International Journal of Progressive Sciences and Technologies (IJPSAT)
ISSN: 2509-0119.
© 2024 Scholar AI LLC.
Vol. 43 No. 2 March 2024, pp. 67-76

The Influence of Application Cooperative Learning Model Type Teams Games Tournament on the Geography Learning Outcomes ff 10th Grade Students at Senior High School 3 Bandar Lampung

Muhammad Faturrahman, Dedy Miswar, Novia Fitri Istiawati, Yarmaidi, Sugeng Widodo

Geography Education Study Program, Faculty of Teacher Training and Education,

University of Lampung

(cc) BY

Abstract – Geography learning at Senior High School 3 Bandar Lampung still often applies conventional learning models so that learning variation can be categorized as deficient. Final Summative Results for Even Semester class X in the Geography subject for the 2022/2023 academic year classified as very low because of the 342 students, only 11 students got the above score. The cooperative learning model type Teams Games Tournament can be used as a solution to vary learning and improve Geography learning outcomes for Xth grade students at Senior High School 3 Bandar Lampung. This research aims to (1) find out the differences in Geography learning outcomes between students in class X.2 and class X.3 at Senior High School 3 Bandar Lampung and (2) find out the influence of application cooperative learning model type Teams Games Tournament on the Geography learning outcomes of Xth grade students at Senior High School 3 Bandar Lampung. This research uses a true experimental design in the form of pretest-posttest control group design. Class X.2 is the control class, while class X.3 is the experimental class. Samples were taken using cluster sampling technique. The data analysis technique for testing the research hypothesis uses the independent sample t-test and paired sample t-test. The research results show that (1) There is no difference in Geography learning outcomes between students in class X.2 and class X.3 at Senior High School 3 Bandar Lampung dan (2) There is influence of the application cooperative learning model type Teams Games Tournament on the Geography learning outcomes of Xth grade students at Senior High School 3 Bandar Lampung. The effect can be seen from the difference in the average pretest and posttest scores for class X.3, which is 18.12%.

Keywords – Cooperative Learning Model Type Teams Games Tournament And Geography Learning Outcomes

I.INTRODUCTION

Learning is essentially a process of interaction between teachers and students, both directly and indirectly. Teacher behavior is teaching and student behavior is learning. With these differences in interaction, learning activities can be carried out using various learning patterns [1]. This statement is in accordance with Law of the Republic of Indonesia Number 20 of 2003 concerning National Education Systems in Article 1 Paragraph 1 which explains that: "Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals, and the skills needed by themselves, society, nation and state."

Corresponding Author: Muhammad Faturrahman

Education is used as a parameter to determine the quality of a country's human resources as seen from the quality of its education. Good quality education is able to create superior, creative and highly competitive human resources [2, 3]. A country usually requires its citizens to undertake formal education. In carrying out formal education, the government has created a curriculum as a system that serves as a guideline so that educational activities are systematic, directed, structured and in accordance with standardization [4].

One of the goals of implementing the curriculum in formal education is to direct the learning process in the classroom so that it runs well in accordance with established guidelines so that learning objectives can be achieved [5]. In the learning process in class, teachers must be able to provide good stimulation to students. One way that teachers can do is apply a learning model. The application of the learning model essentially aims to increase students' learning focus during the learning process [6, 7]. Teachers are advised to apply learning models that can stimulate students to be interactive, thereby creating a pleasant learning atmosphere. Teachers must also be selective in determining and choosing learning models by paying attention to four components, namely objectives, materials, methods and evaluation [8, 9].

Geography teachers at Senior High School 3 Bandar Lampung still often apply conventional learning models where learning activities are generally teacher centered. The conventional learning model is a learning model that is generally used by teachers in schools where teachers only use methods: lectures, discussions, questions and answers, and assignments without involving students to be active and interactive in class [10]. These learning activities result in students becoming: sleepy, bored, not enthusiastic about learning, enjoying themselves, chatting with friends, or playing with gadgets during the learning process [11]. This shows that students are not focused on following the learning process in class. In fact, the current curriculum requires students to be more active or the learning process is student-centered.

