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THE INFLUENCE OF COOPERATIVE LEARNING MODEL TYPE TEAMS GAMES TOURNAMENT ON THE STUDENT LEARNING OUTCOMES OF 7th GRADER ABOUT CLASSIFICATION OF LIVING THINGS

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ABSTRACT

The research aims to determine the effect of using the Teams Games Tournament type of cooperative learning model on the learning outcomes of 7th grader about classification of living things. The type of research used is Quasi Experiment with a research design that is Posttest Only Control Group Design. The population of this research is 7th grader of SMP Negeri 2 Kota Solok. The sampling technique used is purposive sampling technique. The sample used is class VII-9 as the control class using the conventional model while class VII-10 is the experimental class using the Teams Games Tournament cooperative learning model. The instrument used was a test in the form of multiple choice questions totaling 14 questions. The results of the calculation of the hypothesis test using the t-test with a significant level $\alpha = 0.05$ indicate the value of $z_{count} > z_{table}$, namely $z_0 = 6{,}4$ and $z_t = 1{,}96$. Thus the research H_0 is rejected and H_a is accepted where there is an influence of the Teams Games Tournament type cooperative learning model on the learning outcomes of 7th grader in material classification of living things at SMP Negeri 2 Kota Solok.

Keywords: Classification of living things, Learning outcomes, Teams Games Tournament

INTRODUCTION

Learning in the 21st century is a combination of literacy, knowledge capabilities, skills, attitudes, and expertise in technology. In the learning process, teachers must be able to make adjustments to models, strategies, techniques, and teaching methods based on the characteristics of students in that generation (Puspitarini, 2022). Learning with conventional strategies by teachers is no longer recommended to be carried out in the current era (Indarta et al., 2022).

The main challenge in the development of education in Indonesia is the improvement and

equity in the quality of education. Various things have been done, such as allocating 20% of the APBN for the education budget (mandatory spending) since 2009 which is a sizeable allocation for the education sector (Faizal, 2021). This has produced results in improving citizens' access to education, but has not shown an increase in the quality of education compared to other countries. The 2018 PISA results mean that Indonesia is in the low performance quadrant position with high equity and found achievement motives between male and female students in all fields in PISA. Indonesian educators have high enthusiasm for learning, but this has not been matched by an understanding of the needs of each individual student (Kemendikbud, 2019).

The existing learning crisis was compounded by the emergence of the Covid-19 Pandemic which made changes to the Indonesian education scene, which was originally in the form of direct learning to switch to online learning. To anticipate the effects of the Covid-19 Pandemic on learning loss and learning gaps, the Indonesian government through the Kemendikbudristek is taking steps to resolve this problem by providing options for using the curriculum in schools, namely the Kurikulum K-13 in full, Kurikulum Darurat; and Kurikulum Merdeka (Anggraena et al., 2021).

Kurikulum Merdeka framework currently being developed is more flexible, focusing on basic material, character development, and competence among students (Barlian et al., 2022). Kurikulum Merdeka is a learning design that allows students to learn in a relaxed, peaceful, happy, stress-free and pressure-free manner so that they can show their natural talents. (Restu et al., 2021).

Natural Science is defined as a science that provides output in the form of an explanation of an indication that can be trusted through data collection with experiments, data observations, and conclusions obtained (Trianto, 2010). Basically learning science is composed of elements of physics, chemistry and biology which are studied in an integrated manner. Basically, natural science is composed of of real events, concepts, theories, laws, and principles contained in Natural Sciences (Suparwoto, 2011).

In interview sessions with science teachers and observations at school, it was found that the student cognitive learning outcomes met the Kriteria Ketercapaian Tujuan Pembelajaran (KKTP) that had been determined at school, that is 77. The fact is that in the classroom, the application of the learning model that is usually used by teachers is not implemented optimally. Examples of models that are often used are lectures and occasionally varied with the Discovery Learning model. But the implementation of the model is not optimal according to the syntax. The use of lecture/conventional methods that seem monotonous and learning models that are not adapted to the material and do not involve students optimally which results in students not actively participating in learning.

