

The Influence of the Teams Games Tournament (TGT) Learning Model with the Chain Whisper Game Method on Virus Material on the Learning Outcomes of Class X Students at SMAN 2 Lambu

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ABSTRACT

This study aims to determine the effect of the Teams Games Tournament (TGT) learning model with the chain whisper game method on student learning outcomes on virus material in class X of SMAN 2 Lambu. The background of this study is based on the low learning outcomes of students and the lack of active involvement of students during the learning process. The TGT model was chosen because it contains elements of games, competition, and group cooperation that can increase student participation in learning. This type of research is a quasi-experimental study with a Non-equivalent Control Group Design. The research population was all grade X students of SMAN 2 Lambu, with a sample size of 60 students divided into two groups, namely the experimental class and the control class. Data collection techniques were carried out through learning outcome tests (pretest and post-test), while data analysis used descriptive and inferential statistics with the help of SPSS software. The results of the study indicate that the implementation of the Teams Games Tournament (TGT) learning model with the chain whisper game method has a significant effect on improving student learning outcomes on the virus material. In the experimental class, there was a significant increase after treatment, compared to the control class which did not experience a significant increase. Statistical tests using the independent sample t-test produced a significance value (2-tailed) of 0.000 which is smaller than $\alpha = 0.05$ and a t-count value of 27.20 which is greater than t-table 2.00. Based on the research results, it can be concluded that the Teams Games Tournament (TGT) learning model with the chain whisper game method has a significant effect on students' learning outcomes on virus material in class X of SMAN 2 Lambu.

Keywords: *Chain Whisper, Learning Outcomes, TGT Learning Model, viruses*

1) INTRODUCTION

Education plays an important role as a major milestone in human life and must be accessible to all levels of society without exception. More than just an effort to improve intellectual abilities, education also serves as a strategic tool in shaping human values, moral integrity, and the ability of

individuals to carry out their social roles. The educational process is designed systematically and based on concepts so that it can be understood and controlled by all parties without exception.¹

According to Brubacker's thinking, education has a close relationship with various changes in the social, economic, and political fields of a country. Education does not develop separately from society, but runs in the flow of continuous social change. Therefore, the education system is expected to be able to overcome various socio-political dynamics that arise. At the individual level, the education system must also be able to adapt to differences in student character. Therefore, in providing a National Education Foundation, there is a need for an inclusive and selective approach to embrace the various aspirations that exist in society and become the National Education Framework.²

Based on observations conducted in class X at SMAN 2 Lambu, the author found the following facts During the learning process, students' learning activities were limited to sitting, listening to the material presented by the teacher, group work, and even when working on group assignments, some students were busy playing and chatting with their classmates. The learning process tended to be teacher-centered, with students rarely asking questions or responding to what the teacher had explained and tending to be passive.

The Team Game Tournament (TGT) learning model is a form of collaborative learning in which students are divided into several learning groups based on their level of knowledge and gender. The teacher then delivers the material to the students, and each group is asked to understand the material that has been presented. Each group of students then contributes to an academic game that awards points to each learning group. The Team Game Tournament (TGT) learning model has five main components, namely class presentation, teams, games, competitions, and prizes.³

The Team Game Tournament (TGT) learning model is important to be implemented in learning because it has many benefits, including improving student learning outcomes, increasing activity,

¹ Fera Waroka, Irwandi Ansori, and Abdul Rahman, "Development of Student Worksheets Based on the Diversity of Dragonflies in the Rice Fields of Kualo Bukit Aceh, Bengkulu City," *Journal of Education and Biology Learning* 4, No. 2: h, 218-226.

² Ni Nengah Selasih and I Ketut Sudarsana, "Education Based on Ethnopedagogy in Maintaining and Conserving Local Wisdom: A Literature Study," *The Indonesian Journal of the Sciences* 6, no. 2 (2018): p. 295

³ Emiliasi Widyasari, "The Effect of the Team Game Tournament (TGT) Corrective Learning Model Assisted by Flashcards on the Creativity and Learning Outcomes of Students on the Material of Interactions between Living Things and Their Environment in Grade VII MTs An-Nur Palangka Raya," Thesis (2021), p. 6

fostering responsibility, cooperation and healthy competition, and making the classroom atmosphere lively. The Team Game Tournament (TGT) learning model incorporates elements of play.

Therefore, the TGT learning model is highly suitable for implementation. This is based on the results of observations of 10th grade students at SMAN 2 Lambu, where 90.9% of the population chose a learning model that incorporates play.

Competitions and games are methods in the form of activities for students without any pressure or coercion, and they bring happiness to the students. Through games, students can engage in all kinds of activities with joy. The games in question are games that have been designed in such a way that they not only give the impression of playing but also have meaning. This game method can be one of the solutions used to improve children's listening skills through a whispering game.⁴

The whisper chain game is a group game where the teacher whispers a message or information to the first student. The first student whispers the message or information to the second student and so on within a group. The last student tells the teacher the message or information they have received or writes it on the board.