Based on the results of the Final Semester Summative (SAS) even for class determined, namely ≥ 70. Of the 342 class. This shows that student learning outcomes during the Geography learning process in the even semester are classified as very low. The cooperative learning model can be used as a solution to vary Geography learning activities at Senior High School 3 Bandar Lampung so that the Geography learning outcomes of class X students are better. Cooperative learning is a learning model where students learn and work in small groups working together consisting of four to six students with a heterogeneous group structure. There are many types of cooperative learning models, one of which is games -based learning or academic games called Teams Games Tournament (TGT) [12, 13]. This learning model invites students to play and compete through games and competitions. Games in this learning model are able to create a fun learning environment so that they can change a learning environment that was initially boring into a more interesting one, and are able to foster students' enthusiasm for learning.

With this research, the researcher intends to assist Geography Teachers at Senior High School 3 Bandar Lampung in developing variations of learning activities in the classroom through the Teams Games Tournament (TGT) type cooperative learning model. This learning model is applied to the material Geosphere Phenomena: Lithosphere because there are so many terms that can be used as questions for games. The learning material studies: the structure of the earth's layers, the rocks that make up the earth's crust, endogenous energy, exogenous energy, the pedosphere, and geological data management institutions. This learning model is also expected to make it easier for students to learn the material at the game stage can answer the questions correctly.

Based on the background above, there is a problem formulation that wants to be answered, namely is there a difference in Geography learning outcomes between students in class X.2 and class X.3 at Senior High School 3 Bandar Lampung? and is there an influence of the application of the Teams Games Tournaments type cooperative learning model on the Geography learning outcomes of class X students at Senior High School 3 Bandar Lampung? This research has the aim or as an answer to the problem formulation, namely to find out the differences in Geography learning outcomes between students in class X.2 and class class X students at Senior High School 3 Bandar Lampung. Thus, researchers conducted research entitled "The Influence of Application Cooperative Learning Model Type Teams Games Tournament on The Geography Learning Outcomes of 10th Grade Students at Senior High School 3 Bandar Lampung."

II. RESEARCH METHOD

This research uses a quantitative approach which aims to test predetermined hypotheses. Then, this research uses an experimental method which functions to find the effect of treatment on others under controlled conditions. Furthermore, this

research also used a true experimental design in the form of a pretest-posttest control group design. There were two groups selected at random and then given a pretest to find out the initial situation where there were differences between the experimental group and the control group [14].

The population of this research is all class X students of Senior High School 3 Bandar Lampung for the 2023/2024 academic year. The sampling technique uses cluster sampling which is carried out in two stages, namely the first stage takes regional samples, then the second stage takes samples in that area as well so that a smaller regional sample is obtained. The results of sampling, namely class X.3 as the experimental class and class X.2 as the control class. Thus, the sample for this research consisted of 68 students.

Data collection techniques use test instruments and questionnaires, as well as documentation. Tests are used to measure cognitive learning outcomes, questionnaires to measure affective and psychomotor learning outcomes, as well as documentation to collect documents related to research. Before the test instrument is used in research, it is tested for: validity, reliability, level of difficulty, and distinguishing power first, while the questionnaire instrument is tested for validity and reliability.

Data analysis techniques use: descriptive analysis; normality test and homogeneity test as research prerequisite tests; independent sample t-test and paired sample t-test as research hypothesis tests. Descriptive analysis was used to analyze pretest and posttest data for experimental classes and control class by determining: maximum and minimum values, average, and standard deviation. Normality test to find out whether the research data is normally distributed or not. Homogeneity test to determine whether the distribution of data from the two variants, namely posttest data from the experimental class and control class, comes from a homogeneous population or not. Independent sample t-test to determine differences in Geography learning outcomes between the experimental class and the control class by analyzing the data from the posttest results of the two classes. Paired sample t-test to determine the differences in pretest and posttest results in the experimental class and control class.

