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THE INFLUENCE OF COOPERATIVE LEARNING MODEL ON PROBLEM SOLVING ABILITY OF JUNIOR HIGH SCHOOL STUDENTS IN AL QURAN HADITH SUBJECT

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Abstract

The study is intended to examine the impact of implementing the cooperative learning model with the Teams Games Tournament (TGT) approach on the problem-solving skills of junior high school students in the Al-Qur'an Hadith subject. This research uses a quantitative approach with a population of all class VII students at Mts. Fatahillah Semarang. This research uses a non-equivalent control group design for its quasi-experimental design. Data collection was carried out using observation, written assessments, and documentation techniques. The analysis revealed that the mean N-gain score of the control group was 9.15, whereas the experimental group obtained a higher mean score of 19.12. The normality test results indicated that the experimental group's pretest score had a significance value of 0.169 and the posttest score 0.443, both exceeding 0.05, which confirms that the data were normally distributed. Furthermore, the homogeneity test produced a significance value of 0.095, greater than 0.05, indicating that the null hypothesis (H_0) was accepted and the variances of the two groups were homogeneous. Subsequently, hypothesis testing using the independent samples t-test resulted in a Sig. (2-tailed) value of 0.020, which is below the 0.05 threshold. Therefore, it can be concluded that a statistically significant difference exists between the problem-solving skills of students in the experimental class and those in the control class in the Al-Qur'an Hadith subject.

Keyword: Cooperative Learning, Problem Solving Abilities, Team Game Tournaments.

Abstrak. Penelitian bertujuan untuk mengetahui pengaruh model pembelajaran cooperative learning dengan pendekatan teams games tournament terhadap kemampuan problem solving peserta didik SMP pada mata pelajaran Al-Quran Hadis. Penelitian ini menggunakan pendekatan kuantitatif dengan populasi seluruh siswa kelas VII Mts. Fatahillah Semarang. Penelitian ini menggunakan non equivalent control group design untuk desain quasi eksperimen nya. Teknik pengumpulan data yang digunakan yaitu observasi, tes, dan dokumentasi. Berdasarkan analisis data diperoleh nilai n-gain rata-rata pada kelas kontrol adalah 9,15 dan rata-rata pada kelas eksperimen adalah 19,12. Hasil uji normalitas menunjukkan bahwa nilai signifikansi pretest pada kelas eksperimen sebesar 0,169 dan nilai posttest sebesar 0,443, yang keduanya lebih besar dari 0,05. Hal ini menandakan bahwa data pada kelas eksperimen memenuhi asumsi distribusi normal. Selanjutnya, uji homogenitas menghasilkan nilai signifikansi sebesar 0,095 yang juga melampaui batas 0,05, sehingga hipotesis nol (H_0) diterima dan kedua kelompok dinyatakan memiliki varians yang sama (homogen). Pada tahap pengujian hipotesis menggunakan Independent Samples t-Test, diperoleh nilai Sig. (2-tailed) sebesar 0,020 yang lebih kecil dari 0,05. Dengan demikian, dapat dinyatakan bahwa terdapat perbedaan yang bermakna secara statistik dalam kemampuan problem solving antara siswa kelas eksperimen dan kelas kontrol pada mata pelajaran Al-Qur'an Hadis.

Kata Kunci: Cooperative Learning, Kemampuan Problem Solving, Teams Games Tournament.

Background

Islamic religious education is a fundamental foundation in shaping students' character and moral values. The subject of Al-Qur'an Hadith plays a very important role in developing character, religious attitudes, and students' thinking abilities from the elementary to secondary education levels (L. Maskhuroh, 2019). At the seventh-grade level of Madrasah Tsanawiyah, Al-Qur'an Hadith does not only require students to be able to read and memorize verses and hadiths, but also to understand their meanings, contents, rules of tajwid, and to relate the messages of the Qur'an and Hadith to problems in daily life (N. Pohan, Suharwin, 2024).

Teachers who can plan, design, and direct learning systems that align with the curriculum and the capabilities of the students, as well as the supporting learning media, significantly determine the quality and outcomes of student learning (Mis & Amal, 2024). Based on the results of interviews conducted by the researcher with the Al-Qur'an Hadith teacher, it was found that one of the factors influencing students' low problem-solving ability is the difference in their previous educational backgrounds. Some students who come from elementary schools (SD) have not fully understood the material of Al-Qur'an Hadith, which makes it difficult for them to follow the learning process. This condition requires teachers to provide more attention and extra effort in the teaching process. This is different from students who come from Madrasah backgrounds, as they have been equipped with basic knowledge of Al-Qur'an Hadith from their previous level of education, making it easier for them to understand the material and solve the given problems.