The whisper chain game is expected to create a learning atmosphere that shifts from passive to active, from rigid to enjoyable.⁵

One factor contributing to low student learning outcomes is a learning process that is not memorable or enjoyable and fails to create a conducive and meaningful learning environment.⁶ This is what causes the learning outcomes obtained by students to not meet the minimum competency criteria (KKM). Most of the students' test scores are still below 70, while the predetermined KKM standard is 75. Students who do not meet the KKM score will be given remedial lessons.⁷

The subject of viruses is difficult for students to understand. Students' difficulty in understanding the subject of viruses is caused by the lack of variety in learning. This is in line with the survey results, which show that the subject of viruses is indeed a difficult subject, with a percentage of 67.5%. Teachers are unable to attract the attention of students, causing them to feel bored and tired during

⁴ Azlin Atika, Reswita, and Nurhayatun Nufus, "The Effect of Chain Whispering Games on the Oral Communication Skills of 5-6 years old Children," *Jurnal Anak Usia Dini* 5, no. 2 (2021): p. 115

⁵ Putri Diah Sapitri, "The Effect of the Whisper Chain Game Method on Listening Skills in Grade IV Students at SDIT IQRA'2 Bengkulu City," Thesis (2021), p. 12

⁶ Andi Ferawati Jafar, "The Application of Conventional Learning Methods on Physics Learning Outcomes of Students", *Al Asma: Journal of Islamic Education*, 3.2 (2021), 19

⁷ Asfah (44 years old), Biology Teacher for Grade X at SMAN 2 Lambu, Interview, Sangga, July 2, 2024

the learning process. They do not pay attention to or observe what the teachers say, so they are not active in asking or answering questions.

Based on this description, a solution is needed to increase interest and attention in order to improve the learning outcomes of students at SMAN 2 Lambu. One alternative to improve student learning outcomes is to apply an active learning model that stimulates students to focus their attention and learn well and share knowledge with their peers. The learning model that is suitable to be applied is the Team Game Tournament (TGT) learning model. The Team Game Tournament (TGT) learning model with the chain whispering method can increase students' attention and ability to listen and understand the subject matter, and is very suitable for students who enjoy playing, so it is hoped that student learning outcomes will also improve.

2) METHODS

This study used a quasi-experimental method to observe the relationship between variables in the control and experimental groups. The research location is where the research took place. The location of this study was SMAN 2 Lambu, Lambu District, Bima Regency, West Nusa Tenggara.

In this quasi-experimental study, the experimental class reviewed the experimental class used The TGT learning model with the Chain Whispering method was used, while the control class used conventional learning without this model. The research design used was a non-equivalent control group design. This design served to determine whether there were changes or differences in learning outcomes between the control class and the experimental class, which had been given pre-tests and post-tests. The experimental class was taught using the Team Game Tournament (TGT) learning model with the Chain Whispering method, while the control class was taught using the conventional learning model, which is the model commonly used in the learning process at the high school.

The population in this study was all 120 students in class X at SMAN 2 Lambu. The sampling technique used in this study was purposive sampling, which is the selection of samples based on specific considerations. Two classes were selected at SMAN 2 Lambu, namely class X A as the experimental class and class X B as the control class. Both classes had comparable average learning scores and learning times, with each class consisting of 30 students.

The methods or procedures used by the researcher in conducting this study are as follows:

Planning Stage

To determine the situation and conditions at SMAN 2 Lambu, observations and interviews were conducted as the first step in planning. After that, the formulation was carried out. problems, sample determination, and selection of control and experiment. Start creating draft research and prepare research instruments.

Preparation Stage

In this stage, researchers prepare proposals, learning tools such as teaching modules, and research instruments that have been validated and tested for reliability.

Implementation Stage

In the Experimental Class, the research implementation began with an introduction between the researcher and the students, followed by administering a pretest to the students. Next, the researcher carries out the learning process by applying the Teams Game Tournament (TGT) learning model using the whisper chain method. When delivering the material, the researcher uses audio-visual media in the form of PPT. Finally, the researcher gives a test (posttest) to students as a comparison between pretest and posttest scores to determine the learning outcomes of the students.

In the Control Class, the research began with an introduction between the researcher and the students, followed by an initial test (pretest) for the students. Next, the researcher carried out the learning process by applying a cooperative learning model. When delivering the material, the researcher used audio-visual media. Finally, the researcher gave a test (posttest) to students as a comparison between the pretest and posttest scores to determine the learning outcomes of the students.

Data Collection Stage

The main data was collected through an objective test consisting of 25 multiple-choice questions with five answer options (A–E) to measure the students' knowledge during learning.

Analysis and Report Preparation Stage

The data obtained in the previous stage was processed using descriptive and inferential analysis methods. The findings from the analysis were systematically described as the basis for drawing conclusions and compiling the research report.

