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THE EFFECT OF COOPERATIVE LEARNING MODEL THINK PAIR SHARE TYPE ON INTEGRATED SCIENCE LEARNING OUTCOMES CHARACTER

Khoiria Triana Sari[1], Irwan Baadilla[1]
[1] Elementary School Teacher Education, FKIP, University Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia

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ABSTRACT

This study describes the effect resulting from using cooperative learning model think pair share type of learning outcomes Science Class V integrated by the character. The purpose of this study was to determine the influence on the learning outcomes of Science Class V students caused by the use of cooperative learning model type think pair share. This type of research is a True experiment with Pretest-Postest Control Design. The population in this study are students which consists of 3 classes, namely VA, VB, and VC classes. Sampling technique in this study using Probabilty Sampling technique with Simple Random Sampling technique. After random shuffle obtained samples of 2 classes, namely the control class consists of 30 students, and experimental class consists of 29 students. This research activity by providing experimental treatment to the experimental class, while the control class was not given treatment. This study obtained the results of pretest and postest testing of students. Each obtained the pretest results of the control class is = 50.1 while the experimental class is = 49.78. After the experimental class was given treatment with think pair share type learning model and the control class was not given treatment, then the postest results of the control class were = 56.23 while the experimental class was = 79.37. Based on the results of hypothesis testing with t-test using SPSS 22.0 program obtained the results of GIS (2-tailed) is 0.000. Referring to the result Sig (2-tailed) value 0.000 < 0.05 then Ho rejected and Ha accepted. This means that in this study there is a significant difference between the learning outcomes of experimental class students and control class students.

Correspondence Author:
Khoiria Triana Sari
[1]Elementary School Teacher Education, FKIP, University Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia
Email: 1901025339@uhamka.ac.id

1. INTRODUCTION

Education is important in the life of every human individual (Yayan et al., 2019). Education man receives various sciences and improves the abilities inherent in man. Under the National Education system Act No. 20 of 2003 Chapter 2 Article 3 explained that education should be implemented for students to develop their potential through active and innovative teaching and learning activities (Sisdiknas, 2003). Learning is an activity carried out by a person in a conscious state to obtain an understanding, concept, and new knowledge to enable changes in thinking, feeling, or acting (Susanto, 2019b). According to Bower and Hilgard in the book aryani states that

"learning should refer to changes in behavior that are based on the innate response, maturity, or momentary state of each person. Learning is also defined as a person's effort to get a change in overall behavior, which is obtained from the results of his own experience" (Slameto, 2020). The purpose of learning in general is to gain knowledge, instill concepts and skills, and shape one's attitude (Sardiman, 2018).

Learning outcomes obtained by students through the ability of the process of learning activities that have been passed (Susanto, 2019a). In bloom's taxonomic theory, learning outcomes include 3 abilities, namely cognitive abilities, affective abilities, and psychomotor abilities. Cognitive abilities include aspects of knowledge, application, cystesis, analysis, understanding, and evaluation. Affective abilities include embedding values, characterizing, accepting, responding, and organizing. For psychomotor abilities include aspects of adjustment, imitation, habituation and observation (Nursalim, 2018). Learning outcomes are an ability that students receive through their learning experience (Rukajat, 2018). Learning outcomes are known from the process of learners during the learning process takes place and after learning is complete (Setyawati, 2019)

The role of teachers in using learning models is very important to improve student learning outcomes and optimize the role of students in teaching and learning activities. Learning Model is a framework that is able to describe the procedures systematically in the teaching process activities to achieve the purpose of teaching and learning in the classroom (Octavia, 2020). The learning Model is a design pattern that is systematically described starting from step by step learning that aims to help students in constructing ideas, information and building thought patterns to achieve learning goals (Isrok'atun & Rosmala, 2018).

Cooperative learning Model is a learning model designed to prioritize students discuss, work together in groups, a learning model that focuses on the use of small groups of students to work together to maximize learning conditions in the classroom (Prihantini, 2020). The steps of the cooperative learning model are to convey goals and motivate students, present information, organize students into study groups, guide student groups to work together and learn, evaluate learning outcomes, and give rewards to students (Parwanti, 2020).

In the primary school education curriculum there are basic subjects that must be mastered by students, this is contained in the National Education Law No. 20 of 2003 article 37 paragraph (1) mentions the subject of science or science is often referred to as a compulsory subject controlled by students (Permendiknas, 2006; Sisdiknas, 2003). Basically science subjects have a concept of learning related to nature and very broadly tied to human life. In addition, science learning is not just a mastery of knowledge but also a process of discovery that must be done in learning. Gagne explained "*science should be viewed as a way of thinking in the pursuit of under-standing nature, as a way of investigating claims about phenomena, and as a body of knowledge that has resulted from inquiry*" (Widi, 2019). This means that science is seen as a way of thinking about the secrets of nature, then as a way of inquiry about the symptoms of nature, and as a body of knowledge. Science Learning is described as a system that includes 3 components, namely learning input, learning process, and learning output. These components form a learning process that aims to achieve established competencies.

