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Influence of the Type Think Pair Share Cooperative Model Aided by Wordwall-Based Media on Mathematics Study Results of Class IV in Elementary School

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ABSTRACT

This research is motivated by the low learning outcomes in mathematics learning of fourth grade elementary school students. The purpose of this study was to determine the effect of the cooperative model of think pair share type assisted by wordwall-based media on student learning outcomes. The method used was quasi experimental type non-equivalent control group design. Data collection techniques are done through test and non-test techniques. Hypothesis testing using simple liner regression with the results showed that the application of the cooperative model of think pair share type assisted by wordwall-based media was able to increase students' active participation, understanding of mathematical concepts and learning outcomes significantly, so it can be concluded that there is a significant effect of using the cooperative model of think pair share type assisted by wordwall-based media on the learning outcomes of mathematics class IV elementary school.

Keywords: Learning outcomes, Mathematics, Wordwall media, Cooperative model of think pair share type

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1. INTRODUCTION

The learning process is one of the most important activities in learning activities in schools, effective learning will have a positive impact on the development of student learning outcomes, One of the lessons in school that can train students' deductive reasoning is in mathematics, (Mubarok, 2022), Mathematics is an important science that is learned from elementary level learning, The reality in the field, most students have different views on mathematics lessons, Most of the students ignore mathematics because they think that the mathematics lessons they learn have no impact and connection between the usefulness of the material and real life everyday (Kamarullah, 2017), students experience tension in the mathematics learning process, as a result of low interest in students asking about material they don't understand or expressing opinions, so that students prefer to sit still, take notes and listen during learning, the negative impact on students views that mathematics is a lesson that is less interesting, confusing, difficult to learn, boring so that it becomes a factor that causes students to dislike mathematics lessons (Masana, 2022).

Based on the results of a survey conducted by the OECD organization (2019), it states that 72% of Indonesian students have mathematics skills that are classified as low Based on the above, about 72% of Indonesian students are at level 1 and below. Based on this, most students are below level 1 (around 41%), while the rest are at level 1 (around 31%). The mathematical ability of Indonesian students is below level 1 by 41%, according to PISA states that mathematical ability in Indonesia has never been significantly improved in 2022 to become the value with the lowest score in mathematical literacy since 2006, Indonesia occupies position 7 from the bottom with an average score of only 379. Another survey from data from the Ministry of Education and Culture of Lampung province stated that it shows that almost all elementary schools in Bandar Lampung the quality of learners in 2024 has decreased compared to 2023, the quality of learning that has not been optimal can be one of the factors causing low learning outcomes, meaning that the learning process in the classroom has not been maximized in learning.

Low learning outcomes according to educators' statements, apart from being caused by not optimal educators in varying models, media and forms of learning in every lesson, especially learning mathematics, educators in the learning process have not used team learning forms too often and have an impact on the ability to think logically on their environment, students will be more active and like learning, especially learning mathematics if the form of learning varies in models, media and forms of learning that are carried out not in the same form in each lesson. Learning mathematics requires the right model, media, form of learning, so that the learning outcomes of students are maximized, defining the learning model as a conceptual framework that educators use as a guide in carrying out the learning process in the classroom (Tabrani and Amin, 2023).

There are various types of cooperative learning models, one of which is the Think Pair Share (TPS) type cooperative model, research on the Think Pair Share (TPS) type cooperative model has a positive view, one of which gives students time to be able to (think) in solving questions and problems given by educators related to the problem statement (Arumasharroh, 2023). Cooperative learning models, one of the cooperative learning models is Think Pair Share (TPS), to maximize the learning process, learning media is needed, audio-visual-based learning media is an alternative for educators with various advantages compared to using real media, one of the media that can be used is wordwall, a technology-based media that can help the mathematics learning process to improve learning outcomes at SD Negeri 1 Bumi Waras.

2. RESEARCH METHOD

According to the research, quantitative research is a research approach that uses data in the form of numbers and exact science to answer research hypotheses, in the research process focuses on the process of finding knowledge that uses numerical data as a tool in analyzing research data (Waruwu, 2023). The research design, in this study is a quasi experimental type non-equivalent control group design, the experimental group is the group that is given treatment with the Think Pair Share type cooperative learning model assisted by wordwall-based media and the control group is treated with the conventional learning model Numbered Heads Together type.

This research was conducted at SD Negeri 1 Bumi Waras, the sample used in the study in class IV SD N 1 Bumi Waras was a saturated sample, there were 48 students consisting of 24 experimental class students and 24. Data collection techniques use test and non-test data, for test tests using instrument tests then research, data processing using validity tests, reliability, differentiation and likeness of questions for instrument tests then test data using normality tests, homogeneity, analysis of learning outcomes, N-Gain, hypothesis pretest and posttest data. For non-test tests using observation data on the use of the Think Pair Share type cooperative model assisted by wordwall-based media in the experimental class.

3. RESULTS AND DISCUSSION

This study includes data on the ability of learning outcomes by applying the learning model of the cooperative model type think pair share assisted by wordwall-based media and giving different treatments to the experimental class and control class for 6 meetings, the experimental class was conducted as many as 3 by delivering fraction material and applying the think pair share model and applying wordwall media, while the control class was conducted 3 times a meeting by delivering fraction material using the numbered heads together model. The implementation of the instrument trial was carried out on March 6, 2025 Furthermore, researchers conducted research on March 10-15, 2025 by implementing a series of learning activities. The first research implementation on March 10, 2025 was to take the experimental class prestest data which was carried out before learning activities, on March 10-12, 2025 carrying out learning activities by applying the cooperative model of think pair share type assisted by wordwall media on fraction mathematics material, on March 12 taking posttest data in the experimental class, then on March 13-15, 2025, research on March 13, 2025 carried out prestest data collection activities followed by the learning process of fraction mathematics material by applying the numbered heads together model and on March 15 after the learning process took posttest data.

