Jurnal Ilmiah Mandala Education (JIME)
Vol 10 No. 4 Oktober 2024
p-ISSN : 2442-9511, e-2656-5862
DOI: *10.58258/jime.v10i4.7535/http://ejournal.mandalanursa.org/index.php/JIME*

The Effect of the Think Talk Write *Type Cooperative Learning Model* Assisted by Kosica Media on the Science Learning Outcomes of Grade IV Students of Balfai Kupang Tengah State Elementary School

Veronika Ndedo[1], Yulsy Marselina Nitte[2], Kristina E. Noya Nahak[3]
[123]Program Studi Pendidikan Guru Sekolah Dasar, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Citra Bangsa

Article Info
Article history:
Accepted:
Published: 17 Oktober 2024

Keywords:
Think Talk Write Cooperative Model,
KOSICA Media,
Learning Outcomes,
Science.

Abstract
Science learning aims to make students understand science concepts, have process skills, have an interest in studying the environment and be able to apply science concepts in daily life. However, there are still many students who do not understand the material and have not reached the KKM score. This can happen because the learning model used is still conventional and the use of learning media is not effective. Therefore, the researcher uses a think talk write type cooperative learning model assisted by KOSICA media to be able to improve science learning outcomes. The purpose of the study was to determine the effect of the think talk write (TTW) type cooperative learning model assisted by KOSICA media on the learning outcomes of science students in grade IV of Balfai Kupang Tengah State Elementary School. This type of research uses a Quasi experimental design in the form of a nonequivalent control group design, with a sample of 53 students and data collection techniques using observation and multiple-choice test questions. The data was analyzed using hypothesis tests and t-tests. The results of the study showed that the average post test of the experimental class and the control class. The results of this study show that the average post test of the experimental class and the control class using the hypothesis test is 85.37 > 60.77 with a difference of 24.6. The value of sig. (2-tailed) t-test for equality of means of o,ooo < 0.05 meaning Ha is accepted and HO is rejected. So it can be concluded that there is a significant influence of the use of the think talk write (TTW) type cooperative learning model assisted by KOSICA media on the learning outcomes of science students in grade IV of SD Negeri Balfai Kupang Tengah.

Corresponding Author:
Veronika Ndedo
Universitas Citra Bangsa
Email : vndedo@gmail

1. INTRODUCTION

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students can actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals, and skills needed by themselves, society, nation and state, Law No. 20 of 2003 concerning the National Education System. Education can be obtained through the learning process carried out in schools as formal educational institutions.

Learning is an effort by educators to realize the acquisition of knowledge, mastery, skills, and the formation of attitudes and beliefs in students (Hanafy, 2014). In other words, learning is a process that facilitates students to learn well. The learning process that takes place in the classroom has two activities, namely the learning process and the teaching process. Learning can run well if an educator can create an effective and conducive learning atmosphere. Sutinko (Junaedi, 2019) stated that effective learning is learning that involves students directly in learning

activities, learning that allows students to learn easily and happily to be able to achieve predetermined goals. By involving students in the learning process, it will provide convenience and help students to be able to learn well in accordance with the goals to be achieved. The learning process consists of several interrelated components, such as learning models and learning tools or learning media.

The selection of a learning model that is in accordance with the curriculum goals and student potential is a basic ability and skill that must be possessed by a teacher. The accuracy of teachers in choosing a learning model will affect student learning outcomes. The learning model used by teachers affects the quality of the teaching and learning process they carry out. In line with the opinion of Aunurrahman (2013) who stated that the success of the learning process cannot be separated from the ability of teachers to use a learning model that is oriented towards increasing the intensity of student involvement effectively in the learning process. The cooperative model is one of the models that can be applied in the 2013 curriculum learning, in the 2013 curriculum students do a lot of group learning activities. The cooperative learning model is a learning strategy where students learn and work together in small groups collaboratively consisting of 2 to 5 members, with a heterogeneous group structure (Slavin, 2015). One of the cooperative learning models that can activate students in the classroom is the *Thin Talk Write (TTW) type cooperative model*

The researcher applies the Think *Talk Write* (TTW) type of Cooperative model because the learning begins with how students think about solving a task or problem, then followed by communicating the results of their thoughts through a discussion forum, and finally through the discussion forum students can write back the results of their thoughts. The think *talk write* learning model was first introduced by Huinker and Laughlin. Ngalimun (2016) also stated that the *think talk writing learning model* starts with thinking through reading materials (listening, criticizing, and alternative solutions), the reading results are communicated with presentations, discussions, and then making a report on the presentation results. The *Think Talk Write* model needs the help of learning media that can help students. Hartano (2017) also argues that the *Think Talk Write* learning model uses small groups and requires students to work together to discuss, share knowledge, communicate with each other, and help each other to understand the learning material. Learning models and media are very important in the teaching and learning process in the classroom because this can affect students' activities and learning outcomes.