III. RESULTS AND DISCUSSION

Research data in the form of pretest and posttest, as well as affective and psychomotor learning outcomes questionnaires for the experimental class and control class which were analyzed descriptively to determine the values: maximum, minimum, average and standard deviation. These data were analyzed descriptively using the IBM SPSS 23 for Windows application to obtain a descriptive statistical analysis table, as follows:

Descriptive Statistics

	Min	Max	Mean	STDV
Pretest Ex	4	68	39.29	13,732
Posttest Ex	40	80	57.41	10,322
Pretest Con	16	80	39.76	14,200
Posttest Con	28	84	52.47	13,421
Affective Questionnaire Ex	74	100	86.41	7,451
Questionnaire Psycho Ex	73	99	83.09	6,965
Questionnaire Affective Con	72	98	84.53	5,456
Psycho Con Questionnaire	68	100	79.26	8,185

Source: Data Processing Results Using the SPSS Application, 2023

Based on the table above, it can be explained that the minimum and maximum scores for the experimental class pretest are 4 and 68 respectively. The average score and standard deviation of the experimental class pretest are 39.29 and 13,732 respectively. Furthermore, the minimum and maximum scores for the experimental class posttest are 40 and 80 respectively. The

average score and standard deviation of the experimental class posttest are 57.41 and 10,322 respectively. The experimental class posttest score data can be made into a frequency distribution diagram, namely:

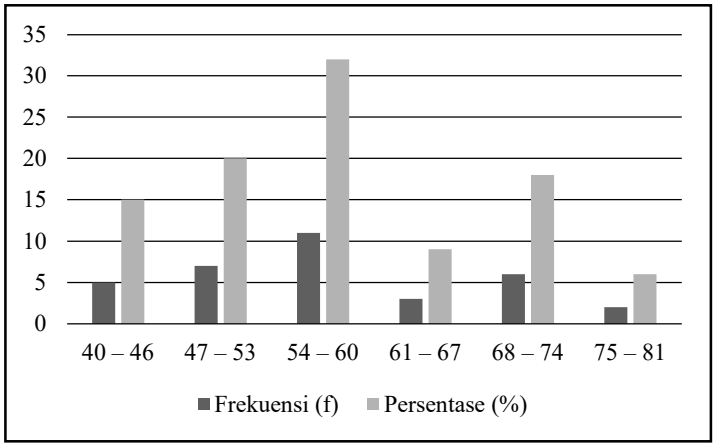

Figure 1. Data Bar Diagram of Experimental Class *Posttest Scores*

Based on Figure 1, it can be explained that the highest frequency of posttest scores is in the interval class 54 - 60 with a total of eleven students, or 32%, while the lowest frequency of posttest scores is in the interval class 75 - 81 with a total of three students people or 9%. Based on the descriptive statistical analysis table, the average cognitive learning outcomes of experimental class students increased from pretest to posttest by 18.12.

Then, based on the table, it can also be explained that the minimum and maximum scores for the control class pretest are 16 and 80 respectively. The average score and standard deviation of the control class pretest are 39 .76 and 14,200 respectively. Furthermore, the minimum and maximum scores for the control class posttest are 28 and 84 respectively. The average score and standard deviation of the control class posttest are 52 .47 and 13,421 respectively. The control class posttest score data can be made into a frequency distribution diagram, namely:

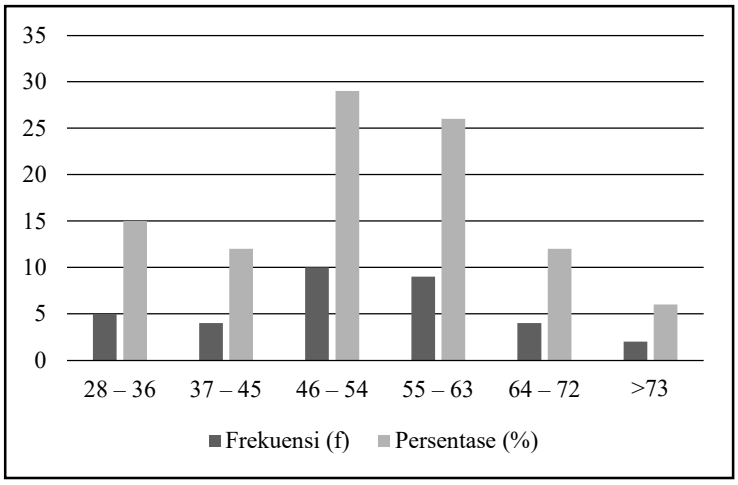

Figure 2. Bar Diagram of Control Class Posttest Value Data

Based on Figure 2, it can be explained that the highest frequency of posttest scores is in the interval class 46 – 54 with a total of ten students or 29%, while the lowest frequency of posttest scores is in the interval class >73 with a total of two students or 6%. Based on the descriptive statistical analysis table, the average cognitive learning outcomes of control class students increased from pretest to posttest by 12.71.

Then, test the research prerequisites. Before testing the research hypothesis, the research prerequisites are tested first, namely the normality test and homogeneity test. The prerequisite test for this research used pretest and posttest data from the experimental class and control class. First, the data is tested for normality to find out whether the research data is normally distributed or not. Normality test using the help of the IBM SPSS 23 for Windows application where the results are as follows:

Tests of Normality

Class	Kol-Smirnov		Shapiro-Wilk	
	df	Sig	df	Sig
Pretest -Ex	34	,200 *	34	,511
Posttest -Ex	34	,200 *	34	,495
Pretest -Con	34	,200 *	34	,179
Posttest -Con	34	.134	34	,303

Source: Data Processing Results Using the SPSS Application, 2023

Based on the table above, it can be explained that the significance value in the Kolmogorov-Smirnov column in the data: experimental class pretest is 0.200, The experimental class posttest was 0.200, the control class pretest was 0.200, and the control class posttest was 0.134. This shows that the significance values are greater than 0.05. Next, the significance value in the Shapiro Wilk column in the data: experimental class pretest is 0.511, The experimental class posttest was 0.495, the control class pretest was 0.179, and the control class posttest was 0.303. This shows that the significance values are greater than 0.05. Thus, the pretest and posttest score data for the experimental class and control class were normally distributed.

Next, the pretest and posttest data for the experimental class and control class were tested for homogeneity to determine whether a variant of the pretest data for the experimental class and control class, as well as a variant of the posttest data for the experimental class and control class, were the same (homogeneous) or not the same (heterogeneous). Homogeneous data can be used to test this research hypothesis. Homogeneity test using the help of the IBM SPSS 23 for Windows application where the results are as follows:

Test of Homogeneity of Variances

Levene Statistics	df1	df2	Sig.
,388	1	66	,535

Source: Data Processing Results Using the SPSS Application, 2023

Based on the table above, the Levene homogeneity test of the pretest data for the experimental class and control class obtained a significance value of 0.535, which means it is greater than 0.05 . Thus, the variance of the pretest data for the experimental class and control class is the same (homogeneous). Meanwhile, the following are the results of homogeneity test calculations on students' Geography learning outcomes using the Teams Games Tournament type cooperative learning model and conventional learning models as seen from the posttest scores of the experimental class and control class.

