JOLLT Journal of Languages and Language Teaching
https://e-journal.undikma.ac.id/index.php/jollt
Email: jollt@undikma.ac.id
DOI: https://doi.org/10.33394/jollt.v12i4.12568

October 2024. Vol. 12, No. 4
p-ISSN: 2338-0810
e-ISSN: 2621-1378
pp. 1739-1754

THE EFFECT OF COOPERATIVE MODEL OF KAHOOT-BASED TEAM GAME TOURNAMENT AND LEARNING MOTIVATION ON INDONESIAN LANGUAGE OUTCOMES

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Article Info
Article History
Received: July 2024
Revised: August 2024
Published: October 2024

Keywords
Cooperative Model;
Team Game Tournament;
Kahoot;
Learning Motivation;
Official Letters;
Personal Letters

Abstract

This study aims to interpret the effect of the application of the Cooperative learning model type Team Game Tournament assisted by Kahoot application and learning motivation on learning outcomes on the material of writing official letters and personal letters of SMP Negeri 02 Gunung Talang students. This research is classified as experimental research with a population of 355 students and a sample of 64 students. Data on learning outcomes were obtained through objective question tests on the material of writing official and personal letters, while learning motivation data were obtained from distributing learning motivation questionnaires. Data analysis was conducted manually and using the IBM SPSS Statistics 27 application. Based on the results of the analysis, the Team Game Tournament type Cooperative learning model assisted by Kahoot application was proven effective in improving student learning outcomes significantly compared to the Conventional learning model. This is evidenced by $t_{count} > t_{table}$ *(df = 62; α = 0.05), namely 8.444> 1.66980 and Sig. (2-tailed) = 0.000 < 0.05 then H0 is rejected. These findings indicate that the application of the Team Game Tournament type Cooperative learning model assisted by the Kahoot application can significantly improve student learning outcomes. In addition, the results showed that students' learning motivation, both high and low, did not significantly affect learning outcomes in the context of using the Cooperative learning model of Team Game Tournament type assisted by Kahoot application. The analysis also showed no significant interaction between the learning model and students' learning motivation, with an interaction F value (FoA*B) = 0.013 and p-value = 0.908. Thus, the effectiveness of the Team Game Tournament type cooperative learning model assisted by Kahoot application was consistent across various levels of student learning motivation, both high and low. This finding indicates that the learning model is effective for all students regardless of their learning motivation level.*

How to cite: Afifah, A., & Atmazaki, A. (2024). The Effect of Kahoot-based Team Game Tournament Type Cooperative Model and Learning Motivation on Indonesian Language Learning Outcomes. *JOLLT Journal of Languages and Language Teaching*, 12(4), 1739-1754. DOI: https://doi.org/10.33394/jollt.v12i4.12568

INTRODUCTION

Modern learning emphasizes the use of technology and interactive approaches to improve learner engagement and learning outcomes. In this digital era, technology integration in education has become a necessity, no longer an option (Akram et al., 2022; Matos et al., 2019; Zheng, 2023). The use of Kahoot interactive platform integrated with Team Game Tournament type cooperative learning model can create a dynamic and learner-focused learning environment. This not only improves academic learning outcomes, but also builds 21st century skills such as critical thinking, creativity, and collaboration (Rosyida et al., 2022; Atmazaki et al., 2020). The Team Game Tournament type Cooperative learning model is one method that combines the principles of teamwork and competitive games. Through the Team Game Tournament type Cooperative learning model, learners are divided into heterogeneous

small groups, where they work together to complete tasks and participate in challenging game tournaments (Ihwanto et al., 2022; Patil et al., 2022). Each member of the group has an important role in achieving a common goal, so they must actively contribute and support each other.

The Team Game Tournament type Cooperative learning model emphasizes students not only learning from the material presented by the teacher, but also from interaction and discussion with group mates (Patil et al., 2022; Al-Fath, 2021; Ghaemi et al., 2023). This helps them to understand the material more deeply and develop important social skills. The integration of Team Game Tournament type Cooperative learning model with Kahoot offers great potential in improving learning engagement and learner motivation (Fuster-Guilló et al., 2019; Mustofiyah & Su'udiah, 2020; Yorman et al., 2023). This model combines elements of competition and collaboration, where learners work in teams to complete tasks and answer questions in a game format (Cahyani & Mustadi, 2021; Nurchasanah, 2020). The use of Kahoot as a digital platform adds an interactive and fun dimension, so that learners are more motivated to actively participate in the learning process.