Based on the problems mentioned, we need a model for learning that is able to increase student participation in learning and is fun by applying cooperative learning model type teams games tournament. What is said of the learning model is the systematic steps contained in it planning, methods, and learning media, as well as tools and materials for guidance in achieving learning goals (Octavia, 2020). The TGT type cooperative learning is a learning model that is carried out in minimalist groups consisting of 5-6 students where there are games (matches) that can hone students' cognitive giving rewards as encouragement in matches (Lestari et al., 2022). The purpose of this research to find out how the influence of the Teams Games Tournament type of cooperative

learning model has on the student learning outcomes of 7th grader about classification of living things.

METHOD

This type of research namely the Quasi Experiment method. The research design that researchers use is the Post-test Only Control Group Design. All 7th grader at SMP Negeri 2 Kota Solok who are enrolled in the 2022/2023 school year are the population of this research. There are 2 groups/sample groups, namely the experimental class and the control class. The study conducted looked at how the two groups of students differed. The sample selection technique used purposive sampling technique. This technique is the determination of the sample based on the factors determined to achieve the desired results (Sugiyono, 2017).

The selected sample, namely VII.9, was selected for the control class and VII.10 was selected for the experimental class. Sampling was based on the summative mean value which was almost the same between the two sample classes. Learning is carried out differently in the experimental class with the control class. In the experimental class ,learning is applied with models cooperative learning model of the Teams Games Tournament type. While the control class, learning is applied by conventional methods. The instrument used was in the form of multiple choice questions for the final test (Posttest) and the learning outcomes were seen from the cognitive point of view of the students after being given treatment. The posttest questions have gone through the validation stage with 3 validators and tests have also been carried out on the items.

Statistical analysis of research data assisted by Microsoft Excel 2019. Statistical analysis can be divided into 2, namely descriptive statistics and inferential statistics (Sundayana, 2018).

In this study, descriptive statistics will determine the average value, maximum and minimum value, variance, and standard deviation at. In inferential statistics is divided into 2 namely parametric and non-parametric statistics. Determining the type of inferential statistical analysis used will be seen based on based on the acquisition of the prerequisite test, both the normality test and the homogeneity test (Sundayana, 2018).

RESULT AND DISCUSSION

The research was conducted from 31 January 2023 to 17 February 2023. The research was carried out at SMP Negeri 2 Kota Solok for the 2022/2023 school year. There were 32 members in the experimental class and 30 people who carried out the posttest in the control class.

Refers to the students' posttest value, a descriptive statistical analysis was performed on the data and the mean, maximum and minimum values, variance, and standard deviation were obtained. This descriptive statistical analysis was also carried out with the help of Microsoft Excel 2019. Following are the results of descriptive analysis on the data of this study.

Tabel 1. Descriptive Analysis of Statistical Data

Class	Max. Value	Min. Value	Var.	Std. Deviation
Experiment	100	50	98,03	9,90
Control	71	36	91,52	9,56

Refers to Table 1, the maximum value obtained in the experimental class is 100 and the minimum value is 50, while the maximum value in the control class is 71 and the minimum value is 36 which is significantly different from the experimental class.

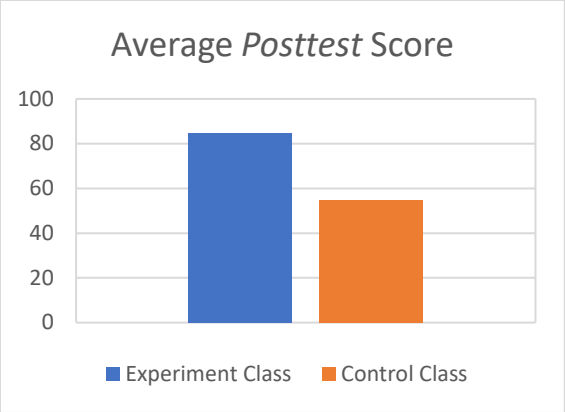

Figure 1. Average Posttest Score

Refers to the graph above, the average score of the experimental class is 84.68 and that of the control class is 54.78. If seen from this average score, the experimental class is very significantly superior to students in the control class. This means that the cooperative learning model of the Teams Games Tournament type applied has an effect on increasing student learning outcomes.

