



Improving Learning Outcomes On Food Chain Material Using the TGT Method For Fifth-Grade Elementary School Students

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Abstract

This study aims to enhance the science learning outcomes of Year 5 primary school students by implementing the Team Games Tournament (TGT) teaching method. This Classroom Action Research project was conducted at UPT SD Negeri Kanigoro 03 during the first semester of the 2024/25 school year. The research subjects were 21 Year 5 students. Data were collected using an initial (pre-)test and a final (post-)test. The research was implemented in four cycles: planning, implementation, observation and reflection. Data was collected through observation, interviews and document analysis. Research instruments included test questions, observation sheets and interview guidelines. The results showed a significant improvement in student learning outcomes. The average pre-test score of 75.47 increased to 89.28 in the post-test. Applying the Team Games Tournament (TGT) method successfully improved students' understanding of ecosystems and food chains. This method also improved students' attitudes towards cooperation, mutual cooperation and discussion. The results of this study demonstrate that the TGT method can enhance students' motivation to learn. This research proves that the TGT method is effective in improving elementary school students' science learning outcomes. Therefore, it is recommended that teachers apply this method to improve the quality of science education. This research could also serve as a reference for other researchers developing science learning methods.

Keywords: Learning outcomes, Team Games Tournament (TGT) Method, Science Learning.

1. Introduction

Learning is the process of interaction between students and educators and learning resources in a teaching and learning environment. Learning is assistance given to learners so that the process of acquiring knowledge and knowledge, mastering skills and forming attitudes and beliefs in learners can occur (Thobroni, 2015). Effective learning is learning that brings students to achieve learning objectives or competencies as expected/intended. Each learner has different characteristics at each age (Masgumelar & Dwiyo, 2020), so teachers need to conduct a needs analysis regarding the development of diverse learners. Student success or learning outcomes are influenced by the quality of good and effective learning, therefore the quality of good learning to improve the quality of education needs development and renewal in the field of education (Anggraini et al, 2022). Learning is the process of interaction between students and educators and learning resources in a teaching and learning environment. Learning is assistance given to learners so that the process of acquiring knowledge and knowledge, mastering skills and forming attitudes and beliefs in learners can occur (Thobroni, 2015). Effective learning is learning that brings students to achieve learning objectives or competencies as expected/intended. Each learner has different characteristics at each age (Masgumelar & Dwiyo, 2020), so teachers need to conduct a needs analysis regarding the development of diverse learners. Student success or learning outcomes are influenced by the quality of good and effective learning, therefore the quality of good learning to improve the quality of education needs development and renewal in the field of education (Anggraini et al, 2022).

According to Eka Rizki Widayanti (2016: 184), science learning in elementary school should not only focus on academic achievement, but also develop process skills to investigate the surrounding nature, solve problems, and make decisions. Therefore, the science learning experience must provide development for students in this aspect of ability. In science learning activities, there are many activities that require students to think critically, actively and creatively. Learning that is interesting for students, so that students feel happy during the learning process, at the end of the lesson or the evaluation section the teacher will give several questions to students to find out the ability of students to what extent during the learning process can understand the lesson. In presenting a lesson in the classroom the teacher does not just deliver material using methods or strategies, but also the teacher is required to master several learning models. In reality, the model that is often used by teachers in the learning process is the classical model. For example, the teacher when learning provides material or examples of problems, if students have understood then the teacher gives questions to students to do then assessed and this continues to be done by the teacher during the learning process. This learning model should be changed by the teacher so that the learning process is better and maximum. In fact, students have high enthusiasm for learning. However, students feel bored with such a learning model and also students sometimes pay less attention to the teacher during the learning process so as to make the learning process look monotonous by students. The need for a learning model that attracts students' attention, so that students are active during the learning process.

Improving learning outcomes and effectiveness in the science learning process has been done through various efforts. One of these efforts is the use of cooperative learning models. The cooperative learning model is designed to educate group cooperation and interaction between students. In the cooperative learning model, there are many types of learning models, one of which is the TGT (Teams Games Tournament) type. The TGT model is often implemented in the subjects of Maths, Indonesian Language and Science, which has been used from the second grade of elementary school to college (Donni, 2017: 307-308). In this model learners play games and tournaments related to the learning material with other team members to earn points for their respective teams.