Test of Homogeneity of Variances

Levene Statistics	df1	df2	Sig.
,785	1	66	,379

Source: Data Processing Results Using the SPSS Application, 2023

Based on the table above, the Levene homogeneity test of posttest data for the experimental class and control class obtained a significance value of 0.379, which means it is greater than 0.05. Thus, the posttest data variance for the experimental class and control class is the same (homogeneous). Then, test the research hypothesis. After the research prerequisites have been met, the next step is testing the research hypothesis. The hypothesis test for this research is in the form of quantitative data

obtained from the results of implementing the Teams Games Tournament type cooperative learning model in the experimental class and the conventional learning model in the control class. Quantitative data used to test the hypothesis of this research, namely pretest and posttest experimental class and control class.

The first hypothesis proposed in this research is "There are differences in Geography learning outcomes between students in class X.2 and class X.3 at Senior High School 3 Bandar Lampung". This hypothesis test is used to determine whether there are differences in Geography learning outcomes between students in class X.2 and class X.3 as seen from the posttest score data. This hypothesis will be tested using the independent sample t-test formula. If the significance value is smaller than α (0.05), then the hypothesis is accepted, whereas if the significance value is greater than α (0.05), then the hypothesis is rejected. The following is a table of the results of the first hypothesis test.

Independent Samples Test

	F	t	df	Sig (2-tailed)
Equal variances assumed	,785	1,702	66	,094
Equal variances not assumed		1,702	61,921	,094

Source: Data Processing Results Using the SPSS Application, 2023

Based on the table above, the researcher refers to the data obtained in the output line equal variances assumed because the data in that line is the significance value of homogeneous data so that the results of the hypothesis test can be considered. The significance value (2-tailed) in the table is 0.94, meaning that the significance value is greater than α (0.05). This is because the difference in value data between the experimental class posttest and the control class posttest is only 57.41 – 52.47 = 4.94 or 4.94%. Thus, the first hypothesis which states "There is a difference in Geography learning outcomes between students in class X.2 and class X.3 at Senior High School 3 Bandar Lampung" is rejected or "There is no difference in Geography learning outcomes between students in class X.3 at Senior High School 3 Bandar Lampung."

The second hypothesis proposed in this research is "There is an influence of the application of the Teams Games Tournaments type cooperative learning model on the Geography learning outcomes of class X students at Senior High School 3 Bandar Lampung". This hypothesis test is used to find out whether the application of the Teams Games Tournament type cooperative learning model can influence Geography learning outcomes. The data used to test this hypothesis are pretest and posttest data for the experimental class and control class. This hypothesis will be tested using the paired sample t-test formula. If the significance value is smaller than α (0.05), then the hypothesis is accepted, whereas if the significance value is greater than α (0.05), then the hypothesis is rejected. The following is a table of the results of the first hypothesis test.

Paired Samples Test

	t	df	Sig. (2 -tailed)
Experimental Pretest - Experimental Posttest	-8,346	33	,000
Control Pretest - Control Posttest	-5,616	33	,000

Source: Data Processing Results Using the SPSS Application, 2023

Based on the table above, in the output row pair 1, the significance value (2-tailed) is 0.000, meaning that the significance value is smaller than α (0.05) so it can be said that there is a difference in the average learning outcomes of students for the experimental class pretest and experimental class posttest . Meanwhile, in the output line pair 2, the significance value (2-tailed) of 0.000, meaning that the significance value is smaller than α (0.05) so it can be said that there is a difference in the average learning outcomes of students for the control class pretest and control class posttest . Based on output pair 1, it can be concluded that there is an influence of the application of the TGT type cooperative learning model on student learning outcomes.

This is because there is a difference in the average learning outcomes before being given the TGT model treatment and after being given the TGT model treatment. To find out how big the influence is, you can look at the average learning outcomes between the pretest and posttest of the experimental class, namely 39.29 and 57.41, respectively. If the two data are differentiated, the magnitude of the influence is obtained, namely 18.12 or 18.12%. Thus, the second hypothesis which states "There is an influence of the application of the Teams Games Tournaments type cooperative learning model on the Geography learning outcomes of class X students at Senior High School 3 Bandar Lampung" is accepted.