Kahoot is a game-based learning platform that allows teachers to create interactive quizzes that can be played by learners in real-time (Sianturi & Hung, 2022; Wang & Tahir, 2020). The use of Kahoot in Team Game Tournament type cooperative learning model provides an additional element of healthy competition and motivates learners to actively participate in learning. Through Kahoot games, learners can engage in fun exercises on grammar and relevant vocabulary (Rojabi et al., 2022; Zulfirah et al., 2023). Thus, learners not only learn through interaction with the material and group mates, but also through a fun and competitive experience, which in turn can improve their understanding and retention of the material taught.

Language skills, especially Indonesian, are basic abilities that are very important for students to develop. They include aspects of listening, speaking, reading and writing, all of which are essential in everyday life as well as in academic contexts (Saifudin et al., 2022). A good command of Bahasa Indonesia not only helps learners in understanding other subject matter, but also in communicating effectively and expressing their ideas clearly. The skill of writing official and personal letters is an important part of the language competence that learners must master (Zeng et al., 2022; Zhilan et al., 2022). Official letters are official communications that are often used in various administrative matters, while personal letters are a form of personal communication that reflects more informal language skills. Mastery of these skills is important because it can help learners in various real-life situations, both in the school environment and outside school.

At SMP Negeri 02 Gunung Talang, there are still a number of challenges in the learning process. Many learners are less engaged in learning because the teaching methods are still traditional and tend to be monotonous. Learners are rarely given the opportunity to interact and work together in groups, which causes learning to be individualistic and less dynamic. This has a negative impact on learners' cognitive and psychomotor abilities. Based on the needs evaluation that has been carried out on students of class VII SMP Negeri 02 Gunung Talang on the material of official letters and personal letters with learning outcomes of identifying parts, similarities and differences, and the structure of official letters and personal letters, 68.6% of students face difficulties in understanding the material of official letters and personal letters. Many learners are less involved in the learning process due to monotonous and uninteresting teaching methods. In addition, learners are rarely given the opportunity to interact and work together in groups, even though teamwork can improve their social and academic skills.

In addition, teachers at SMP Negeri 02 Gunung Talang also face difficulties in integrating technology such as the Kahoot application in learning. This lack of knowledge and

skills in using technology causes the learning process to be less optimal and less interesting for learners. The effect results in low learner engagement and lack of effectiveness in achieving learning objectives. The ability to integrate technology with learning models is essential to create a dynamic learning environment and motivate learners in the teaching-learning process. Therefore, efforts are needed to overcome this challenge through the implementation of more interactive and technology-based learning models.

Previous studies have shown that the use of Team Game Tournament type cooperative learning model can improve learners' learning outcomes (Pello, 2018; Putri, 2022; Rosyida et al., 2022; Syah et al., 2023). These studies also indicate that technology integration in learning can increase learner engagement and motivation. However, more research is needed that specifically examines the effect of using Kahoot in a Team Game Tournament type Cooperative model on Indonesian learning outcomes. This study aims to fill this gap by exploring how the Kahoot application, when used in the context of the Co-operative Team Game Tournament model, can influence Indonesian learning outcomes on official and personal letters. This research is expected to provide new insights into the effectiveness of combining cooperative learning models and interactive technology in improving learners' academic skills, particularly in Indonesian language lessons.

Furthermore, this research also examines how students' learning motivation can moderate the relationship between the use of Kahoot in the Team Game Tournament type cooperative learning model and Indonesian learning outcomes. Thus, this research provides a more comprehensive understanding of the factors that can influence the successful implementation of technology in cooperative learning. Specifically, this research assesses the effect of Kahoot-based Team Game Tournament type cooperative model on Indonesian learning outcomes; the effect of Kahoot-based Team Game Tournament type cooperative model on Indonesian learning outcomes with high learning motivation; the effect of Kahoot-based Team Game Tournament type cooperative model on Indonesian learning outcomes with low learning motivation; and the interaction of Kahoot-based Team Game Tournament type cooperative model with learning motivation. This research is expected to provide new insights into the effectiveness of using game-based technology in Cooperative learning, as well as providing practical guidance for teachers in integrating interactive tools such as Kahoot to improve learner learning outcomes. This study also aims to provide empirical evidence on the importance of learning motivation in the context of interactive and competitive learning, which in turn can help in designing more effective and enjoyable learning strategies for learners.