Hamdayana (2014) mentioned that there are several benefits obtained from the TTW strategy, namely: The communication-based learning model with the TTW strategy can help students in constructing their own knowledge so that students' understanding of concepts becomes better, students can communicate or discuss their thoughts with their friends so that students help each other and exchange ideas. The *think talk write* learning model has several advantages, (Istarani and Ridwan, 2014) including: Can train students to think logically and systematically, Train students to pour ideas from the learning process in a written writing that they write themselves, Train students to present ideas orally and in writing, Train students to construct their own knowledge as a result of collaboration, Foster students' courage to express opinions, Because he has to present his own learning results. Meanwhile, the disadvantages of the *Think Talk Write* (TTW) Learning Model are as follows: For students who are slow in thinking will experience difficulties in participating in such learning, students who are less able to pour their thoughts into their writing, will experience their own obstacles, There are students who are lazy to think to find something. Therefore, teachers must always encourage children so that they can think carefully and precisely.

Learning media are all forms of intermediaries that are used to express ideas, thoughts, or ideas so that the ideas reach the recipient. Arsyad (2017) argues that learning media is a component of learning resources or physical vehicles that contain instructional materials in the student environment that can stimulate students to learn. Meanwhile, according to Adam and Syastra (2015), learning media is everything both physical and technical in the learning process

that can help teachers to make it easier to convey subject matter to students, thus making it easier to achieve the learning goals that have been formulated. Mahnun (2018) mentioned that "media" comes from the Latin word "mediun" which means "intermediary" or "introduction". Furthermore, media is a means of channeling messages or learning information that the source of the message wants to convey to the target or recipient of the message. Learning media can also be interpreted as an intermediary for teachers in delivering learning materials in accordance with the goals to be achieved in the learning process (Nitte and Benu, 2022). The use of learning media can also improve the quality of the learning process because learning will be more interesting, students will be younger to understand the material being taught, students will also do more learning activities, students can gain more realistic knowledge with the conditions when the lesson is carried out and can be an alternative in overcoming student boredom in learning. Basically, the use of learning media can help teachers create an interesting learning atmosphere for students. One of the media that can be used is KOSICA (Light Properties Box) media.

A light property box is a medium or prop that contains material that has light properties. With the medium of light nature box props, it is hoped that students can be more active and creative and can explain the properties of light in their own language, (Prasetya, 2022). With the medium of this light box props, it is hoped that students can be more active and creative and be able to explain the properties of light in their own language. In addition, this light box teaching aids media can also foster students' enthusiasm for learning to be more active and creative in learning activities (Faradita, 2019). This KOSICA (Light Properties Box) media is designed so that the properties of light can be in 1 box (4in 1) so that students can more easily conduct experiments, experiments, and observe various light properties.

This media is easy to use, where the way to use it is only by blaming the flashlight and pointing the flashlight at each device for experiments. KOSICA media has advantages if implemented in learning, which is fun, entertaining and interesting to do because all students will compete to play using KOSICA media. KOSICA media can be used in science learning. By using KOSICA media in science learning, students will be more active and encouraged to participate in learning, students will be more enthusiastic and enthusiastic in learning, and can improve students' memory and thinking speed. In addition, the use of KOSICA media in science learning makes learning more fun and interesting to do. So that KOSICA media is suitable to be applied in science learning.

In essence, science subjects are expected to be a vehicle for students to learn about themselves and the surrounding nature, as well as prospects for further development in applying it in daily life, Yumarlin (2013) In general, science subjects in elementary / middle school aim for students: to understand science concepts, have process skills, have an interest in studying the environment, be scientific, able to apply scientific concepts to explain natural phenomena and solve problems in daily life, as well as realize the greatness of God.

