learning mastery reached 75%, while in Cycle II the percentage of student learning mastery increased to 85%. The following table and diagram present the recapitulation of student learning mastery percentages:

**Table 4.3 Recapitulation of Student Learning Outcomes**

Cycle	Mastery (Tuntas)	Non-Mastery (Not Tuntas)
Cycle I	15 students = 75%	5 students = 25%
Cycle II	17 students = 85%	3 students = 15%

The results indicate that the application of the Cooperative Learning Model Type Teams Games Tournament led to an improvement in student achievement. More students reached the minimum mastery criteria (KKTP) in Cycle II compared to Cycle I, showing a positive impact of the model on student learning outcomes.

## CONCLUSION

Based on the results of the classroom action research conducted in two cycles using the Cooperative Learning Model Type Teams Games Tournament on the learning process and outcomes of fifth-grade students, the researcher can draw the following conclusions:

1. The improvement in the learning process can be seen from the observation sheets in Cycles I and II. The data show that teacher activity in Cycle I obtained an average of **82.5%** in the “Very Good” category, while in Cycle II it increased to **92.5%**, also in the “Very Good” category. Meanwhile, student learning process observation results in Cycle I obtained an average of **59.47%** in the “Poor” category, then increased in Cycle II to **81.03%** in the “Very Good” category. Based

on these data, it can be concluded that the teaching process, both from the teacher's and students' perspectives, improved in each cycle.

2. The improvement in mathematics learning outcomes using the Cooperative Learning Model Type Teams Games Tournament was also evident. In Cycle I, the learning mastery reached **69.23%** in the "Fairly Good" category. In Cycle II, it increased to **86.20%** in the "Good" category. Based on these data, it can be concluded that the use of the Cooperative Learning Model Type Teams Games Tournament can enhance students' learning outcomes.

## **SUGGESTIONS/RECOMMENDATIONS**

### **For Teachers**

Teachers are encouraged to apply the Cooperative Learning Model Type Teams Games Tournament as an alternative strategy to improve both the learning process and student outcomes in mathematics. Teachers should also consistently conduct reflections after each cycle of learning to identify weaknesses and improve future implementation.

### **For Students**

Students are expected to actively participate in the learning process, both individually and in groups, so that they can maximize the benefits of cooperative learning through games and tournaments. Active involvement will help improve critical thinking, collaboration, and mastery of mathematical concepts.

### **For Schools**

Schools should support the implementation of innovative learning models such as the Teams Games Tournament by providing adequate facilities and training for teachers. This support can help create a more engaging, interactive, and effective learning environment.

### **For Future Researcher**

Future researchers are recommended to conduct similar studies in other subjects or different grade levels to see the broader impact of the Teams Games Tournament model. They may also combine this model with other learning strategies or media to further optimize student engagement and achievement.

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