Based on the results of field observations in general, many students still have difficulty understanding the concept of Science Learning given and build concepts in their own minds, this is because teachers do not optimize the learning model used in the process of teaching and learning

activities take place. The teacher is an important role in control in the classroom to create learning that actively discusses, creates the character of students who dare to express their opinions. Learning that is not done actively is less optimize the role of students in the learning process, so that the learning outcomes obtained by students less satisfactory may not even reach the specified KKM.

From the problems that have been described, this makes science learning in the classroom less than optimal which creates very low science learning outcomes in the classroom. In addition, the character of students in the class is created by students who are not actively discussing, students who are passive, and do not work together in groups. This encourages researchers to conduct tests by applying the cooperative learning model think pair share type that is integrated with the character of students.

Arends (Octavia, 2020) states the think pair share Model or model used jointly-this sharing is a type of cooperative learning model designed to complement student interaction patterns. A cooperative Model designed to complement student interaction patterns, Azlina (Aryani, 2021; Isrok'atun & Rosmala, 2018) states *"Think-pair share is a cooperative learning technique whic is said multi-mode discussion in which students listen to a question or presentation, have time to think individually, talk with each other in pairs and finally share responses with the larger group"*. This means that the think pair share learning model has a variety of discussion patterns to create an active and conducive learning atmosphere. This discussion process creates the character of students who are active in groups, actively discuss, and dare to express their opinions. Character is a form of a person's personality character manifested as a habit with moral behavior and ethics (Mumpuni, 2018).

Character is a characteristic of a person who is attached to himself from birth based on a lifelong learning process (Hapudin, 2019). Student character is an important role that must be formed by the teacher. Teachers in the classroom not only assess a learning outcome in the form of numbers, but teachers also have an important role in shaping the character of class students. Because teachers are more to interact with students in class, then assess the behavior of students in class. Therefore, students are not only formed to be smart in cognitive but students must also be formed in terms of character, so that learning outcomes are not only based on numbers but also there are changes in the character of students . Think Pair Share type cooperative learning Model in Integrated Science Learning to support learning outcomes that not only support numbers, but also student behavior that must be formed through the learning process (Novasari et al., 2022). Then by using the learning model will be actively discussed learning through concrete thinking stages so as to provide a meaningful learning experience for students (Amaliyah, 2020).

Previous research with think pair share model has been conducted by a previous study by Riwayanti entitled *"Think Pair Share learning Model research on the findings of Class V students"*. The results of this study using the Think Pair Share Type Model can be used as an alternative to learning that can increase student activity actively to learn and get information in understanding the problem so that high learning outcomes will be created. The relationship of research with research is in the learning model. The difference between research and research is in the method used (Riwayanti, 2019). Further research by (Tussakdia et al., 2022) entitled *"Application of Cooperative Learning Model Type Think Pair Share (TPS) in Science Learning class V of SD Negeri 68 Lubuk Linggau"*. The results of this study concluded that there is a change

in the learning model of thinking in pairs to Share students ' science learning outcomes. The difference between research and research is in the research method used (Tussakdia et al., 2022).

2. METHODS

The research method used in this study is a true experiment. True research this experiment the sample used for the experiment but as a control group was carried out randomly from a certain population (Sugiyono, 2021). The design of this study is Pretest-Postest Control Group Design (Sugiyono, 2021) (Table 1).

Table 1. *The design of research* its Pretest-Postest Control Group Desilgn (Sugiyono, 2021)

R	O_1	X	O_2
R	O_3		O_4

The study was divided into two randomly selected groups and then given a pretest to determine the initial state of any differences between the control group and the experimental group. The population used in this study is the fifth grade of 3 classes, namely V A, V B and V C. Data were obtained from the school where the study was conducted.

Sampling technique in this study is Probability Sampling technique. The sampling technique used is Simple Random Sampling. This means that sampling is simple because sampling members from the population is carried out randomly without regard to strata in the population (Sugiyono, 2021; Sundayana, 2020). This study took the student population of Class V. Sampling criteria were taken randomly through homogeneous classes (Novidiantoko, 2020). Then grouped consisting of 2 sample classes, namely control class and experimental class (Table 2).

Table 2. ample classes, namely control class and experimental class.

No	Class	Total
1	Control class	30
2	Experiment class	29

Implementation of the treatment used in this study is that there are two classes V control and V experimental. Previously, these 2 classes were given pretest first with water cycle material, then this pretest contains 30 multiple choice questions with 4 choices (a, b, c, and d). Experimental class that is receiving special treatment is using cooperative learning model think pair share type. In the experimental class, after receiving special treatment using the cooperative learning model think pair share type, then this class was given a posttest of 30 multiple choice questions with 4 choices (a, b, c, and d). For the control class, the researcher did not give special treatment using cooperative learning model of think pair type, but this control class used conventional learning model. Similar to the experimental class, this control class was also given a posttest with the same material, namely the water cycle. The Posttest is given with 30 multiple choice questions with 4 choices (a, b, c, and d).