RESEARCH METHOD

Research Design

This study applies an experimental method with a 2x2 factorial design, aiming to examine the effect of the Kahoot-based Team Game Tournament type of Cooperative learning model and learning motivation on Indonesian learning outcomes on the material of official and personal letters. The 2x2 factorial design helps in understanding not only the individual effects of each variable, but also how the combination of the two variables affects learning outcomes (Haerling & Prion, 2020; Ogara & Suyanto, 2019; Sugiharti & Wildya, 2021). This design is suitable for experimental research involving two independent variables because it allows researchers to measure the effects of both variables. In addition, this design has the advantage of revealing the interaction between two variables. Thus, the 2x2 factorial design provides a more comprehensive understanding of the effects and interactions between various factors in the educational context.

Population and Sample

The population in this study were all seventh grade students at SMP Negeri 02 Gunung Talang, totaling 355 people. To determine the research sample, purposive sampling technique was used, namely the selection of samples based on certain criteria relevant to the research objectives (Ames et al., 2019; Rai & Thapa, 2019; Serra et al., 2018). The criteria used in the sample selection are (1) uniformity of learner characteristics, where learners have relatively similar academic backgrounds based on previous test scores, (2) sufficient class availability to be intervened with different learning models, and (3) stable attendance of learners during the current semester, to minimize the influence of absenteeism on research results.

Class selection is done through a statistical testing process. First, a normality test was conducted to ensure that the distribution of students' test scores was normally distributed (Sig. > 0.05). Next, a homogeneity test was conducted to ensure that the variance of test scores between classes was not significantly different (F = 0.446; p-value = 0.544 > 0.05), so that the selected classes had similar variability. In addition to statistical considerations, the availability of teaching time and teacher commitment in implementing the learning model were also factors in class selection. Based on these considerations, two classes that met the criteria were determined as research samples, namely class VII-D consisting of 32 students and class VII-E consisting of 32 students. Thus, the total sample of this study was 64 students.

Instruments

This study used test instruments and questionnaires. Tests were used to measure students' abilities in Indonesian language subjects on official and personal letters. Before the instrument was used, the instrument was consulted with a linguist so that the content validity and the level of conformity with the material being taught could be guaranteed. The test instrument indicators used in this study are presented as follows.

Table 1
Test Instrument Indicator

No.	Material	Question Indicator
1.	Definition of letter	a. Learners can explain the definition of a letter in general. b. Learners can identify the main purpose of letter writing.
2.	Types of official and personal letters	a. Learners can distinguish between official and personal letters. b. Learners can give examples of each type of letter (official and personal).
3.	Contents of official and personal letters	a. Learners can explain the difference in content between official and personal letters. b. Learners can mention the important components that must be present in the content of official and personal letters.
4.	Characteristics of official and personal letters	a. Learners can identify the characteristics of official and personal letters. b. Learners can compare and contrast the characteristics of official and personal letters.
5.	Elements and linguistic rules of personal and official letters	a. Learners can mention the elements in personal and official letters. b. Learners can explain the linguistic rules that apply in writing personal and official letters.
6.	Structure of official and personal letters	a. Learners can explain the general structure of official and personal letters. b. Learners can identify the parts of the structure of official and personal letters.

The questionnaire instrument was prepared based on the theory of learning motivation (Sardiman, 2018). The instruments used to collect data on students' learning motivation have been constructively tested by experts and have gone through instrument trials with validity and reliability testing, so that these instruments can be relied upon in accurately measuring students' learning motivation. The results of the learning motivation instrument validity test in this study show that all instruments are declared valid with a Sig. (2-tailed) <0.05. The learning motivation instrument reliability test is presented as follows.

Table 2
Reliability Test of Learning Motivation

Reliability Statistics	
Cronbach's Alpha	N of Items
.987	60

Based on the table above, it can be concluded that the Cronbach's Alpha reliability coefficient value is 0.987. Thus the learning motivation questionnaire instrument was tested by the data and declared reliable. This value is in the interval> 0.80-1.00 with the category "Very Reliable".