After the descriptive statistical analysis was carried out. The next stage is inferential statistical analysis. The first analysis was tested by prerequisite test. Where the normality test is the prerequisite test that is first tested on the data, that is used the Liliefors test. The prerequisite test can be seen in Table 2 and Table 3.

Tabel 2. Normality Test

Class	L_{count}	L_{table}	Conclusion
Experiment	0,1648	0,1542	Not normally
Control	0,1690	0,1590	
Sig.			0,05

Seen from Table 2, the results of the Normality test were obtained, in the control class where the value of $L_{count} > L_{table}$ was 0.1690>0.1590. While the experimental class obtained a value of $L_{count}>L_{table}$, namely 0.1648<0.1542. So that it can be explained that the data obtained were not normally distributed in the two research classes.

Tabel 3. Homogeneity Test

Class	F_{count}	F_{table}	Conclusion
Experiment	1,07111	1,85	Homogen
Control			
Sig.			0,05

Seen from Table 3, it was found that the F_{count} of the posttest values of the two sample classes was 1.071110675 while the F_{table} with a significant level of 0.05 was 1.85. It can be defined that the value of $F_{count} <F_{table}$. This shows that the variance of the data obtained is homogeneous.

After the analyzed data is not normally distributed and the variance is homogeneous. The next step is to test the hypothesis with the type of Mann Whitney test (Sundayana, 2018). The Mann Whitney test is a non-parametric test as a substitute for the t-test which is used to test the difference between two independent samples. The hypothesis is a temporary answer to the formulation of the problem put forward by the researcher, and can be explained from a theoretical basis or theoretical study so that it is still necessary to test the truth of the hypothesis (Riduwan, 2010). This following table shown the results of the mann whitney-test on the data of this study.

Tabel 4. Mann-Whitney Test

Class	Z_{count}	Z_{table}	Conclusion
Experiment	6,4	1,96	$z_{count} > z_{table}$
Control			
Sig.			0,05

Based on Table 5, the test with the mann whitney test obtained the value of $z_{count} > z_{table}$, namely 6,4> 1,96 so that H_0 was rejected and H_a was accepted. H_a is accepted indicating a very significant difference in students' cognitive learning outcomes between using the cooperative learning model with type Teams Games Tournament (TGT) and conventional methods. Where is the reason, students in the experimental class

are very enthusiastic or participate actively in learning because of the games in the Teams Games Tournament model. Implementation of tournaments and group scores attracts students' attention and challenges them to get the highest score so that students play actively in the continuity of the learning process. From this discussion it was found that there was an influence of cooperative learning model with the type Teams Games Tournament about student learning outcomes of 7^{th} grader on the classification of living things at SMP Negeri 2 Kota Solok.

This research is in line with Herlina et al., (2019) research which is concluded an influence in the use of in the Teams Games Tournament cooperative learning models) on biology learning outcomes by students at SMA Negeri 5 Bengkulu Utara. This is also supported by Melinda & Situmorang (2014) reasearch where they concluded that there was such a significant impact on student learning outcomes due to the cooperative model of learning treatment given to the Teams Games Tournament type.

CONCLUSION

Refers to the results obtained in the research, the data analysis carried out, and the discussion, the conclusions can be drawn that there is an impact or difference in the use of cooperative learning model with type of Teams Games Tournament which is very significant for the students learning outcomes of 7^{th} grader in the classification of living things. This has been proven by the mann whitney-test results where z_{count} = 6,4 and z_{table} at a significance level of 0.05, namely 1,96. Thus, $z_{count} > z_{table}$ (6,4>1,96) which means the rejection of H_0 research and Ha research is accepted. So, there is an influence of the cooperative learning model of the Teams Games Tournament (TGT) type on student learning outcomes for 7th grader with material classification of living things in SMP Negeri 2 Kota Solok.