Learning activities will produce learning outcomes. Learning outcomes are the level of mastery of students towards specific goals to be achieved in teaching program units or the level of achievement towards general teaching goals. This ability is acquired by students after they carry out activities or after they receive their learning experience (Abida, 2020). The abilities that students have after receiving their learning experience include cognitive, affective, and psychomotor aspects (Irwitadia, 2015). Sudjana (2017) said that student learning outcomes are essentially behavioral changes as learning outcomes in a broader sense covering cognitive, affective, and psychomotor fields. Basically, learning outcomes are the results obtained after participating in learning. Learning outcomes are also a tool used to assess student development in participating in learning activities (Nahak et al., 2024). When the learning results obtained are good, the student has understood the material being studied and vice versa, if the learning results obtained are not satisfactory, then the student is not able to understand the material well.

Based on the pre-observation conducted by the researcher at SD Negeri Balfai Kupang Tengah, there are several problems that occur in science learning learning, namely: Students'

learning outcomes are still low. As evidenced by the average test scores of grade IV students of SD Negeri Balfai in the 2023/2024 school year, it is still below the Minimum Completeness Standard (KKM) set at school, which is 70. This is shown by the learning outcome data obtained by the researcher, namely the presentation of class completeness is 33% where 9 out of 27 students who get a score above the KKM, while 18 students still have not reached the KKM.

Based on the background, the researcher was motivated to conduct a study with the title: The Effect of the Think Talk Write *(TTW) Type Cooperative Learning Model* Assisted by KOSICA Media on the Learning Outcomes of Science Class IV of SD Negeri Balfai Kupang Tengah.

2. RESEARCH METHODS

The type of research used is the type of *Quasi Experimental Design* research in the form of *Nonequivalent Control Group Design* by creating an experimental class and a control class. The experimental class was treated using KOSICA media while the control class was not given KOSICA media treatment or learning was carried out conventionally (Sugiyono, 2015).

Table 1. Research Design Table

Group	Pre test	Treatment	Post test
K	o_1	X_1	O_1
E	o_2	X_2	O_2

Information:
E : Experiment
K : Control
o_1 : *Pre-test* on the experimental group
o_2 : *Pre-test* on the control group
X_1 : Treatment of the Think *Talk Write* (TTW) learning model with media assistance KOSICA
X_2 : Treatment with conventional learning models
O_1 : *Post test* for the experimental group
O_2 : *Post test* for control group

The sample in the study amounted to 53 students and the sampling technique used *purposive sampling.* The indicator measured is the science learning outcome. The data collection techniques used in this study are tests, observations, and documentation. The instruments used are test instruments and observation sheets to observe student learning activities using the *Think Talk Write type cooperative learning model* assisted by KOSICA media. The test questions used in this study consisted of 20 multiple-choice questions, with the data analysis techniques used being normality tests, homogeneity tests, and hypothesis tests using T-tests

3. RESULTS AND DISCUSSION

The data obtained from research conducted at SD Negeri Balfai Kupang Tengah from July 24 to August 01, 2024. The sample of this study was taken from the fourth grade, where Class IV C became the experimental class, while class IV A became the control class. Of the 53 students who were sampled, 26 students came from the control class and 27 students came from the experimental class.

Table 2. Student Activity Observation Sheet

Aspects that Observed	Indicators	Score	
		Yes	Not
Initial activities	Ready to receive lessons	✓	
	Pay attention to the teacher's explanation of the learning objectives to be achieved	✓	
Core Activities	Pay attention and follow seriously when learning takes place by using the TTW type cooperative model assisted by KOSICA media	✓	
	Actively involved and interacting in the learning process of the TTW type Cooperative model assisted by KOSICA media	✓	
	Able to understand and remember well the explanation of learning materials using the TTW type Cooperative model assisted by KOSICA media	✓	
	Students feel happy, more enthusiastic and motivated in participating in the learning process using the TTW type cooperative model assisted by KOSICA media	✓	
	Focus on learning using the TTW type Cooperative model assisted by KOSICA media	✓	
	The TTW type cooperative model assisted by KOSICA media can eliminate boredom during learning		
	Able to use KOSICA learning media		
	Actively ask the teacher	✓	
	Answering teacher questions	✓	
	Have a good discussion with group friends	✓	
	Able to present the results of the discussion	✓	
Closing activities	Students are able to work on evaluation questions	✓	
	Students are able to make a summary of learning outcomes		✓
Sum		14	1
Total score		93,33	