Data Analysis

The data analysis process begins with descriptive statistical analysis, which aims to provide an overview of the data that has been collected. These descriptive statistics include the calculation of the mean, median, mode, standard deviation, and frequency distribution of the variables studied. The next stage is screening or initial action taken on the data before hypothesis testing is carried out. The screening process in this study includes a prerequisite test of normality and homogeneity analysis. The normality test was carried out with the Kolmogorov-Smirnov test through the provisions if Sig. (2-tailed) > 0.05 then H_0 is accepted with the conclusion that the sample data comes from a normally distributed population (Baumgartner & Kolassa, 2023; Filion, 2015; Janna & Herianto, 2021; Quraisy, 2022). Furthermore, the data is said to be homogeneous if the p-value > 0.05 then H_0 is accepted with the conclusion that the variants of two or more data groups are homogeneous (Hussain et al., 2023).

After the data meets the prerequisites of normality and homogeneity, the process continues with hypothesis testing, which aims to test the assumptions or hypotheses that have been formulated in the study. This hypothesis test was carried out through relevant statistical methods, namely Independent Sample T-Test and ANOVA. Thus, the whole process of data analysis using IBM SPSS Statistics 27 allows researchers to obtain valid and reliable results, and answer research questions accurately.

RESEARCH FINDINGS AND DISCUSSION

Data Description

Data description includes a simple presentation of data obtained from the research results. The presentation of data was carried out on the value of learning outcomes of experimental classes given the treatment of Kahoot-based Team Game Tournament type Cooperative learning model, experimental classes given the treatment of Kahoot-based Team Game Tournament type Cooperative learning model with high learning motivation level and low learning motivation, control classes given the treatment of conventional learning model, control classes given the treatment of conventional learning model with high learning motivation level and low learning motivation. This data description provides a comprehensive understanding of how different treatments affect student learning outcomes.

Table 3
Data Description

		X1	X2	X1O1	X1O2	X2O1	X2O2
N	Valid	32	32	16	16	16	16
	Missing						
Mean		83,25	65,25	83,75	65,50	82,75	65,00
Std. Error of Mean		1,464	1,550	2,048	1,893	2,152	2,517
Median		84,00	66,00	84,00	68,00	82,00	64,00
Mode		76	72	72	68	76	72
Std. Deviation		8,281	8,766	8,193	7,572	8,606	10,066

	X1	X2	X1O1	X1O2	X2O1	X2O2
Variance	68,581	76,839	67,133	57,333	74,067	101,333
Skewness	0,011	0,064	-0,064	-0,082	0,096	0,165
Std. Error of Skewness	0,414	0,414	0,564	0,564	0,564	0,564
Kurtosis	-1,114	-0,495	-1,130	-0,564	-1,041	-0,575
Std. Error of Kurtosis	0,809	0,809	1,091	1,091	1,091	1,091
Range	28	36	24	28	28	36
Minimum	68	48	72	52	68	48
Maximum	96	84	96	80	96	84

The table above compares the learning outcomes of students from the experimental class using the Team Game Tournament type Cooperative learning model with the help of Kahoot (X1) and the control class using conventional learning methods (X2). The results show that students in the experimental class have a higher average score (83,25) than students in the control class (65,25). If observed, students with high learning motivation in the experimental class (X1O1) obtained an average of 83,75, higher than the highly motivated students in the control class (X2O1) who only obtained an average of 82,75. Even for students with low learning motivation, the experimental class (X1O2) remained superior with an average of 65,50 compared to the control class (X2O2) which had an average of 65,00. In addition, the spread of standard deviation values in the control class was larger, which means that the variation in student learning outcomes was wider. This indicates that the use of Kahoot in the Cooperative learning model in the experimental class not only improved overall learning outcomes but also provided more consistency in student performance.

Tests of Normality

A normality test is a statistical procedure used to determine whether sample data is normally distributed. In this study, the normality test was conducted to ensure that the data collected met the assumption of normal distribution, which is an important prerequisite for parametric statistical analysis. By conducting a normality test, researchers can validate whether the distribution of values in each group, both the experimental group using the Team Game Tournament type Cooperative learning model with the help of Kahoot media and the control group using Conventional methods, follows a normal distribution pattern. The normality test results provide a strong basis for continuing further statistical analysis and ensuring the accuracy and reliability of the research findings.