3) RESULTS AND DISCUSSION

Learning Outcomes of Students Taught Using the Teams Games Tournament (TGT) Learning Model with the Chain Whisper Game Method (Experimental Class)

The study was conducted on 10th grade students at SMAN 2 Lambu, specifically in the experimental class (XA), using data obtained through learning outcome test instruments in the form of pre-tests and post-tests. This class followed the learning process by applying the Teams Games Tournament (TGT) model with the chain whisper game method. Based on the results of descriptive statistical analysis of the learning outcomes of class X A (experimental) students, the following data was obtained:

Table 4.1: *Descriptive Analysis of Pretests and Posttests for the Experimental Class:*

Parameter	Experimental	
	Pretest score	Posttest Score
Maximum Score	48	96
Minimum Score	20	76
Average	31.07	85.73
Standard deviation	6.69	5.70
Variance	4.18	3.10

Based on the descriptive analysis in Table 4.1, it can be seen that the average score of students in the experimental class increased from 31.07 to 85.73, which means there was a difference of 54.66 points. This is also indicated by a decrease in the standard deviation from 6.69 to 5.70 and a decrease in the variance from 4.18 to 3.10, which means that the data distribution is closer to the average.

The categorization of pretest and posttest learning outcomes for the experimental class can be seen in the following table:

Table 4.2: *Categorization of Pretest and Posttest Learning Outcomes*

Experimental Class			
Interval Score	Category	Frequency pretest	Posttest Frequency
0-32	Very Low	21	0
33-49	Low	9	0
50-66	Moderate	0	0
67-83	High	0	8
84-100	Very High	0	22
Number		30	30

Based on Table 4.4, the distribution of learning outcomes of students in the experimental class can be obtained, where in the pretest most students were in the 0- 32 interval with a very low category, namely 21 students, and in the 33-49 interval with a low category, namely 9 students. Meanwhile, in the posttest, there was a change in frequency, with the majority of students falling within the 84-100 interval, categorized as very high, with 22 students, and within the 67-83 interval, categorized as high, with 8 students, meaning that there was an increase in the students' learning outcome test scores.

Based on the descriptive analysis conducted on the experimental class, the comparison of the pretest and posttest results is as follows:

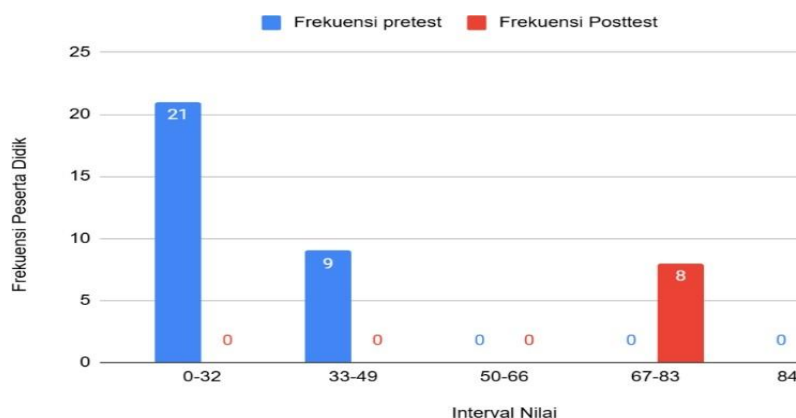


Figure 4.1: *Academic Proficiency Assessment Criteria*

Based on Figure 4.1, it can be seen that there is a difference between the pretest and posttest results of students in class X A (experimental class). In the pretest learning results, it was found that the students' scores were dominated by the very low category (interval 0-32), namely 21 students, and the low category (interval 33-49), namely 9 students. Meanwhile, in the posttest learning outcomes, the students' scores were dominated by the very high category (interval 84-100), with 22 students, and the high category (interval 67-83), with 8 students.

Learning Outcomes of Students Taught without Using the Teams Games Tournament (TGT) Learning Model with the Chain Whisper Game Method (Control Class)

Based on the results of the study conducted at SMAN 2 Lambu class X by collecting data from the pretest and posttest learning outcome instruments on class XB students as the control class without being taught using the Teams Games Tournament (TGT) learning model with the Chain Whispering Game Method, the following descriptive statistical analysis data was obtained:

Parameter	Pretest Score	Posttest Score
Maximum Score	40	80
Minimum Score	20	48

Table 4.3: *Descriptive Analysis of Pre-test and Post-test for Class Control*

Average	29.07	65.33
Standard deviation	5.34	8.77
Variance	6.41	14.20

Based on the descriptive analysis results in Table 4.5, it can be seen that the average score of students in the control class increased from 29.07 to 65.33, which means there was a difference of 36.26. There was an increase in student learning scores, but the difference between the pretest and posttest scores was still low. This is also indicated by an increase in the standard deviation from 5.43 to 8.77 and an increase in the variance from 6.41 to 14.20, which means that the range of data variance is wider.