However, the reality in the field shows that the teaching of Al-Qur'an Hadith in grade VII is still dominated by conventional methods, such as lectures and individual memorization. This condition causes students to be passive, easily bored, and experience difficulties when faced with questions that require comprehension, analysis of the meaning of verses or hadiths,

application of tajwid rules, and drawing conclusions from the content of surahs and hadiths. Learning that focuses solely on memorization leads to a lack of student interest learning activities (Rosidatul Ulya & Widodo, 2025).

This condition causes students' problem-solving abilities in learning Al-Qur'an Hadith to remain suboptimal. Students experience difficulties in answering problem-based questions, such as relating verses or hadiths to contextual situations, determining the rules of tajwid in certain verses, and explaining the wisdom contained in hadiths in daily life. The success of the learning process is highly determined by the teacher's ability to select and implement appropriate teaching methods (Hariyanto, 2019). This indicates the need for innovation in the use of learning models that are not only aligned with the characteristics of Al-Qur'an Hadith material but also capable of encouraging active participation and developing students' thinking skills.

A learning model considered relevant to address this issue is Cooperative Learning with the Teams Games Tournament (TGT) approach. One form of cooperative learning is the Teams Games Tournament approach, in which students are divided into small groups consisting of four to five members with diverse characteristics (Sofyan, 2022). Two of the oldest and most researched forms of cooperative learning are Team Game Tournaments (TGT) (Budi, 2024)

Based on research by Alfina et al., low student engagement in the learning process is influenced by the mismatch of the learning model used. The implementation of the TGT model has been proven to significantly increase student learning activity. The average n-gain in the experimental class reached 0.90, while the control class only reached around 0.50. Since this value falls into the high effectiveness category (greater than 0.76), it can be concluded that the TGT model is effective in increasing student engagement.

With the implementation of the Cooperative Learning model through the Teams Games Tournament approach, it is expected that the learning of Al-Qur'an Hadith in grade VII will become more active, engaging, and meaningful. Students will not only focus on memorizing surahs and hadiths but also develop critical thinking skills in solving problems related to the material, interpreting meanings, and applying the values of the Qur'an and Hadith in daily life. Therefore, research on the Effect of the Cooperative Learning Model with the Teams Games Tournament Approach on Students' Problem-Solving Ability in Junior High School in the subject of Al-Qur'an Hadith for grade VII is important to be conducted.

Method

This study employs a quantitative method with the aim of analyzing the effect of using the Cooperative Learning model of the Teams Games Tournament (TGT) type on students' problem-solving abilities. The research design used is a quasi-experimental design in the form of a Non-Equivalent Control Group Design. The population of this study includes all seventh-grade students of MTs Fatahillah Semarang City, totaling 40 students. The sampling technique was carried out by selecting two classes as research subjects. Class VII A was chosen as the experimental group, which received treatment in the form of the implementation of the Cooperative Learning model of the TGT type, while class VII B served as the control group using the Cooperative Learning model of the Student Teams Achievement Divisions (STAD) type. To measure the level of students' problem-solving abilities, both groups were given a test before the treatment (pretest) and after the treatment (posttest).

This research was conducted at Madrasah Tsanawiyah Fatahillah, located on Jalan Falatehan Beringin Raya, Ngaliyan District, Semarang City, Central Java. The data collection techniques used in this study include observation, tests, and documentation. Observation was used to obtain supporting data related to the implementation of the learning process and student activeness during the learning activities. Tests were administered in the form of pretests and posttests to both the experimental and control classes. Documentation was carried out as a means of collecting field data in the form of activity reports, supported by photographic and video evidence.

To obtain a comprehensive overview of students' abilities in solving problems in the subject of Al-Qur'an Hadith, this study applied descriptive analysis to the results of the pretest and posttest in both the experimental and control classes. This analysis involved calculating the mean, minimum and maximum scores, as well as the standard deviation (Irfan et al., 2022). Before conducting hypothesis testing, a series of statistical assumption tests were performed as prerequisites for analysis. These stages included tests of normality and homogeneity of the data. The normality test aimed to determine whether the data distribution followed a normal distribution, using the Shapiro-Wilk test due to the sample size being less than 50 respondents, with a significance level set at 0.05. Furthermore, the homogeneity test was conducted to determine the equality of variances between research groups, using Levene's Test with the same significance level of 0.05. After all prerequisites were met, the analysis proceeded to hypothesis testing using the Independent Samples t-Test to determine differences in the improvement of students' learning outcomes before and after the implementation of the learning treatment.