Table 4
Tests of Normality

	X1	X2	X1O1	X1O2	X2O1	X2O2	X*O
Statistic	0,123	0,127	0,136	0,192	0,159	0,132	0,076
df	32	32	16	16	16	16	64
Sig.	0,200*	0,200*	0,200*	0,118	0,200*	0,200*	0,200*

Based on the results of the Kolmogorov-Smirnov normality test, it is known that Sig. Tests of Normality > 0.05. This indicates that all data meets the assumption of normal distribution, which allows the use of parametric statistical analysis techniques for further hypothesis testing. Thus, the data that has been tested provides a strong basis for continuing the Independent Sample T-Test and ANOVA statistical analysis.

Tests of Homogeneity of Variances

The homogeneity test is important to ensure that the variance in each data group is similar, so that the assumption of homogeneity of variance in the statistical analysis of the t test and ANOVA is met. This data includes a comparison of variances between experimental classes using the Team Game Tournament type Cooperative learning model with the help of

Kahoot media and control classes using conventional learning models, both for students with high and low learning motivation. By conducting a homogeneity test, researchers can identify whether the difference in variance is significant or not, so that further analysis can be carried out with high validity.

Table 5
Tests of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Learning Outcome Score	0,033	1	62	0,856
Value of Learning Outcomes with High Learning Motivation	0,107	1	30	0,746
Value of Learning Outcomes with Low Learning Motivation	0,250	1	30	0,620
Value of Learning Outcomes with High and Low Learning Motivation	0,468	3	60	0,706

Based on the results of the homogeneity of variance test, the Levene Statistic value and significance are obtained for various data groups. For the learning outcome variable, the Levene Statistic value is 0,033 with a p-value of 0,856 > 0,05, so H_0 is accepted with the conclusion that the variance of the two data groups is homogeneous. In the group of learning outcomes with high learning motivation, the Levene Statistic value is 0,107 with a p-value of 0,746 > 0,05, so H_0 is accepted with the conclusion that the variants of the two groups of data are homogeneous. For the group of learning outcomes with low learning motivation, the Levene Statistic value is 0,250 with a p-value of 0,620 > 0,05, so H_0 is accepted with the conclusion that the variance of the two groups of data is homogeneous. Finally, for learning outcomes that include high and low learning motivation, the Levene Statistic value is 0,468 with a p-value of 0,706 > 0,05, so H_0 is accepted with the conclusion that the variance of the four data groups is homogeneous. Thus, the results of this homogeneity test indicate that the variance in each data group is similar, so the assumption of homogeneity of variance in the statistical analysis of Independent Sample T-Test and ANOVA is met.

Hypothesis Test

Hypothesis testing is a statistical procedure that involves testing two hypotheses, namely the null hypothesis (H_0) and the alternative hypothesis (H_1). The hypothesis testing in this study was conducted to address the research problem, which is to determine the differences in learning outcomes between students treated with the Cooperative learning model type Team Game Tournament assisted by the Kahoot application and those treated with the conventional model; the effect of the Cooperative learning model type Team Game Tournament assisted by the Kahoot application on the learning outcomes of students with high learning motivation; the effect of the Cooperative learning model type Team Game Tournament assisted by the Kahoot application on the learning outcomes of students with low learning motivation; and the interaction between the Cooperative learning model type Team Game Tournament assisted by the Kahoot application and learning motivation.

Table 6
Independent Sample T-Test

	t	df	Sig. (2-tailed)
Equal variances assumed Hipotesis 1	8,444	62	0,000
Equal variances assumed Hipotesis 2	6,543	30	0,000
Equal variances assumed Hipotesis 3	5,361	30	0,000

Based on the results of the Independent Sample T-Test analysis, several conclusions can be drawn, namely the results of the independent samples test analysis of the first hypothesis, obtained t-value > t_{table} (df = 62; α = 0.05), namely 8.444 > 1.66980 and Sig. (2-tailed) = 0.000 < 0.05, thus H_0 is rejected. Therefore, the proposed hypothesis is supported by the data, so it can be concluded that there is an effect of the Cooperative learning model type Team

Game Tournament assisted by the Kahoot application on students' learning outcomes in the material of writing official and personal letters. Based on the results of the independent samples test for the second hypothesis, it was found that t-value > t_{table} (df = 30; α = 0.05), namely 6.543 > 1.69726 and Sig. (2-tailed) = 0.000 < 0.05, thus H_0 is rejected. Therefore, the proposed hypothesis is supported by the data, so it can be concluded that there is an effect of the Cooperative learning model type Team Game Tournament assisted by the Kahoot application on the learning outcomes of students with high learning motivation in the material of writing official and personal letters. Based on the results of the independent samples test for the third hypothesis, it was found that t-value > t_{table} (df = 30; α = 0.05), namely 5.361 > 1.69726 and Sig. (2-tailed) = 0.000 < 0.05, thus H_0 is rejected. Therefore, the proposed hypothesis is supported by the data, so it can be concluded that there is an effect of the Cooperative learning model type Team Game Tournament assisted by the Kahoot application on the learning outcomes of students with low learning motivation in the material of writing official and personal letters.