The categorization of pretest learning outcomes for the control class can be seen in the following table:

Table 4.4: *Categorization of Pretest and Posttest Learning Outcomes Control Class*

Score Range	Category	Frequency Pre-test	Posttest Frequency
0	Very Low	25	0
33	Low	5	1
50-66	Moderate	0	14
67-83	High	0	15
84-100	Very High	0	0
Total		30	30

Based on Table 4.8, the distribution of learning outcomes of students in the control class can be obtained, where in the pretest most students were in the 0-32 interval with a very low category of 25 students and the 33-49 interval with a low category of 5 students. Meanwhile, in the posttest, there was a change in frequency, where the frequency of students began to spread to the 33-49 interval with 1 student in the low category, the 50-66 interval with 14 students in the sufficient category, and the 67-83 interval with 15 students in the high category. This means that there was an increase in the learning test scores of the students, but not as much progress as in the experimental class.

Based on the descriptive analysis conducted on the control class, the comparison of pretest and posttest results is as follows:

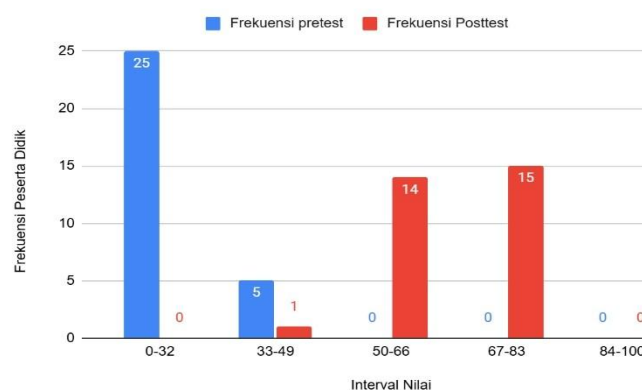


Figure 4.2: *Criteria for Assessing Academic Competence Pre-test and post-test Class X B*

Based on Figure 4.2, it can be seen that there is a difference between the pretest and posttest results of students in Class in Class X B (control class). In the learning outcomes of the, it was found that the students' scores were predominantly in the very low category (interval 0-32), namely 25 students, and the low category (interval 33-49) with 5 students. Meanwhile, the learning outcomes in the posttest showed that the students' scores were dominated by the high category (interval 67-83) with 15 students, the sufficient category (interval 50-66) with 14 students, and the low category (interval 33-49) with 1 student.

The Effect of the Teams Games Tournament (TGT) Learning Model with the Chain Whispering Method

In this section, inferential statistical analysis was conducted to determine whether the use of the Teams Games Tournament (TGT) learning model with the chain whispering game method had an impact on student learning outcomes. To find this out, the following prerequisite tests were first conducted:

a. Normality Test

Based on the results of the Kolmogorov-Smirnov test conducted using Statistical Product and Service Solution (SPSS) version 27 on the experimental class data (X A) taught using the Teams Games Tournament (TGT) learning model with the whisper chain game method, a significance value (sig.) of 0.081 was obtained for the pretest data, and the same value of 0.081 was obtained for the posttest data. Considering that the significance value is greater than the specified significance level ($\alpha = 0.05$), it can be concluded that the learning outcome data of students in the experimental class is normally distributed.

The results of the analysis for the control class (X B), which was taught without using the Teams Game Tournament (TGT) learning model with the whisper chain game method, obtained a sig. value of 0.120 on the pretest and a sig. value of 0.145, while the α value = 0.05, which means that the learning outcome data for the control class (X B) taught without the Teams Game Tournament (TGT) Learning Model using the whisper chain game method is normally distributed. Thus, the data from both classes, namely the experimental class (X A) and the control class (X B), are normally distributed.

Table 4.5: *Normality Test Results for the Experimental and Control Classes*

Variable	Sig.	df	α	Description
Pretest Experimental Class	0.081	30	0.05	Normal
Posttest Experimental Class	0.081	30	0.05	Normal
Pretest Control Class	0.120	30	0.05	Normal
Posttest	0.145	30	0.05	Normal

b. Homogeneity Test

The homogeneity test aims to determine whether the variances possessed by the two samples used are taken from a uniform population or otherwise.

The results of the homogeneity test analyzed using SPSS version 27 show that the significance value (sig.) obtained is 0.083. Since this value is greater than the predetermined significance level ($\alpha = 0.05$), it can be concluded that the two groups, namely the experimental class (XA) and the control class (XB), come from a homogeneous population. Thus, the variance between the two groups can be considered equivalent and meets the assumptions for further analysis.

c. Hypothesis Testing

Hypothesis testing was conducted to determine whether the TGT learning model using the whisper chain game method affected student learning outcomes. Learning outcomes in the experimental class (X A) and control class (X B) were different. The t-test on independent samples (independent sample t-test) was used to test the hypothesis of student learning outcome data.