The score obtained from table 2 above is 93.33. This shows that the researcher has done a good job of learning using the TTW type cooperative model assisted by KOSICA media because all aspects are implemented well so that it can be said that there is an influence of the use of the learning model using the TTW type cooperative model assisted by KOSICA media on student learning outcomes. To measure student learning outcomes is to use *pre-test* and *post test* questions consisting of 20 multiple-choice questions given after both classes study the same material. The data obtained from this study are the science learning outcomes of experimental class students who use the learning model using the TTW type cooperative model assisted by KOSICA media and the science learning outcomes of control class students who do not use the learning model using the TTW type cooperative model assisted by KOSICA media.

Before taking data, the researcher conducted a test on the question instrument to be used. Of the 20 questions tested by the instrument, all were declared valid. This is because at a significant level the table r value is greater than the r value, the calculation of the r value obtained from the calculation is 0.361. Thus, it can be concluded that the learning outcome

instrument is reliable with a very high standard. After the results of the trial, it is known that *a pre-test* is carried out in the experimental class and control class to obtain initial data. The experimental class was treated using a TTW-type cooperative learning model assisted by KOSICA media, while the control class was given conventional learning. After the class code treatment is given *a post test*, this is done to find out the student's ability after the treatment. Learning Outcomes *Pre-test* experimental class and control class.

a. Pre test experiment and Pre test control

After the test, students in the experimental class obtained scores with a score range of 70-100, with an average score of 85.37. The average *post-test* for the control group was 60.00, with a score range of 50 - 80.

Table 3. Frequency Distribution *of Experimental Pre Test*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	45	1	3.7	3.7	3.7
	50	4	14.8	14.8	18.5
	55	6	22.2	22.2	40.7
	60	6	22.2	22.2	63.0
	65	6	22.2	22.2	85.2
	70	1	3.7	3.7	88.9
	75	3	11.1	11.1	100.0
	Total	27	100.0	100.0	

Source : SPSS 16.0 Analysis Results of 2024

Based on the data shown in table 3 regarding learning outcomes *Pre-test* In the experimental class, there were 5 students who scored between 45 and 50, 6 students who scored between 51 and 55, 6 students who scored between 56 and 60, 6 students who scored between 61 and 65, 1 student who scored between 66 and 70, and 3 students who scored between 71 and 75. Thus, out of a total of 27 students, only 4 students met the KKM.

Table 4. Frequency Distribution *Pre Test* Control

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	35	3	11.5	11.5	11.5
	40	2	7.7	7.7	19.2
	45	6	23.1	23.1	42.3
	50	4	15.4	15.4	57.7
	55	5	19.2	19.2	76.9
	60	2	7.7	7.7	84.6
	65	4	15.4	15.4	100.0
	Total	26	100.0	100.0	

Source : SPSS 16.0 Analysis Results of 2024

A total of 5 students in the control class in table 4 had scores between 35 and 40 on the *pre-test*; six students had scores between 41 and 45; four students had scores between 46 and 50; five students had scores between 51 and 55; two students had scores between 56 and

60; and four students had scores between 61 and 65. Therefore, there are 26 students, none of whom have reached KKM 70.

b. Control Post Test and Experiment Post Test

The post-test learning results in the experimental class after the treatment of *the KOSICA media-assisted think talk write* model received a score between 70 and 100, with an average of 85.37. The average post-test for the control group was obtained 60.77, with a score range between 50 and 80.

Table 5. Distribution of Frequency Post *Test* Experiment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	70	1	3.7	3.7	3.7
	75	2	7.4	7.4	11.1
	80	7	25.9	25.9	37.0
	85	7	25.9	25.9	63.0
	90	5	18.5	18.5	81.5
	95	4	14.8	14.8	96.3
	100	1	3.7	3.7	100.0
	Total	27	100.0	100.0	

Source: SPSS 16.0 Analysis Results of 2024

The data in table 5 shows that there were 3 students who scored between 70 and 75, 7 students who scored between 76 and 80, 7 students who scored between 81 and 85, 5 students who scored between 86 and 90, 4 students who scored between 91 and 95, and 1 student who scored between 96 and 100. So, it can be concluded that all students have achieved KKM scores.