Next, the interaction of the Cooperative learning model type Team Game Tournament assisted by the Kahoot application with learning motivation in this study was analyzed through ANOVA testing as follows.

Table 6
Tests of Between-Subjects Effects

Dependent Variable: *Posttest* (A*B)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5194.000[a]	3	1731,333	23,095	0,000
Intercept	352836,000	1	352836,000	4706,572	0,000
X	5184,000	1	5184,000	69,151	0,000
O	9,000	1	9,000	0,120	0,730
X*O	1,000	1	1,000	0,013	0,908
Error	4498,000	60	74,967		
Total	362528,000	64			
Corrected Total	9692,000	63			

Based on the results of the analysis of tests of between-subjects effects of the fourth hypothesis, several conclusions were obtained, namely, Fo(X) = 69.151 with a Sig. value = 0.000 < 0.05, thus H_0 is rejected. Therefore, the proposed hypothesis is supported by the data, so it can be concluded that there is a difference in the average learning outcomes of students on the material of writing official and personal letters between those given treatment with the Cooperative learning model type Team Game Tournament assisted by the Kahoot application and the Conventional learning model. Fo(O) = 0.120 with a Sig. value = 0.730 > 0.05, thus H_0 is accepted. Therefore, the proposed hypothesis is not supported by the data, so it can be concluded that there is no difference in the average learning outcomes between students with high and low learning motivation on the material of writing official and personal letters. This indicates that the factor of students' learning motivation (high or low) does not significantly affect students' learning outcomes. Fo(X*O) = 0.013 with a Sig. value = 0.908 > 0.05, thus H_0 is accepted. Therefore, the proposed hypothesis is not supported by the data, so it can be concluded that there is no significant interaction between the Cooperative learning model type Team Game Tournament assisted by the Kahoot application and the Conventional learning model with learning motivation on students' learning outcomes in the material of writing official and personal letters. This indicates that the effect of the learning model used differs significantly for students with different levels of learning motivation.

Discussion

The results of hypothesis testing in this study indicate that there is a significant effect of the Cooperative learning model type Team Game Tournament assisted by the Kahoot application on students' learning outcomes. This is evidenced by the t-test results showing t-value = 8.444, which is greater than t_{table} = 1.66980, and a Sig. (2-tailed) value = 0.000 < 0.05. The findings of this study are similar to several studies that state the use of the Cooperative learning model type Team Game Tournament assisted by the Kahoot application is effective in improving students' learning outcomes (Pello, 2018; Putri, 2022; Syah et al., 2023). This learning model can enhance students' active participation, social skills, and understanding of the material. This is reflected in the study by Pransiska (2021) which suggests that the Cooperative learning model can improve communication skills and cooperation among students. Additionally, research by Walef et al. (2022) shows that Cooperative learning can increase learning motivation and achievement among students.

The study by Fauzi & Masrupah (2024) einforces the findings of this research with the discovery that the Cooperative learning model type Team Game Tournament has been significantly proven to improve learning outcomes. The Team Game Tournament Cooperative model emphasizes teamwork and healthy competition between groups, which can enhance students' learning motivation (Marwati et al., 2023). Kahoot, as a supporting tool, provides gamification elements that make the learning process more engaging and interactive. Gamification in education can enhance student engagement and material retention. Astuti et al. (2022) explain that the Team Game Tournament Cooperative learning model allows students the freedom to interact and express their opinions.

In addition, the application of Kahoot in the Cooperative learning model type Team Game Tournament provides immediate feedback to students, which is crucial for an effective learning process (Idawati et al., 2023; Perdana et al., 2020; Salam et al., 2022). Immediate feedback allows students to identify and correct their mistakes in real-time. According to the study by Garza et al. (2023), platforms like Kahoot that provide immediate feedback can significantly improve students' understanding and learning outcomes. The effectiveness of immediate feedback lies in its ability to motivate students to be more proactive in the learning process.