REFERENCES

Anggraena, Y., Felicia, N., Ginanto, D. E., Pratiwi, I., Utama, B., Alhapip, L., & Widiaswati, D. (2021). Kajian Akademik: Kurikulum Untuk Pemulihan Pembelajaran. In *Pusat Kurikulum dan Pembelajaran; Badan Standar, Kurikulum, dan Asesmen Pendidikan; Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi*.

Barlian, U. C., Solekah, S., & Rahayu, P. (2022). Implementasi Kurikulum Merdeka dalam Meningkatkan Mutu Pendidikan. *Journal of Educational and Language Research*, *1*(12), 2105–2118. http://bajangjournal.com/index.php/JOEL

Faizal, N. A. (2021). Usaha Meningkatkan Kualitas Pendidikan Melalui Mandatory Spending Anggaran Pendidikan. In *Kementerian Keuangan, Direktorat Jenderal Keuangan*. https://anggaran.kemenkeu.go.id/in/post/usaha-meningkatkan-kualitas-pendidikan-melalui-mandatory-spending-anggaran-pendidikan-

Herlina, M., Sulaiman, E., & Widiastuti, R. (2019). Pengaruh Model Pembelajaran Kooperatif Tipe Team Games Tournament (TGT) dengan Media Audio Visual terhadap Hasil Belajar Biologi Siswa dI SMAN 5 Bengkulu Utara. *Jurnal IPA Terpadu*, *3*(1), 84–94. http://ojs.unm.ac.id/index.php/ipaterpadu

Indarta, Y., Jalinus, N., Samala, A. D., Riyanda, A. R., & Adi, N. H. (2022). Relevansi Kurikulum Merdeka Belajar dengan Model Pembelajaran Abad 21 dalam Perkembangan Era Society 5 . 0. *Edukatif: Jurnal Ilmu Pendidikan*, *4*(2), 3011–3024.

https://edukatif.org/index.php/edukatif/index

Kemendikbud. (2019). *Hasil PISA Indonesia 2018: Akses Makin Meluas, Saatnya Tingkatkan Kualitas*. Biro Komunikasi Dan Layanan Masyarakat, Kemendikbud.

Lestari, N. I., Razak, A., & Arsih, F. (2022). Meta-Analisis Pengaruh Penggunaan Model Pembelajaran Teams Games Tournament (TGT) terhadap Hasil Belajar Siswa. *Jurnal Pendidikan*, *VIII*(I), 17–30.

Octavia, S. A. (2020). *Model-Model Pembelajaran* (A. H. Zein (ed.)). Deepublish.

Puspitarini, D. (2022). Blended Learning sebagai Model Pembelajaran Abad 21. *Ideguru: Jurnal Karya Ilmiah Guru*, *7*(1), 1–6. https://doi.org/10.51169/ideguru.v7i1.307

Restu, R., Rosita, R., Rahayuningsih, Y. S., Hernawan, A. H., & Prihantini. (2021). Implementasi Kurikulum Merdeka Belajar di Sekolah Penggerak Restu. *Jurnal Basicedu*, *5*(4), 2541–2549. https://doi.org/10.31004/basicedu.v5i4.1230

Riduwan. (2010). *Pengantar Statistika Sosial*. Alfabeta.

Sugiyono. (2017). *Metode Penelitian Pendidikan*. Alfabeta.

Sundayana, R. (2018). *Statistika Penelitian Pendidikan* (1st ed.). Alfabeta.

Suparwoto. (2011). *Sains dan Kajian Filsafat*. FMIPA UNY.

Trianto. (2010). *Model Pembelajaran Terpadu*. Bumi Aksara.