This research was conducted at Senior High School 3 Bandar Lampung in October-November 2023, academic year 2023/2024. Before starting the research, the researcher tested the requirements for the research instrument in the form of test questions and questionnaires in class X.1. After that, the researcher continued the series of research by starting an experiment to determine the differences in Geography learning outcomes between students in class X.2 and class Negeri 3 Bandar Lampung.

This research uses a true experimental design research design in the form of a pretest-posttest control group design. This research design divides the research sample into two classes, namely the experimental class and the control class. Experimental class students were given treatment by applying a Teams Games Tournament type cooperative learning model, while control class students were given no treatment or by applying a conventional learning model. The experimental class in this research is class X.3, while the control class is class X.2. Thus, this research has two problem formulations that must be answered based on the results of research conducted in class X.2 and class X.3. This experimental research was carried out for four consecutive weeks in both classes.

Before the learning process began, both classes were given a pretest on the lithosphere material to determine the students' initial cognitive abilities. Students take the pretest via the Google Form application provided by the researcher. The pretest obtained results, namely the average pretest score for class X.2 was 39.76, while the average pretest score for class X.3 was 39.29. Furthermore, the learning model used in class X.3 is the Teams Games Tournament type cooperative learning model. This learning model has five stages/syntax as proposed by Slavin (2008), including: (1) class presentation; (2) study in groups; (3) games; (4) competition; (5) group awards.

After the learning process is complete, students in both classes are given a posttest to determine their cognitive learning results. There are 25 posttest questions with multiple choice types that have been tested: validity, reliability, level of difficulty, and distinguishing power. The posttest questions are the same as the pretest questions, only the number sequence is different. Posttest score data is used as a reference to determine differences in learning outcomes between class X.2 and class X.3. Based on the research results, the significance value (2-tailed) in the table is 0.94, meaning that the significance value is greater than α (0.05). Apart from that, if we look at the average posttest score for the two classes, the average posttest score for the experimental class is 57.41, while the average posttest score for the control class is 52.47. If the two averages are different, the result is 4.94. Because the significance value is greater than α (0.05) and the difference in the average posttest scores for the two classes is very small, it can be concluded that there is no difference in Geography learning outcomes between students in class X.2 and class X.3 or the first hypothesis in this research was rejected.

Based on the results of research by [15], the average posttest score for the experimental class was 77.18, while the average posttest score for the control class was 71.71. If the two average posttest scores are different, the result is 5.47. The difference in the average posttest score is not much different from the difference in the average posttest score in this study, namely 4.94. However, the results of research conducted show that the difference in the average posttest score can be concluded that there is a difference in learning outcomes between the experimental class and the control class, while the difference in the average posttest score in this study can be concluded that there is no difference in learning outcomes between the experimental class and the control class. This means that the difference between the average posttest scores of the experimental class and the control class must be greater than five if you want to get a research conclusion, namely that there is a difference in learning outcomes between the experimental class which was given treatment by applying the Teams Games Tournament type cooperative learning model and the control class which was not given treatment or by applying conventional learning models.

We look at the increase in cognitive learning outcomes from pretest to posttest in class X.2 and class X.3, it can be explained that the difference in the average pretest and posttest scores in class and posttest class X.3 was 18.12. This shows that the increase in cognitive learning outcomes from pretest to posttest in class X.2 and class 3. Meanwhile, based on the results of

research by [16], the difference between the average pretest and posttest scores for the experimental class was 38.59, while the difference between the average pretest and posttest scores for the control class was 34.06. This shows that the increase in cognitive learning outcomes from pretest to posttest can be said to be much different or significant so that it can be concluded that there are differences in Geography learning outcomes between experimental class and control class students.