The results of the hypothesis test analysis conducted using the Statistical and Service Solution (SPSS version 27) program show that the sig. value (2-tailed) = 0.000 while the α value is 0.05, so the sig. value is $< \alpha$ or the t-count value is 27.20 while the t-table value is 2.00, so the t-count is $> t$ -table.

Therefore, H_0 is not accepted and H_1 is accepted at a significance level of 5% ($\alpha = 0.05$). This indicates that student learning outcomes are greatly influenced by the use of the Teams Games Tournament (TGT) learning model with the whisper chain game method.

Discussion

The results of the study measured the learning outcomes of students in the experimental class (XA) and the control class (XB). The experimental class (XA) was taught the Teams Games Tournament (TGT) Learning Model with the whisper chain game method, while the control class (XB) was not taught the Teams Games Tournament (TGT) Learning Model with the whisper chain game method.

The learning outcomes of students taught using the Teams Games Tournament (TGT) Learning Model with the whisper chain game method

The Teams Games Tournament (TGT) learning model used in this study included five main stages, namely class presentation, teamwork, games, tournaments, and group awards. Each stage was carried out by taking into account the conditions of the students in class X of SMAN 2 Lambu.

In the class presentation stage, the teacher conveyed the objectives and main topics of the virus material using PowerPoint media and an interactive approach. Students were directed to listen carefully as preparation for the academic games and tournaments. Although some students tended to be passive, the use of media and the direct involvement of the teacher succeeded in increasing the students' attention to the material.⁸

Students are divided into heterogeneous groups based on academic ability. Each group consists of five students. This composition is in line with the principles of cooperative learning to create positive interdependence and productive cooperation. This is important given the diversity of student characters at SMAN 2 Lambu, as explained by the biology teacher, who said that students are hyperactive, lack focus, and often play during class.⁹

Then, academic games and tournaments were held. The game used was whispering chain, where the first participant received a question card and whispered it to the next friend until the last participant conveyed the whispered question and answered it by writing the answer on the board. This method

⁸ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

⁹ Asfah (44 years old), Biology Teacher for Grade X at SMAN 2 Lambu, Interview, Sangga, July 2, 2024

emphasized the involvement of all group members in turns and trained their focus and memory. This activity proved to generate enthusiasm among students and made the classroom atmosphere more lively. Academic tournaments are a form of evaluation. Each member of the last group acts as a representative to answer questions. This activity fosters a spirit of healthy competition and encourages individual responsibility because students act as team representatives. The classroom atmosphere becomes competitive but still fun, as students feel challenged to answer correctly in order to get the highest score for their team.

The group with the highest score is given an award. This form of reward motivates students to be actively and seriously involved throughout the process learning takes place. This activity also provides effective positive reinforcement in improving student learning outcomes and participation.¹⁰

The application of the Teams Games Tournament (TGT) learning model with the whisper chain game method in this study has shown its effectiveness in improving the learning outcomes of grade X students at SMAN 2 Lambu on the subject of viruses. The pretest and posttest results showed a significant increase from an average score of 31.07 to 85.73, proving that active and participatory learning through Teams Game Tournament (TGT) has a positive impact on students' cognitive achievements.¹¹

The Teams Games Tournament (TGT) model, as developed by DeVries and Edwards, combines elements of teamwork, educational games, competition, and rewards. This model actively involves all students in the learning process and is suitable for use in contexts where students need a fun and dynamic approach. The Teams Game Tournament (TGT) learning syntax consists of five stages, namely (1) class presentation, (2) formation of heterogeneous groups, (3) games, (4) tournaments, and (5) rewards for the best teams.¹²

The percentage of student learning outcomes obtained through the Teams Game Tournament (TGT) model using the whisper chain game method was grouped based on the score range in the learning outcome test. The results showed that 22 students, or 73.33%, were in the very high category, while 8 students, or 26.66%, were in the high category. From these data, it can be concluded that the

¹⁰ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

¹¹ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

¹² Wisnu D. Yudianto, Kamin Sumardi, and Ega T. Berman, "Teams Game Tournament learning model to improve vocational school students' learning outcomes," *Journal of Mechanical Engineering Education*. 1, no. 2 (2014): p. 324.

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majority of students who learned through the Teams Game Tournament (TGT) model using the whisper chain game method achieved a very high level of learning outcomes.¹³

The improvement in learning outcomes in the experimental class was due to the active participation of the students. As is well known, the Teams Game Tournament (TGT) learning model is a model that creates more active, effective, innovative, and enjoyable learning and motivates students to learn in order to obtain high scores in learning outcome evaluations using games and tournaments.