Table 6. *Control Class* Post Test Frequency Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	50	5	19.2	19.2	19.2
	55	5	19.2	19.2	38.5
	60	6	23.1	23.1	61.5
	65	5	19.2	19.2	80.8
	70	2	7.7	7.7	88.5
	75	2	7.7	7.7	96.2
	80	1	3.8	3.8	100.0
	Total	26	100.0	100.0	

Source: SPSS 16.0 Analysis Results of 2024

Based on the data in table 6 of the *post test* results, it is known that 10 students got a score between 50 and 55, 6 students got a score between 56 and 60, 5 students got a score between 61 and 65, 2 students got a score between 66 and 70, 2 students got a score of 71 and 75, and 1 student had a score between 76 and 80. Thus, it can be said that five pupils, from the Control class, attained KKM 70 after receiving conventional instruction in the form of lectures, while twenty-one pupils, from the class, did not attain KKM.

The data from the statistical prerequisite test, as well as the research hypothesis, were analyzed using SPSS version 16, obtained as follows:

1. Normality Test

   The data normalization test is intended to show that the sample data comes from a population that is normally distribied. The technique used in testing normality in this study uses the calculation of the SPSS 16 for Windows program with a test using *the Kolmogorov-Smirnova* test in SPSS 16.0 for Windows.

Table 7. Normality Test Results

		Kolmogorov-Smirnova			Shapiro-Wilk		
	Class	Statistics	Df	Sig.	Statistics	Df	Sig.
ResultsBelajar	Pre Test Experiment	.139	27	.193	.943	27	.144
	Post Test Experiment	.150	27	.122	.957	27	.309
	Pre Test Control	.138	26	.200*	.935	26	.105
	Post Test Control	.152	26	.128	.928	26	.068

Source: SPSS 16.0 Analysis Results of 2024

From the table, it can be known that it is normally distributed, with the values obtained in table 7 *Tests of Normality* above, the data on *the learning outcomes of the experimental class post test* show significant values of 0.122 > 0.05. With a score of 0.128 > 0.05, the data showing the learning outcomes for the control class after the test were also distracted normally.

2. Homogeneity Test

   Homogeneity test using the *Levene*, with the help of the Windows SPSS 16.0 program for calculations.

Table 8. Homogeneity Test Results

		Levene Statistic	df1	DF2	Sig.
Result Soldiers	Based on Mean	.869	3	102	.460
	Based on Median	.830	3	102	.480
	Based on Median and with adjusted df	.830	3	100.172	.480
	Based on trimmed mean	.849	3	102	.470

Source: SPSS 16.0 Analysis Results of 2024

There was no difference between the experimental class and the control group in terms of post-test learning outcomes, as shown by the results of the *Levene* test in table 8, which obtained a significance value of 0.460 > 0.05.

3. Hypothesis Test

Ensuring that there is a difference in values between the experimental group and the control group is the purpose of hypothesis testing. H_0 accepted if the obtained sig value exceeds 0.05, on the other hand, Ha is accepted if the obtained gis value is below 0.05. The study is based on the following hypotheses:

H_0 : There is no influence on the use of the cooperative learning model type *Think Talk Write* (TTW) Assisted by KOSICA Media on Learning Outcomes Science Grade IV Students of SD Negeri Balfai Kupang Tengah.

a. Ha : There is an Influence of Use of the Influence of the Use of Learning Models KOSICA Media-Assisted Think Talk Write *(TTW)* Type Cooperative On the Science Learning Outcomes of Grade IV Students of SD Negeri Balfai Kupang Middle.