The Team Games Tournament (TGT) cooperative learning model is a learning model that places students in learning groups consisting of four to six students with different abilities, ethnicities/races, and genders. The learning process begins with the presentation of learning objectives and material, followed by group discussions and tournament activities, and ends with group awards. Cooperative learning using the Team Games Tournament (TGT) model can enhance and foster students' interest in learning (science) because the TGT model incorporates a game-based process that makes the learning process more enjoyable. Learning activities with games designed in the TGT cooperative learning method allow students to learn more relaxed, while fostering responsibility, cooperation, healthy competition, and learning engagement. However, in the TGT method, there is also the presentation of material, which is the same as in previous methods. With the same presentation of material as in previous methods, the learning atmosphere may not experience changes or improvements that could motivate students to learn. As a result, the material presented may not be well received by the students. This research is important for several reasons, namely improving the quality of education and refining learning methods. The quality of education in Indonesia has not improved due to the tendency for educational methods to be monotonous and not keep up with the times. Therefore, this research is expected to test the effectiveness of the TGT method in the learning process and help find learning methods that can improve the quality of education in Indonesia.

Based on the above description, the purpose of this study is to determine the effectiveness of the Team Games Tournament (TGT) cooperative learning model on student learning outcomes and to determine the difference in science learning outcomes before and after receiving treatment using the Team Games Tournament (TGT) cooperative learning

model. Therefore, the researcher is interested in conducting a study titled 'Improving Learning Outcomes in Food Chain Material Using the TGT Method for Fifth-Grade Elementary School Students.'

2. Method

The type of research used by the researcher was Classroom Action Research (CAR). The implementation of learning activities using educational games involved students directly in learning activities. These educational games can motivate students to participate enthusiastically in learning and make it easier for them to understand concepts and absorb the knowledge provided. Thus, it is hoped that student learning outcomes will improve.

Classroom Action Research (CAR) is a form of scientific and methodical study conducted by teachers or researchers in the classroom with actions to improve the learning process and outcomes. PTK is a reflective and context-based research that addresses the conditions, circumstances, and situations within the classroom, conducted in a planned, systematic, and self-aware manner to solve problems and improve the quality of education within the classroom (Toharudin, 2019). Classroom action research is divided into four activities: (1) action planning, (2) action implementation, (3) observation, and (4) reflection. All of these activities are viewed as a cycle and are carried out in a repetitive cycle.

This study was conducted in class V of UPT SD Negeri Kanigoro 03 in the odd semester of the 2024/2025 academic year. This study was conducted on 6 December 2024. The subjects of this classroom action research were class V students of UPT SD Negeri Kanigoro 03. There were 21 students, consisting of 8 female students and 13 male students.

The technique used to collect data in this study is testing. A test is an exercise used to measure or determine the skills, knowledge, attitudes, intelligence, abilities, or talents possessed by individuals or groups. In this study, testing will be conducted twice, namely a pre-test (initial test) and a post-test (final test). The pre-test is necessary to establish baseline knowledge, and the post-test is used to measure learning outcomes. Generally, students who achieve the highest pre-test scores show the greatest improvement on the post-test. Conversely, students who show the least improvement between the pre-test and post-test may have performed poorly on the pre-test.

Later, each student will be given a pre-test and post-test, and the results will be compared to draw conclusions about the students' understanding. The pre-test and post-test use different questions, with 10 short-answer questions. These questions are compiled from science subjects with material on ecosystems and food chains. The data analysis technique used involves comparing the students' scores before and after the implementation of the method. From this data, it can be determined whether there has been an improvement or a decline in the students' scores. This test is conducted to assess the students' abilities and to analyse their learning outcomes before and after the implementation of the Team Games Tournament (TGT) learning method.

3. Results and Discussion

3.1 Result

This study was conducted at UPT SD Negeri Kanigoro 03 during the 2024/2025 academic year from September to December 2024. The population and sample in this study were 21 fifth-grade students at UPT SD Negeri Kanigoro 03. The class was treated using the Team Games Tournament (TGT) learning method and conducted pre-tests and post-tests.

This study was conducted three times, with one pre-test, one treatment using the Team Games Tournament (TGT) learning method, and one post-test. The pre-test was conducted to assess students' initial knowledge of ecosystem and food chain concepts. After

the pre-test results were obtained, the intervention was implemented in science education using the Team Games Tournament (TGT) method, followed by a post-test to evaluate students' learning outcomes after receiving the TGT-based instruction on ecosystem and food chain concepts.

1. Initial Ability (Pre-Test)

The pre-test was conducted on 6 December 2024 and was attended by 21 fifthgrade students from UPT SD Negeri Kanigoro 03. The purpose of the pre-test was to assess the students' initial abilities regarding material that they had not yet studied. The pre-test questions used were in the form of short-answer questions, consisting of ten questions. The results of the pre-test, summarised in the initial test results, can be seen in Table 3.1.