It is also important to note that the Cooperative learning model type Team Game Tournament assisted by the Kahoot application not only improves cognitive learning outcomes but can also enhance the affective and psychomotor aspects of students (Pransiska, 2021; Wahyuningsih et al., 2021). Through teamwork, students learn social and communication skills, as well as develop a sense of responsibility. These aspects are crucial in holistic education aimed at shaping students' overall character. In conclusion, the Cooperative learning model type Team Game Tournament assisted by the Kahoot application can enhance students' learning outcomes. This finding supports the use of technology and innovative teaching methods in education to achieve better learning results. Therefore, educators and educational institutions may consider adopting similar approaches in their efforts to improve the quality of teaching and students' learning outcomes.

From the perspective of students with high learning motivation, this study shows that the calculated t-value = 6.543 with degrees of freedom (df) = 30 and a significance level (p-value) = 0.000, which is smaller than the significance threshold of 0.05. This indicates that H0 is rejected, and Ha is accepted, meaning there is a significant effect of this learning model on the learning outcomes of students with high learning motivation. The use of the Cooperative Learning model of the Team Game Tournament type supported by the Kahoot application has proven to be effective in improving students' learning outcomes (Fauzi & Masrupah, 2024). Kahoot as a learning aid can enhance interactivity and student participation, thus motivating them to learn more. This is consistent with previous research which shows that the use of

technology in learning can increase student engagement and learning outcomes (Yusro et al., 2021).

In addition, the Team Game Tournament type of Cooperative learning model has various advantages that support collaborative and competitive learning. Students not only learn for themselves but also work together in teams to achieve common goals. This creates a fun and challenging learning environment, which in turn increases students' learning motivation. High motivation is an important factor in learning success, as motivated students tend to be more diligent and focused in their studies.

The success of the Team Game Tournament type of Cooperative learning model assisted by the Kahoot application in this study is also in line with constructivist theory, which emphasizes the active role of students in the learning process. According to Shakeela & Vijayalakshmi (2023) the constructivist approach emphasizes active learning, where students build knowledge under the active guidance of the teacher, promoting diverse roles for both educators and students. Students construct their understanding through social interaction and direct experiences. The use of the Kahoot application supports this by providing a platform that allows students to actively participate in the learning process through interactive games and quizzes (Campillo-Ferrer et al., 2020). This helps students to understand the material in a more engaging and interactive way. Overall, the combination of the Team Game Tournament type of Cooperative learning model and the Kahoot application can have a positive impact on students' learning outcomes, especially for students with high learning motivation. Therefore, this approach can be considered for wider application in various learning contexts to improve student learning outcomes.

Furthermore, in terms of students with low learning motivation, the t-test analysis results show that t-value = 5.361 with degrees of freedom (df) = 30, which is much greater than the t-table value = 1.69726 at a 0.05 significance level. Additionally, the p-value = 0.000 < 0.05. Therefore, H0 is rejected and Ha is accepted, indicating a significant influence of the Team Game Tournament type of Cooperative learning model assisted by the Kahoot application on students' learning outcomes.

The rejection of H0 indicates that the use of the Team Game Tournament type of Cooperative learning model assisted by the Kahoot application is effective in improving students' learning outcomes, particularly for those with low learning motivation. This result is consistent with several hypothesis tests in previous studies that show the effectiveness of the Team Game Tournament type of Cooperative learning model assisted by the Kahoot application (Kurniawati et al., 2020; R.A et al., 2023; Rosyida et al., 2022). The use of Kahoot as an aid also contributes to the active engagement of students in the learning process through the competitive and interactive elements it provides (Holbrey, 2020).

The Cooperative learning model of the Team Game Tournament type, assisted by the Kahoot application, has several advantages that contribute to the improvement of learning outcomes. According to Fernández-Espínola et al. (2020) Cooperative learning can enhance students' social interaction and communication skills, which are important in the learning process. Mendo-Lázaro et al. (2022) also affirm that Cooperative learning can increase students' motivation and engagement in learning. With the game elements in Kahoot, students become more interested and enthusiastic about participating in the learning process, which indirectly improves their learning outcomes.