One interesting learning model is the Teams Games Tournament (TGT) model, which uses games or tournaments to encourage students to participate more actively in games according to their abilities. Academic games and tournaments improve students' academic abilities and instill individual responsibility as representative group. TGT increases students' confidence, courage, and enthusiasm for learning. Student learning outcomes are greatly influenced by the Teams Games Tournament (TGT) learning model, which uses a game method, namely the whisper chain game.¹⁴

The high learning outcomes of students are greatly influenced by the learning model used, namely the Teams Games Tournament (TGT) learning model, which presents a game method, namely the whisper chain game method.¹⁵

This is supported by the statements of Nurhayati, Shika, and Fenny, who explain that the Teams Game Tournament (TGT) cooperative learning model is relatively easy to implement because it is designed to be practical and encourages active participation from students, as it combines elements of games and encourages the active involvement of all students in the learning process.¹⁶

Research conducted by Taufiq Ridani S reveals that the application of the Teams Games Tournament (TGT) learning model can improve student learning outcomes, develop social skills, and foster positive responses from students.¹⁷ A similar statement was made by Nur Afwa Milawati, who emphasized that the Teams Game Tournament (TGT) learning model can be used as an effective

¹³ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

¹⁴ Sutriani Indah Lestari, "The Effect of the Team Game Tournament (TGT) Cooperative Learning Model on Mathematics Learning Outcomes in Grade V Students at SD Inpres No. 181 Pattopakang, Mangarabombang District, Takalar Regency," Thesis (2019)

¹⁵ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

¹⁶ Nurhayati Purnama Sari, Sahika Della, and Fenny Agustina, "The Effect of the Teams Group Tournament (TGT) Using Crossword Puzzles (ITS) on the Learning Outcomes of Grade XI Science Students at Muhammadiyah Batam High School," *Bio-Lectura: Journal of Biology Education* 1, no. 1 (2022): p. 3.

¹⁷

alternative strategy to improve student learning achievement, while also fostering their confidence in the learning process.¹⁸

Thus, learning using the 'TGT' model with the whisper chain method is not only cognitively effective but also strengthens students' character in social and affective aspects. This makes the Teams Games Tournament (TGT) model a viable learning alternative for schools with diverse student characteristics.

The whisper chain game requires students to whisper questions to each other in groups. Although it is intended to be focused and fun, its implementation often makes the classroom noisy and difficult to control. Laughter, excessive enthusiasm, and even mistakes in conveying information often cause commotion.¹⁹

One of the major challenges of the whisper chain game is the change in information conveyed from one participant to another. If one participant fails to grasp the content of the question correctly, then the information that.

To the last participant can be wrong, resulting in incorrect answers. Some students with low verbal skills or low self- confidence had difficulty repeating the information whispered to them, slowing down the game and reducing the effectiveness of the learning activity. In practice, students with high academic abilities tended to dominate the game, while weaker students only participated passively, so that the goal of equal collaboration was sometimes not ideally achieved.²⁰

The tournament phase requires strict time management. However, due to the high enthusiasm of the students and the large number of groups that must be assessed, the implementation sometimes exceeds the time specified in the lesson plan.²¹

Learning outcomes of students taught without using the TGT Learning Model with the Chain Whisper Game Method

¹⁸ Nur Afwa Milawati, "The Effect of the TGT Learning Model on Science Learning Outcomes as Seen from self-confidence of seventh-grade students at SMP Amal Bakti Jati Agung Lamung Selatan", Thesis (Lampung: UIN Raden Intan Lampung, 2019), p.

¹⁹ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

²⁰ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

²¹ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

Based on research conducted on the control class (XB) taught without using the Teams Game Tournament (TGT) learning model for 2 meetings, the researcher obtained data from descriptive statistical analysis testing, namely a pretest average score of 29.07 with a maximum score of 40 and a minimum score of 20. Then, the posttest average score was 65.33 with a maximum score of 80 and a minimum score of 48.²²

The percentage of student learning outcomes taught without using the Teams Game Tournament (TGT) learning model with the whisper chain game method was categorized based on the range of student learning outcome test scores. The results show that there were 15 students in the high category with a percentage of 50.00%, 14 students in the sufficient category with a percentage of 46.66%, and 1 student in the low category with a percentage of 3.33%. From these data, it can be concluded that the learning outcomes in the class taught without using the Teams Game Tournament (TGT) learning model only reached the high category.²³

Based on the results of the above study, it can be concluded that the posttest learning achievement of students in the control class increased compared to the pretest results, but this increase was not satisfactory because the 50.00% of students achieved high learning outcomes, while only 13.33% of students achieved KKTP (Learning Objective Completion Criteria) scores, based on the established KKM standard.²⁴

The low learning outcomes in the control class were due to students' difficulties in understanding the learning material, lack of interest in learning, and the lack of learning variety created by educators, as indicated by the students' suboptimal post-test results. In the control class, educators used a conventional learning model and PowerPoint media, where students listened to explanations from educators, had group discussions, and gave presentations. Students always felt bored and tired during the learning process because there was no fun learning process, as indicated by the fact that students tended to remain silent during group discussions and question and answer sessions. This is in line with the opinion that there are several factors that influence low learning outcomes, such as a lack of interest, motivation, and ability among students.²⁵

²² Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

²³ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

²⁴ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

²⁵ Nabillah and Abadi.