Table 9. Average Score of *Post Test of* Experimental Class and Control Class

	Class	*N*	*Mean*	*Std. Deviation*	*Std. Error Mean*
Result Learn	*Post Test Experiment*	*27*	*85.37*	*7.196*	*1.385*
	Post Test Kotrol	*26*	*60.77*	*8.449*	*1.657*

Source: SPSS 16.0 Analysis Results of 2024

Table 10. T-Test Table

		Levene's Test for Equality of Variances		*t-test for Equality of Means*						
									95% Confidence Interval of the Difference	
		F	*Sig.*	*t*	*Df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
Result Learn	*Equal variances assumed*	*.698*	*.407*	*11.427*	*51*	*.000*	*24.601*	*2.153*	*20.279*	*28.923*
	Equal variances not assumed			*11.392*	*49.092*	*.000*	*24.601*	*2.159*	*20.262*	*28.941*

Source: SPSS 16.00 of 2024 Analysis Results

After the test, the experimental class obtained *post-test* learning results with an average of 85.37, while the control group obtained an average of 60.77. The experimental class had an average score that showed a difference of 24.6 points between them. The hypothesis was tested by averaging the *post-test results* from the control group and the experimental group. After that, the researcher tested using an independent sample test. The gist value *of the eugual probability variable* is 0.000, which is less than the significance threshold of 0.05, according to the findings of the independent sample T test. As a result, the researcher was able to accept Ha and reject H_0. Grade four students at SDN Balfai Kupang Tengah have benefited significantly from the use *of KOSICA's media-assisted* think talk write model in their science lessons.

4. DISCUSSION

Based on the results of the calculation in the table above, the value of learning outcomes *Post Test* The experimental class had an average of 85.37 and a learning outcome score of *Post Test* The control class has an average of 60.77 so the difference in average scores *Post Test*

experiments and average values *Post Test* The control class was 24.6 so it could be said that the average value of the experimental class was higher than the average value of the control class. After calculating the average *Post Test* Experimental class and control class (*Group Statistics),* Furthermore, hypothesis testing is carried out with *Independent Sample Tests* to determine whether there is a significant influence on learning outcomes using the TTW type cooperative model assisted by KOSICA media. From the results of the hypothesis test in table 4.11 of the T-Test (*Independent Samples Tests)* above, at the value of sig. (2-tailed) test *t-test for eugual variances assumed* by 0.000, then the significant value < 0.05 which means H_0 rejected or in other words H_a accepted, so it can be concluded that there is a significant influence of the use of the TTW type cooperative model assisted by KOSICA media on the learning outcomes of science students in grade IV of SD Negeri Balfai Kupang Tengah

All data were distracted normally, as confirmed by the normality test using the *Kolmogorov-smirnov test,* which obtained values of 0.122 and 0.128, respectively for this value > 0.05. To ensure that the data is consistent and unbiased, a homogeneity test is also conducted, with a p-value of 0.460 > 0.05. In addition, the sig (2-tailed) T-test value of 0.000 < 0.05 indicates that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. Thus, it can be concluded that the use of *the think talk write model* assisted by KOSICA media has a significant impact on the learning outcomes of science students in grade four students at SD Negeri Balfai Kupang Tengah.

Based on the results of this study, the use of learning models and media by teachers is a factor that affects student learning outcomes. Through media and learning models, younger students understand the subject matter that can improve student learning outcomes. Researchers found that during learning with KOSICA media, students can easily understand the material of light properties which results in increased learning outcomes obtained by students.

The results of this research are in line with the studies that have been conducted by previous researchers. Several previous researchers have used the *Think Talk Write* model a lot and have shown positive results on student learning activity through the learning results obtained. Previous research was previously conducted by Novitasari (2022). The results of this study obtained through Think *Talk Write learning* can improve the learning outcomes of science students in grade IV of SDN Lubang Buaya 04 Morning which is shown by the results of the Independent sample t-test stating that the score of sig. (2-tailed) is 0.000 < 0.05. so it can be said that H_O was rejected and accepted H_a.

The results of this study were able to make a positive contribution to improving the learning outcomes of science learning outcomes of grade IV students of SD Negeri Balfai Kupang Tengah. Therefore, the use of the TTW type cooperative model assisted by KOSICA media can be used as one of the creative and innovative learning alternatives in an effort to improve the quality of education, especially in science subjects, so that it can be concluded that H0 is rejected and Ha is accepted, and it can be concluded that there is a significant influence on the use *of the think talk write* type cooperative learning model (TTW) with the help of KOSICA media on the learning outcomes of science students in grade IV of SD Negeri Balfai Kupang Tengah.