This study also highlights the importance of paying attention to students with low learning motivation. Campillo-Ferrer et al. (2020) indicate that the integration of technology in education, such as the use of the Kahoot application, can help increase student engagement and learning motivation. The gamification in Kahoot creates a more interactive and enjoyable learning environment, thereby motivating students with low motivation to learn (Amni et al., 2021). Thus, the Cooperative learning model of the Team Game Tournament type, assisted by

the Kahoot application, is not only effective in general but also beneficial for students with low learning motivation, providing additional support to improve their learning outcomes.

The results of this study have important implications for educational practice, particularly in classroom teaching strategies. Teachers may consider integrating the Team Game Tournament type of Cooperative learning model assisted by the Kahoot application in Indonesian language instruction, especially for students with low learning motivation. This approach not only enhances learning outcomes but can also make the teaching and learning process more engaging and enjoyable for students. The use of technology in education, such as Kahoot, can also help students understand material more easily through interactive and entertaining methods.

From the implementation of the Cooperative learning model of the Team Game Tournament type, assisted by the Kahoot application, cognitive abilities have improved, as evidenced by increased understanding of the material, improved test scores, and heightened student engagement in learning activities through the quick and interactive feedback provided by Kahoot. In addition to improvements in cognitive abilities, students' psychomotor skills have also seen enhancement, marked by better skills in writing official and personal letters, as well as the development of practical skills through game and competition activities involving the use of Kahoot. The improvement in writing skills, particularly in official and personal letters, was noted by the Indonesian language teacher, who observed significant progress in students' writing skills in terms of structure and grammar, as well as an increased ability to organize and communicate ideas effectively in written form.

The interaction test results between the learning model and learning motivation (FoX*O) show an F-value of 0.013 with a p-value of 0.908 > 0.05. This indicates that there is no significant interaction between the Team Game Tournament type of Cooperative learning model assisted by the Kahoot application and learning motivation with respect to students' learning outcomes. In other words, the effectiveness of the Team Game Tournament type of Cooperative learning model assisted by Kahoot does not differ significantly for students with varying levels of learning motivation.

In addition to the learning model and motivation, other factors also determine students' learning success. According to Yang et al. (2021) the quality of teaching, feedback provided to students, and varied learning strategies are key factors influencing learning outcomes. Han (2021) also mentions that the use of technology in education, such as the Kahoot application, can enhance student engagement and motivation. However, the success of this technology greatly depends on how it is integrated into the overall learning process. Support from the learning environment is also a key factor in students' learning success. Mishra (2020) shows that social support from family and peers can enhance students' motivation and engagement in learning. Tan et al. (2021) note that this support includes emotional encouragement, academic assistance, and positive reinforcement, all of which contribute to improved learning outcomes. With adequate support, students are more motivated to learn and achieve better results.

Student engagement in active learning is another crucial factor. Afifah (2020) shows that Cooperative learning can enhance student engagement through interaction and collaboration. This active involvement encourages students to participate more in the learning process, improving their understanding of the material and their learning outcomes. Thus, learning strategies that promote active engagement, such as the Team Game Tournament type of Cooperative learning model assisted by the Kahoot application, can provide better and more consistent learning results for all students, regardless of their initial motivation levels.

CONCLUSION

Based on the analysis and discussion, several conclusions can be drawn, the Team Game Tournament type of Cooperative learning model, assisted by the Kahoot application,

significantly improves student learning outcomes for both high and low motivation students, with no significant interaction between the learning model and student motivation. This indicates that its effectiveness is consistent across different levels of learning motivation. Integrating the Team Game Tournament type of Cooperative learning model with the Kahoot application enhances student engagement and active participation in the learning process, making the learning experience more interactive and enjoyable. The use of the Kahoot application within this learning model also facilitates a more effective understanding of the material through game mechanisms that stimulate students' interest and learning motivation.

This study demonstrates that the Cooperative Learning model, specifically the Team Game Tournament type assisted by the Kahoot application, is effective in improving student learning outcomes for both high and low motivated students. These findings imply that integrating technology into learning can make the process more interactive and engaging, ultimately enhancing student involvement and understanding. For educators, these results underscore the importance of adopting innovative teaching methods that leverage technology to create a dynamic and enjoyable learning environment. Additionally, schools and educational institutions need to support teachers with training and resources necessary to effectively implement the Team Game Tournament type of Cooperative Learning model assisted by Kahoot.

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