The effect of applying the TGT learning model with the whisper chain game method on student learning outcomes

The results of this study indicate that there is an effect of applying the Teams Game Tournament (TGT) learning model with the whisper chain game method on the learning outcomes of students in Grade X at SMAN 2 Lambu, Bima Regency, on the subject of viruses. This can be seen from the results of the analysis using hypothesis testing. Based on the analysis results, a sig. value of 0.012 was obtained, meaning that the sig. value is smaller than the α value. Or by looking at the tcount and ttable values, where the table value is 2.00. The test results obtained show that tcount>ttable (27.20>2.00). Thus, H₀ is rejected and H₁ is accepted at a significance level of 5% ($\alpha = 0.05$). This finding reinforces the view that game-based cooperative learning strategies can create a fun learning atmosphere while improving students' understanding of the subject matter.²⁶ Therefore, it can be concluded that there is a significant effect of the application of the Teams Game Tournament (TGT) learning model with the whisper chain game method on the learning outcomes of students at SMAN 2 Lambu, Bima Regency.²⁷

The analysis was conducted using a two-tailed t-test (independent sample t-test) on the learning outcome data of the experimental and control classes. The analysis results show that the significance value (2-tailed) was 0.000 < 0.05 and the t-count value was 27.20 > t-table 2.00, which means that H₀ was rejected and H₁ was accepted, so there was a significant effect of using the TGT model with the chain whispering game method on learning outcomes. All statistical analyses in this study were performed using SPSS version 27 software, both for normality, homogeneity, and hypothesis testing. The average pretest score in the experimental class was 31.07 and the posttest score was 85.73, while the control class increased from 29.07 to 65.33. This shows higher effectiveness in the experimental class. The t-test technique was used because the data came from two different groups and was normally distributed, as well as having homogeneous variance, as evidenced by the previous normality and homogeneity tests.²⁸

The significant difference between the learning outcomes of students in the experimental class and the control class was due to the fact that the experimental class used the Teams Game Tournament

²⁶ Slavin, R. E. Cooperative Learning: Theory, Research, and Practice (2nd ed.). (Boston: Allyn and Bacon, 2005)

²⁷ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

²⁸ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

(TGT) learning model with a chain whispering game method, which greatly encouraged students' interest in learning and built their motivation to be more active in teaching and learning activities. In using the Teams Game Tournament (TGT) learning model, the game method used is a whisper chain involving the activities of all students without any status differences, allowing students to learn in a relaxed manner and fostering a sense of responsibility for each individual in their group, as well as healthy cooperation and competition in the game. As explained by Slavin (2005), the TGT model provides opportunities for all students to be actively involved without any status differences, while also fostering a sense of responsibility within the group and building positive social interactions.²⁹

The results of research conducted by Akhmad Taufik and Riski Wahyu Purnomo in the Journal of Mathematics Education Didactics show that the application of the Teams Games Tournament (TGT) learning model has a positive effect on improving student learning outcomes. Through a syntax that combines games, intergroup competition, and rewards, TGT is able to create a fun and competitive learning atmosphere, thereby encouraging students to be more active and motivated in their learning. The study found that the average learning outcomes of students in classes that used the TGT model were higher than those in classes that used conventional models, indicating the effectiveness of this model in improving students' conceptual understanding and active participation.³⁰

These findings are in line with the results of research conducted at SMAN 2 Lambu, where the TGT model with the chain whispering game method was able to significantly improve student learning outcomes through active involvement and a dynamic classroom atmosphere.³¹

The results of the study show that the application of the Teams Games Tournament (TGT) model with the chain whispering game method significantly improves student learning outcomes. This reinforces the theory proposed by Abdul Hafid, Muhammad Idris Jafar, and Muh. Nuzul Kurniawan, which states that the TGT model is an easy-to-apply learning approach that actively involves all students through fun activities such as games, and is able to increase students' self-confidence, social

²⁹ Slavin, R. E. Cooperative Learning: Theory, Research, and Practice (2nd ed.). (Boston: Allyn and Bacon, 2005)

³⁰ Akhmad Taufik and Riski Wahyu Purnomo, "The Effect of the Teams Games Tournament (TGT) Learning Model on Students' Mathematics Learning Outcomes," Journal of Mathematics Education Didactics 10, no. 2 (2023): 102.