The results of the research data were obtained from the pretest and posttest scores in the experimental and control classes. The question items given were 20 questions that had been tested for

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validity, reliability, difficulty of the questions and the differential power of the questions. . Data on the posttest value of student learning outcomes can be seen in the following data;

Table 1.
Pretest and Posttest Score

No	Research data	Result value *prestest* and *posttest*					
		Average		The highest score		Lowest value	
1	Eksperimental class	***Prestest***	***Posttest***	***prestest***	***posttest***	***prestest***	***posttest***
		50	88,75	75	95	35	80
2	Control class	***Prestest***	***Posttest***	***prestest***	***posttest***	***prestest***	***Posttest***
		44,375	79, 375	65	85	25	70

For the results of the pretest and posttest of the experimental class for variable Y, it can be seen in the following diagram;

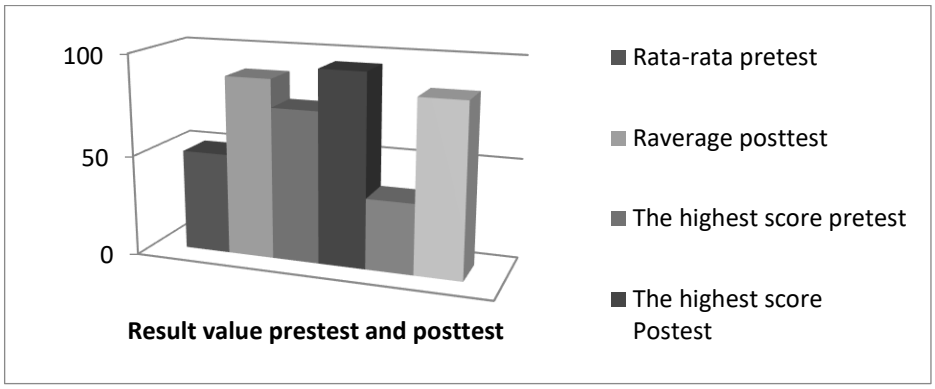


Fig 1. Pretest and Posttest Variable Y

The results of the observation calculation of the use of the cooperative model of think pair share type assisted by wordwall-based media for variable X:

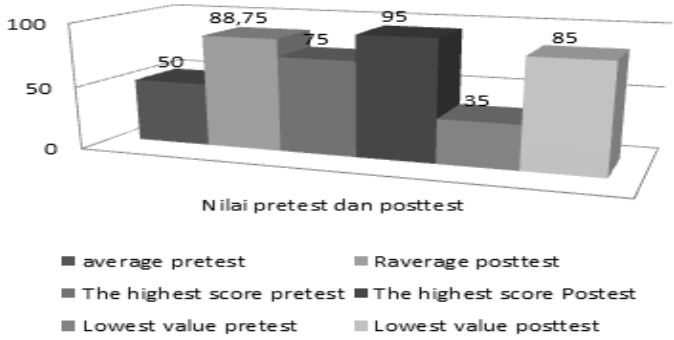


Fig 2. Observation Calculation of the Cooperative Model of Think-Pair-Share Type

The average N-Gain for the experimental class (cooperative method of think pair share type assisted by wordwall media) is 76.8052 or 76.8% including in the effective category with a minimum N-Gain value of 50% and a maximum of 91.67%, so it can be concluded that the cooperative method of think pair share type assisted by wordwall-based media is effective in improving mathematics learning outcomes in grade IV elementary school.

This hypothesis was tested using simple regression test analysis using the help of SPSS version 25 using the posttest value of the experimental class and the observation value of the learning model used, the following test results Based on table 31 above, it can be seen that Fhitung < Ftabel, namely

Fhitung = 15.532 and Ftabel = 4.30, then Fhitung < Ftabel, namely 15.532 < 4.30 with a significant level of 0.001 < 0.05, it can be concluded that Ha is accepted and HO is rejected, which means that there is a significant effect of the cooperative model of think pair share type assisted by wordwall-based media (X) to improve student learning outcomes (Y).

This means that the influence of the cooperative model of think pair share type assisted by wordwall-based media (X) on improving mathematics learning outcomes (Y) is 41.4%, while 58.6% is influenced by other factors. % while 58.6% is influenced by other factors

4. CONCLUSION

Based on the results of research and discussion, the conclusion of this study is that there is a significant influence on the cooperative model of think pair share type assisted by wordwall-based media variable (X) on the learning outcomes of mathematics class IV elementary school variable (Y), this can be proven in the results of simple linear regression hypothesis testing that there is a significant influence on variable X on variable Y, meaning that there is an increase in grade IV math learning outcomes through the use of cooperative model of think pair share type assisted by wordwall-based media. It can be concluded that Ha is accepted and Ho is rejected. Average N-Gain for the experimental class (cooperative method of think pair share type assisted by wordwall media) is 76.8052 or 76.8% included in the effective category with a minimum N-Gain value of 50% and a maximum of 91.67%, so it can be concluded that the cooperative method of think pair share type assisted by wordwall-based media is effective in improving the learning outcomes of mathematics class IV elementary school. This study successfully showed a significant effect on learning models and media on student learning outcomes. These findings provide a positive contribution to the world of education, especially in the development of learning methods, increasing learning motivation, utilizing educational technology, so that it is expected to support the creation of educational practices that are more effective, innovative, and according to the needs of students in the future. In addition, the results of this study can be a reference for future researchers to develop further studies, either by expanding the variables studied, using different methods, or applying this research to other contexts or populations, so as to enrich knowledge and provide real solutions to educational problems.

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