Apart from that, the number of students who completed or got a posttest score >70 in class X.3 and class X.2 was very small. Based on the research results, there were three students who completed class X.3, while there were two students in class X.2. This shows that there is only one student who completes the difference. This not too big difference is one of the reasons there is no difference in learning outcomes between class X.2 and class X.3. Another cause is that there are quite a lot of students who get posttest scores that are lower than the pretest scores in class X.2. Based on attachments 10 and 11, class X.2 students who got posttest scores lower than the pretest scores were five students, while class

Furthermore, both classes were given questionnaires to measure affective and psychomotor learning outcomes. If we look at the average scores, the average affective learning outcomes for class X.3 are higher than class X.2 where the respective average scores are 86.41 and 84.53. When examined again, the two average values are not much different, only 1.88. Meanwhile, the average psychomotor learning outcomes for class X.3 are also higher than class X.2 where the respective average scores are 83.09 and 79.26. When examined again, the two average values are not much different, only 3.83. Thus, the affective learning results of the two classes can be categorized as very good, the psychomotor learning results for class X.2 can be categorized as good, and the psychomotor learning results for class X.3 can be categorized as very good.

Based on the detailed explanation in the previous paragraphs, it can be concluded that the Teams Games Tournament type cooperative learning model influences students' Geography learning outcomes. This is because there is a difference in the average learning outcomes before being treated with the Teams Games Tournament type cooperative learning model and after being treated with the Teams Games Tournament type cooperative learning model. This is proven by the increase in cognitive learning outcomes from pretest to posttest in class X.3 amounting to 18.12. This means that the application of the Teams Games Tournament type cooperative learning model has a large influence on students' Geography learning outcomes, namely 18.12 %. The cognitive learning outcomes seen from the average posttest scores for class X.2 and class X.3 are also different, as well as the affective and psychomotor learning outcomes for class X.2 and class 2. Apart from that, the most determining factor to determine the effect of implementing the Teams Games Tournament type cooperative learning model on the Geography learning outcomes of class IBM SPSS for Windows. Based on the results of the second hypothesis test, the significance value (2-tailed) of 0.000, meaning that the significance value is smaller than α (0.05) so it can be concluded that there is an influence of the application of the Teams Games Tournament type cooperative learning model on the Geography learning outcomes of class X students at Senior High School 3 Bandar Lampung or the second hypothesis in this research accepted.

This research is in accordance with the results of research conducted by Sitepu., et al (2022) entitled "The Influence of the Teams Games Tournament (TGT) Type Cooperative Learning Model on Student Learning Outcomes in Subtheme 2 The Importance of Healthy Food for the Body in Class V Elementary School." The results of this research show that the results of the pretest and posttest comparison have a significance value of 0.000, which means it is smaller than α (0.05). Thus, it can be concluded that there is a difference between the average pretest and posttest scores so that the implementation of the Teams Games Tournament type cooperative learning model can influence the learning outcomes of class V students for the 2022/2023 academic year. This can be strengthened by the teaching experience carried out by [16], "The use of STAD and TGT has made a significant increase in the test scores of my students. Previously, test scores did not improve, but after students started working together as a true team, test scores became better."

IV. CONCLUSIONS AND SUGGESTIONS

The significance value (2-tailed) in the table is 0.94, meaning that the significance value is greater than α (0.05). Apart from that, if we look at the average posttest score for the two classes, the average posttest score for the experimental class is 57.41, while the average posttest score for the control class is 52.47. If the two averages are different, the result is 4.94. Because the significance value is greater than α (0.05), the difference in the average posttest scores for the two classes is very small, and the number of students who complete or get a posttest score >70 in class X.3 and class X.2 is very small. , then it can be concluded that there is no difference in Geography learning outcomes between students in class X.2 and class X.3

Significance value (2-tailed) of 0.000, meaning that the significance value is smaller than α (0.05) so it can be concluded that there is an influence of the application of the Teams Games Tournament type cooperative learning model on the Geography learning outcomes of class X students at Senior High School 3 Bandar Lampung. This is because there is a difference in the average learning outcomes before being treated with the Teams Games Tournament type cooperative learning model and after being treated with the Teams Games Tournament type cooperative learning model in class X.3. The effect can be seen from the difference in the average pretest and posttest scores for class X.3, which is 18.12 %. Apart from that, the learning outcomes for class X.3 are better than the learning outcomes for class X.2. These learning outcomes are seen from three domains, namely cognitive, affective and psychomotor.