³¹ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

interaction, and learning motivation in an equal atmosphere without status differences between group members.³²

However, the application of this model also faces several obstacles during the implementation of games and tournaments, namely the classroom atmosphere becomes noisy due to the high enthusiasm of students in the whisper chain game, so that teachers must be more active in controlling the class. Inaccurate information often occurs when students misunderstand or convey questions incorrectly, causing the message to change at the end of the whisper chain so that the last student does not fully understand the question. Students lack confidence when they have to answer questions in front of the group in tournaments, especially for students with low academic abilities. The dominance of certain students in the group causes an imbalance in participation.³³

The solution implemented by teachers is to rotate roles fairly within the group and provide positive reinforcement (rewards) not only to the tournament winners but also to groups that demonstrate cooperation and progress. In addition, guidance at the beginning of the activity was key to maintaining order. This is in line with Afrizal's opinion that **teachers can also take on the role of controlling the game** and giving **positive reinforcement** to groups that show enthusiasm and order, not just to the winners.³⁴

Meanwhile, the control class was taught without using the Teams Game Tournament (TGT) learning model, using the whisper chain game method or the conventional learning model at the school, namely the cooperative learning model. only presented information, organized study groups, guided group work, conducted evaluations by presenting the results of group discussions, and gave appreciation. Students tended to be passive because the learning process was boring.³⁵

The control class showed that during the learning process, the enthusiasm of the students was not as intense as in the experimental class. Students mostly received information passively from the teacher or discussed in groups without any competitive stimulus. Learning activities tended to be monotonous and lacked motivation and varied learning experiences.³⁶

³² Abdul Hafid, Muhammad Idris Jafar, and Muh Nuzul Kurniawan, The Effect of the TGT Cooperative Learning Model on the Indonesian Language Learning Outcomes of Fifth Grade Students, *Journal of Elementary School Education & Learning*, Vol. 4 No. 1 (2024), pp. 42–43. <https://ojs.unm.ac.id/jppsd/article/view/65093>

³³ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

³⁴ Afrizal, R. "Implementation of the whispering game method in increasing student interest in learning," *ALACRITY: Journal of Education*, 2, no. (2022), 120–129.

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³⁶ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

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This lack of variety in learning falls into the category of **monotonous teaching**, which is a teaching practice that does not provide sufficient cognitive stimulation for students. As a result, many students show boredom and lack of motivation during the learning process. This situation is exacerbated by one-way communication, where the teacher's dominance in delivering material is not balanced with opportunities for students to participate actively. This lack of involvement has an impact on the low enthusiasm and learning outcomes of students, as seen from their lower achievements compared to the experimental class.³⁷

Based on the results of the pretest and posttest data analysis, there was an increase in learning outcomes among students in the control class. However, this increase was relatively low and insignificant when compared to the increase that occurred in the experimental class. This shows that the conventional learning model used in teaching is still unable to optimize student activity and motivation to learn to the maximum extent. This is in line with the opinion of Putri, Ratni, and Ringkat, who state that the **cooperative learning model** is highly dependent on how teachers manage **interactions between group members**, guide discussions, and provide clear directions. If not maximized, students tend to only carry out discussions formally without deep emotional and cognitive involvement. This has an impact on students' learning outcomes, which are not significantly optimal.³⁸

Based on this, this study proves that there is a significant effect on the use of the Teams Game Tournament (TGT) Learning Model with the chain whispering game method on the material virus on the learning outcomes of grade X students at SMAN 2 Lambu.³⁹

4) CONCLUSIONS

The learning outcomes of students in the experimental class (X A) in the subject of viruses have improved. The average score rose from 31.07 to 85.73, which is in the very high category, with 100% of students meeting the KKTP (Learning Objective Achievement Criteria) score, which is 75. The learning outcomes of students in the control class (X B) in the subject of viruses improved. The

³⁷ Satriani, "The Effect of Monotonous Teaching on Student Learning Motivation." *Journal of Education and Learning*, 7, no.2(2018), pp. 112–120.

³⁸ Putri, K. M. F., Ranti, L. R., and Ringkat, G. H. F. "Cooperative Learning Model." *Dewantara: Journal of Social Humanities Education*, 3, no. 3 (2024), pp. 1–6.

³⁹ Mustika Lestari Prajasa, Research Results at SMAN 2 Lambu, November 12-30, 2024

average score increased from 29.07 to 65.33, which is in the high category, but only 13.33% of students met the KKTP (Learning Objective Achievement Criteria) score of 75. There was a significant effect of using the TGT Learning Model with the whisper chain game method on student learning outcomes in the subject of viruses. This is evidenced by the results of the hypothesis testing obtained, namely sig. (2-tailed) = 0.000 or sig. = 0.012, while the α value is 0.05, so that the sig. value is $< \alpha$ or by seeing that $t\text{-count} > t_{\text{table}}$ ($27.20 > 2.00$). Thus, H_0 is rejected and H_a is accepted at a significance level of 5% ($\alpha=0.05$). This shows that there is an effect of using the Teams Game Tournament (TGT) learning model with the whisper chain game method on student learning outcomes.

Author's Contribution

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