Result and Discussion

This study began with the administration of a pretest and posttest in two different classes. The experimental class was taught using the Cooperative Learning model of the Teams Games Tournament (TGT) type, while the control class used the Student Teams Achievement Divisions (STAD) type. Each class completed 20 multiple-choice questions in the pretest and 20 questions in the posttest. This step aimed to determine the effect of implementing the TGT model on the problem-solving skills of seventh-grade students in the subject of Al-Qur'an Hadith.

At the initial stage of learning in the experimental class, students were given a pretest to be completed individually in order to determine their initial abilities related to the topic of Mad, which includes Mad Thobi'i, Mad Wajib Muttashil, and Mad Jaiz Munfasil. After the pretest was completed, students were divided into groups consisting of 6–7 members per group. Next, students engaged in group discussions to answer the given questions using a letter-chain game, in which each group member was only allowed to write one letter alternately until a complete answer was formed. The group that was the fastest and most accurate in forming the correct answer was awarded points as a form of appreciation for their teamwork and accuracy. After the game activity was completed, students then worked on the posttest individually. This posttest aimed to determine the improvement in students' understanding of the topic of Mad, particularly Mad Thobi'i, Mad Wajib Muttashil, and Mad Jaiz Munfasil, after participating in the learning process and group discussions that had been conducted.



Figure 1. Team Game Tournament type learning

The difference between the experimental and control classes lies in the quiz phase. In the control class, students simply work in groups on questions based on the assigned test paper, without any game elements or activities as implemented in the experimental class. The pretest and posttest results for the experimental and control classes can be seen in figure 1.

Table 1. Pretest and Posttest Results Data for Experimental Class and Control Class

Class	Highest Score	Lowest Score	Average
Pre-Eksperimen	90	20	56,5
Pre-Kontrol	20	75	50,50
Pos-Eksperimen	95	45	66,75
Pos-Kontrol	80	20	54,50

Based on the results listed in the table, it can be seen that the average posttest scores for the two groups after receiving treatment with different learning methods showed a difference. The mean posttest score for the experimental group appeared superior to that of the control group. Next, the pretest and posttest data were analyzed to determine whether the data distribution from both groups met the assumption of normality. Testing was conducted using SPSS version 27 software. The basis for decision-making was set at a significance level of 0.05, where data were considered normal if the significance value was greater than 0.05, and abnormal if it was less than 0.05. A summary of the normality test results is presented below.

Table 2. Normality Test Results

Class	N	Sig
Pre-Eksperimen	20	.169
Pre-Kontrol	20	.256
Pos-Eksperimen	20	.443
Pos-Kontrol	20	.141

The results of the normality test conducted using SPSS version 27 indicate that the significance value of the pretest in the experimental class is $0.169 > 0.05$, meaning that the data are normally distributed. In the control class, the pretest significance value is $0.251 > 0.05$, indicating that the pretest data in the control class are also normally distributed. For the posttest data, the experimental class obtained a significance value of $0.443 > 0.05$, which shows that the data are normally distributed. Meanwhile, the control class shows a significance value of $0.141 > 0.05$, indicating that the posttest data in the control class are also normally distributed. Therefore, it can be concluded that all pretest and posttest data from both research groups meet the assumption of normal distribution.

The next stage of analysis is testing the homogeneity of variances to determine whether the pretest and posttest data from both research groups have equal levels of variance. This test was conducted using Levene's Test with the assistance of SPSS version 27. The basis for decision-making is set at a significance level of 0.05, where if the significance value is greater than 0.05, the null hypothesis (H_0) is accepted, indicating that the variances of the two groups are considered equal (homogeneous). Conversely, if the significance value is less than

0.05, the null hypothesis (H_0) is rejected, meaning that the variances of the two groups are not equal (not homogeneous). The results of this test can be seen as follows.