V. ACKNOWLEDGMENT

Thank you to the Institute for Research and Community Service, University of Lampung, Bandar Lampung City Government, and all stakeholders involved in this research.

REFERENCES

[1] Mesquita, I., Coutinho, P., De Martin-Silva, L., Parente, B., Faria, M., & Afonso, J. (2015). The value of indirect teaching strategies in enhancing student-coaches' learning engagement. Journal of sports science & medicine, 14(3), 657.

[2] Pahlawanti, W. D., Harapan, E., & Wardiah, D. (2020). The Influence of School Principal Supervision and School Committee Participation on the Quality of Junior High School Education. *International Journal of Progressive Sciences and Technologies*, *23*(1), 324-333.

[3] Purwanto, M. B., Hartono, R., & Wahyuni, S. (2023). Essential skills challenges for the 21st century graduates: Creating a generation of high-level competence in the industrial revolution 4.0 era. *Asian Journal of Applied Education (AJAE)*, *2*(3), 279-292.

[4] Sundberg, D., & Wahlström, N. (2012). Standards-based curricula in a denationalised conception of education: The case of Sweden. *European Educational Research Journal*, *11*(3), 342-356.

[5] Tyler, R. W. (2013). *Basic principles of curriculum and instruction*. University of Chicago press.

[6] Granić, A., & Marangunić, N. (2019). Technology acceptance model in educational context: A systematic literature review. *British Journal of Educational Technology*, *50*(5), 2572-2593.

[7] Mandasari, B., & Wahyudin, A. Y. (2021). Flipped classroom learning model: implementation and its impact on EFL learners' satisfaction on grammar class. *Ethical Lingua: Journal of Language Teaching and Literature*, *8*(1), 150-158.

[8] Voogt, J., Fisser, P., Pareja Roblin, N., Tondeur, J., & van Braak, J. (2013). Technological pedagogical content knowledge–a review of the literature. *Journal of computer assisted learning*, *29*(2), 109-121.

[9] Sugiyono. 2017. Metode Penelitian Kuantitatif, Kualitatif, dan R&D.: Alfabeta. Bandung.

[10] Handayani, Dwi. 2016. The Influence of the TGT (Teams Games Tournament) Type Cooperative Learning Model with Domino Card Media on the Geography Learning Outcomes of Class X Senior High School 1 Muntilan. Journal of Geo Education, 1(12), 1 – 8.

[11] Slavin, Robert E. 2008. Cooperative Learning: Theory, Research and Practice (Translated by Nurulita Yusron). Bandung: Nusa Media.

[12] Altun, S. (2015). The effect of cooperative learning on students' achievement and views on the science and technology course. *International Electronic Journal of Elementary Education*, *7*(3), 451-468.

[13] Gillies, R. M. (2016). Cooperative learning: Review of research and practice. *Australian Journal of Teacher Education (Online)*, *41*(3), 39-54.

[14] Sutarto, S., Sari, D. P., & Fathurrochman, I. (2020). Teacher strategies in online learning to increase students' interest in learning during COVID-19 pandemic. *Jurnal Konseling dan Pendidikan (JKP)*, *8*(3), 129-137.

[15] Sun, J. C. Y., & Wu, Y. T. (2016). Analysis of learning achievement and teacher–student interactions in flipped and conventional classrooms. *International Review of Research in Open and Distributed Learning*, *17*(1), 79-99.

[16] Supard, S., & Hasanah, E. (2020). Junior high school students' experiences of high technology based learning in Indonesia. *International Journal of Learning, Teaching and Educational Research*, *19*(5), 153-166.