5. CONCLUSION

The results of the study in the experimental class showed better results compared to the control group. This study shows that the experimental class that uses the cooperative *type of think talk write* (TTW) assisted by KOSICA media with an average of 85.37 which is higher than the value of the control class obtained 60.77 using conventional learning, so it can be concluded that there is a significant influence of the use of the cooperative learning model of think talk write (TTW) type assisted by KOSICA media on science learning outcomes Grade IV students of SD Negeri Balfai Kupang Tengah.

6. SUGGESTION

The author admits that the writing of this article is not perfect, therefore the advice and input from various parties the author needs for the perfection of this article in the future.

7. ACKNOWLEDGMENTS

This research would not have been possible without the support of Citra Bangsa Kupang University, especially the PGSD Study Program, and the supervisors who have helped direct this research.

8. BIBLIOGRAPHY

Aulia, A. (2016). *Application of the Question and Answer Learning Method in the Form of a Wheel of Fortune to Improve Student Learning Outcomes in PAI Subjects at SMP Seri Tanjung, Ogan Ilir Regency*. Skipsi)(Doctoraal Dissertation,Uin Raden Fatah Palembang. http://eprints.radenfatah.ac.id/692/1/AULIA_TarPai.pdf.

Abida, N. (2020). Application of Group Investigation type cooperative learning model to improve mathematics learning outcomes. Tutoring: *Journal of Education of Educational Sciences*, 3(2), 163. https://doi.org/10.31258/jta.v3i2.163-182

Adam, S. (2015). The use of information technology-based learning media for grade X students of Ananda Batam High School. *Computer Based Information System Journal*, *3*(2).;

Arsyad, Azhar. (2017). *Learning Media*. Jakarta: Raja Grafindo Persada

Aunarrahman. (2013). *Learning and Learning*. Bandung: Alfabeta

Benu, Asty.Y and Yulsy M Nitte. (2022). *Learning Media: Innovative Foundations and Development*. Attack: CV AA Rizky.

Faradita, M. N., & Rofiqoh, A. R. A. (2022). Light Box Media to Improve Science Understanding and Learning Outcomes in Limited Face-to-Face Learning. PROCEEDINGS UMSURABAYA, 1(1)

Hamdayana, (2014). *Creative and Character Learning Models and Methods*. Bogor: Ghalia Indonesia

Hanafy, M. S. (2014). The concept of learning and learning. Lentera Pendidikan : Journal of Tarbiyah and Teacher Training, 17(1), 66-79.

Hartanto. (2017). The Application of the Think Talk Write (TTW) Learning Model with the Help of Student Worksheets to Improve Integrated Science Learning Activities and Outcomes of Grade VII A SMP Negeri 2 Rantau Panjang Students. *Journal of Innovation and Learning* Physics.4(1),10- 17.https://fkip.unsri.ac.id/index.php/menu/104.

Irwitadia. (2015). Student Learning Outcomes on Algebraic Form Material in Grade VII SMP Negeri 1 Banda Aceh Academic Year 2013/1014. *Journal of Opportunity*, 4(1), 5-11.

Istarani and Ridwan. (2014). *Types of Cooperative Learning*. Medan: CV Media Persada

Junaedi, I. (2019). Effective learning process. JISAMAR (*Journal of Information System, Applied, Management, Accounting and Research*), 3(2), 19-25.

Mahnun, N. (2012). Learning media (a study of the steps of media selection and its implementation in learning). *Journal of Islamic thought*, *37*(1).

Ngalimun. (2017). *Learning Strategies*. Yogyakarta: Parama Ilmu.

Prasetya, S.P. (2015). *Geography Learning Media*. Yogyakarta: Waves

Slavin. (2015). *Cooperative Learning*. Bandung: Nusa Media

Sudjana. Nana. (2016). *Assessment of Teaching and Learning Process Outcomes*. Bandung: PT Remaja Rosdakarya

Sugiyono. (2015). *Research and Development Methods. In Sugiyono, Research and Development Methods*. Bandung: Alfabeta.

Timu, D., Nahak, K.E.N., Soinbala, H.V., Tasuib, M., Lesik, N.M., & Koy, R. (2024). Analysis of the Application of Truth or Dare Media to Improve Student Learning Outcomes in Grade II Elementary School PKN Learning. *Indonesian Journal of Education and Learning (JPPI)*, 4(2), 524-533.