Table 3. Homogenitas Test Results

	Levene Statistic	df1	df2	Sig.
Based on Mean	2.931	1	38	.095

The results of the homogeneity test using SPSS version 27 show a significance value of 0.095. Since this value is greater than 0.05, the null hypothesis (H_0) is accepted, indicating that both groups have equal variances or are homogeneous. Based on the previous findings from the normality and homogeneity tests, it can be confirmed that the data meet the assumptions of normal distribution and equal variance. With both prerequisites fulfilled, the comparative analysis between the pretest and posttest scores in the experimental and control classes was conducted using the Independent Samples t-Test.

This test was carried out to determine whether there is a significant difference in students' problem-solving abilities between the experimental class, which applied the Teams Games Tournament (TGT) model, and the control class, which used the Student Teams Achievement Division (STAD) model. The results of the Independent Samples t-Test analysis are presented in Table 4 below.

Table 4. Independent sample t test results

	F	Sig.	t	Sig. 2 (tailed)
Equal variances assumed	2.931	.095	- 2.430	.020

The results of the analysis using SPSS version 27 show a Sig. (2-tailed) value of 0.020, which is smaller than the significance level of 0.05. Therefore, it can be concluded that there is a statistically significant difference in students' problem-solving abilities between the experimental class and the control class.

Based on the findings of the analysis, it can be affirmed that the use of the Teams Games Tournament (TGT) model contributes to improving students' problem-solving abilities in the subject of Al-Qur'an Hadith, particularly on the topic of *Mad*. This improvement is a result of the implementation of the TGT model in the learning process. These positive changes are not only reflected in the quantitative data obtained from observations but are also supported by interview results with the Al-Qur'an Hadith teacher, which confirm the development of students' abilities.

The implementation of the Teams Games Tournament (TGT) learning model is able to enhance students' cognitive, social, and affective engagement, as it creates a learning environment that is competitive yet still emphasizes cooperation. The strength of this model lies in its ability to build an engaging and enjoyable learning atmosphere, foster intrinsic

motivation, and strengthen social relationships among group members. In addition, the stages in TGT ranging from material presentation, group discussion, game activities, to tournaments provide varied learning experiences that can adapt to students' characteristics and learning styles (Tanjung & Haryati, 2020; Fatmawati, 2019).

However, the implementation of the TGT model is not without limitations that need to be considered. One of the common challenges is the relatively long time allocation required for each stage of the learning process, especially during tournaments and the awarding phase. In addition, teachers need to have strong classroom management skills to ensure that TGT is implemented effectively and does not merely become a play activity without clear academic objectives. In certain situations, students with lower academic abilities may experience psychological pressure if they do not receive adequate support from their group members (Utami & Rohani, 2021). Therefore, systematic planning strategies are needed, along with balanced group formation that takes into account students' abilities and social backgrounds.

Despite its advantages and limitations, the TGT model remains a viable option as a cooperative learning approach that can enhance overall student participation. The implementation of this learning strategy can be adjusted by teachers according to classroom conditions and student characteristics, accompanied by special guidance for students who tend to be passive to ensure their involvement. When implemented effectively, the TGT model can improve learning participation while also fostering cooperation, sportsmanship, and responsibility throughout the learning process (Yulia & Ismail, 2021).

Conclusion

Based on the results of the research and discussion that have been conducted, it can be concluded that the implementation of the Cooperative Learning model with the Teams Games Tournament (TGT) approach has a significant effect on improving the problem-solving abilities of seventh-grade students in the subject of Al-Qur'an Hadith, particularly on the topic of *Mad*. This is supported by the results of the Independent Samples t-Test analysis, which produced a Sig. value of $0.020 < 0.05$, indicating a significant difference in problem-solving abilities between the group that applied the TGT model and the group that used the STAD model.

The data analysis results show that the posttest scores of students in the experimental class are higher than those in the control class. This finding indicates that the TGT model is capable of creating a more active, interactive, and enjoyable learning environment through a combination of group work, games, and tournaments. As a result, students are encouraged to be more engaged in the thinking process, understand concepts more deeply, and apply Al-Qur'an Hadith material in problem-solving contexts.

Based on these findings, the Cooperative Learning model with the Teams Games Tournament approach is recommended as an alternative learning strategy for the subject of Al-Qur'an Hadith, particularly to improve students' problem-solving abilities. Future research is expected to further develop the application of the TGT model in different materials, educational levels, or in combination with other variables such as learning motivation, religious attitudes, and critical thinking skills in order to obtain more comprehensive results.

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