Table 3.1. Summary of Pre-test Results

No	Description	Pre-test
1	Highest Score	100
2	Lowest Score	40
3	Average Score	75,47
4	Student who passed	21 people (100%)

Based on the data in Table 3.1, it can be seen that the student who received the highest score on the pre-test was 100 and the lowest was 40. The overall average score was 75.47. Thus, it can be concluded that the initial ability of fifth-grade students at UPT SD Negeri Kanigoro 03 before implementing science learning using the Team Games Tournament (TGT) learning method was not yet complete.

2. Final Ability (Post-Test)

The post-test was conducted on 6 December 2024 and was attended by 21 students in class V of UPT SD Negeri Kanigoro 03. The post-test results can be seen in Table 3.2. The post-test was conducted to determine the final abilities of the students after being taught using the Team Games Tournament (TGT) learning method. The post-test questions used were in essay format, consisting of ten questions. The post-test results, summarised in the final test results, can be seen in Table 3.2.

Table 3.2. Summary of Final Test Results (Post-Test)

No	Description	Post-Test
1	Highest Score	100
2	Lowest Score	60
3	Average Score	89,28
4	Student who passed	21 people (100%)

Based on Table 3.2, it can be seen that the student who received the highest score on the post-test was 100 and the lowest was 60. The overall average score was 89.28. Students who scored the lowest and the average score of students showed an improvement in scores. Therefore, it can be concluded that the final ability of fifth-grade students at UPT SD Negeri Kanigoro 03 after implementing science education using the Team Games Tournament (TGT) learning method is considered satisfactory.

3.2 Discussion

In this study, the researcher taught fifth-grade students at UPT SD Negeri Kanigoro 03 as the sample. The purpose of this study was to determine the science learning outcomes of fifth-grade students at UPT SD Negeri Kanigoro 03 for the 2024/2025 academic year after applying or implementing teaching using the Team Games Tournament (TGT) learning method. In the learning process using the Team Games Tournament (TGT) method, a pretest was conducted first to determine the students' initial abilities before the treatment was given.

The Team Games Tournament (TGT) was conducted by 21 fifth-grade students from UPT SD Negeri Kanigoro 03. They were divided into four groups, each consisting of five to six students. Each group was given a piece of paper depicting either rice or a tree (as producers). Each group was tasked with creating a food chain found in rice field and forest ecosystems. Each group will line up in a row, with the first member attaching the image of the first animal (as consumer 1) and adding an arrow. Once finished, that student returns to the back of the line, and the next member continues by attaching the second animal (as consumer 2) and adding an arrow, and so on until reaching the decomposer or decomposer. After the learning process using the Team Games Tournament (TGT) method was successfully implemented, the students were given a post-test to assess their final results. In this final test, the students were more active because they had a better understanding of the ecosystem and food chain.

Based on the above discussion, it can be seen that science learning at UPT SD Negeri Kanigoro 03 after implementing the Team Games Tournament (TGT) learning method has been significantly completed. This can be seen in the results of the initial test (pre-test) and the final test (post-test), where the average score in the initial test (pre-test) was 75.47 and the average score in the final test (post-test) was 89.28.

4. Conclusion

Based on the results of the research and discussion above, it can be seen that the learning outcomes of fifth-grade students at UPT SD Negeri Kanigoro 03 after applying the Team Games Tournament (TGT) learning method were significantly complete. This can be seen in the initial test (pre-test) and final test (post-test) results, where the initial test (pretest) yielded an average score of 75.47, and the final test (post-test) yielded an average score of 89.28. It can be concluded that the application of science learning for fifth-grade students at UPT SD Negeri Kanigoro 03 using the Team Games Tournament (TGT) learning method has been successful, as evidenced by the improvement in student learning outcomes after being taught using the Team Games Tournament (TGT) method. Not only that, this method can also improve the attitude of cooperation, mutual assistance, and discussion among students.

It is recommended that teachers apply this method in science education to improve the quality of education. This research can also serve as a reference for other researchers to develop innovative science teaching methods. Teachers need to consider the advantages and disadvantages of the Team Games Tournament (TGT) method in lesson planning. The researchers' recommendations before implementing the Team Games Tournament (TGT) method are as follows: teachers should assess students' initial abilities before implementing the TGT method, further research is needed to develop the TGT method, and teachers should regularly monitor students' progress.

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