Data collection techniques used in this study is by using a test in the form of posttest. The form of the test used is a multiple choice form. The questions are arranged in four answer choices,

namely options a, b, c, and d, then the answer is given a value of 1 for the correct one and given a value of 0 for the wrong answer. The test instruments that will be used in the study amounted to 30 objective questions (multiple choice) with 4 answer choices (a, b, c, and d) given to students of Class V control and experimental V. Before being used, the instrument of science learning results have been tested for validity by expert lecturers.

In this study, normality test and homogeneity test was conducted using SPSS 22.0 program. Hypothesis testing used is Independent Sample t Test using SPSS 22.0 program with the following test criteria :

a) if the significance value (2-tailed) < 0.05, then Ho is rejected and Ha is accepted.
b) if the significance value (2-tailed) > 0.05, then Ho is accepted and Ha is rejected.

With Hypothesis :

Ho : there is no significant difference between the results of students grades experiment (Think Pair Share learning model) and control class students

Ha : there is a significant difference between the results of the experimental clas students learning values (Think Pair Share learning model) and (control class students)

3. RESULTS AND DISCUSSION

Instrument trials were conducted to measure the feasibility of an instrument used in this study. Instrument trials were conducted to students of Class V, which amounted to 34 students. Tests were conducted to determine the validity and reliability of the instrument. Calculation of instrument validity test using Biserial point correlation formula. Based on the calculation of the trial (Table 3), 32 valid questions were obtained. The condition is valid if $r_{count} > r_{table}$, while the condition is invalid if $r_{count} < r_{table}$.

Table 3. Instrument valid if $r_{count} > r_{table}$, while the condition is invalid if $r_{count} < r_{table}$

Classilfilcatilon	Total	Number
Valid	32	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31, 33, 34, 35
Drop	3	8, 26, 29

Reliability test was conducted using Spearmen Brown formula by halving (odd even) with significance level of 0.05 and obtained the result of 0.850. Reliable instrument if $r_{count} > rt_{able}$ at the level of $\alpha = 0.05$ with the number of n = 34 (0.338). Then it can be seen that rhitung (0.850) > rtabel (0.338), so it can be concluded that the instrument is reliable. The results are then classified into interpretations that are very strong.

The frequency distribution of control class and experimental class is shown in the following Table 4:

Table 4. Frequency distribution of control class and experimental class

	Control	**Experiment**
N	30	29
Mean	50,1	49,78
Standar Deviasi	6,98	9,808
Range	33	33
Max	66	66
Min	33	33

Based on the pretest results of the control group of 30 students who sampled the study obtained the highest value of 66 and the lowest value of 33, the average value of 50.1; median 50.50; mode 52; and standard deviation of 6.98. Furthermore, the pretest results of the experimental group of 29 students who sampled the study obtained the highest value of 66 and the lowest value of 33, the average value of 49.78; median 55; mode 51, 7; and standard deviation of 9.808.

Tabel 5. Posttest results of control & experiment classes

	Control	**Experiment**
N	30	29
Mean	56,23	79,37
Standar Deviasi	6,80	6,108
Range	23	27
Max	66	93
Min	43	66

Based on the results of post-test control group of 30 students who sampled the study obtained the highest value of 66 and the lowest value of 43, the average value of 56.23; median 57.7; mode 60.9; and standard deviation 6.80 (Table 5). Furthermore, the results of the experimental group post test of 29 students who were sampled in the study obtained the highest value of 93 and the lowest value of 66, the average value of 79.37; median 79.36; mode 79.13; standard deviation 6.108.

Furthermore, the normality test phase is carried out to determine whether the pretest data is normally distributed or not. Normality testing in this study with liliofers test using SPSS 22.0 program with test criteria if the value of significance > $\alpha = 0.05$, then the data is normally distributed, and if the value of significance < $\alpha = 0.05$, then the data is not normally distributed. The following are the results of the calculation of normality test (Table 6):

Table 6. Normality test results with SPSS 22.0

Class	Silgnilfilcance value	Categoriles
Pretest control	0,174	Normally distributed
Pretest experiment	0,153	Normally distributed
Postest control	0,110	Normally distributed
Postest experiment	0,139	Normally distributed

Normality test results with liliofers test in SPSS 22.0 pretest program control group of 30 students obtained significance value 0.524 > 0.05 and experimental class significance value 0.153 > 0.05. It can be concluded that both groups of pretest data are normally distributed. Furthermore, the normality test with liliofers test in SPSS 22.0 postest program the control group of 30 students obtained significance values of 0.110 > 0.05 and the experimental class of 29 students obtained significance values of 0.158 > 0.05. Then it can be concluded that the two groups in the postest are normally distributed.

The next step is the calculation of homogeneity Test homogeneity test is performed using Levene's test in the SPSS 22.0 program with test criteria if the significance value (sig) on The based on Mean > 0.05, then the homogeneous data variance and if the significance value (sig) on The Based on Mean < 0.05 then the variance of the data is not homogeneous (Table 7).

Table 7. Homogeneity test results with SPSS 22.0

	Significance value ***(Based on Mean)***	**Categories**
Pretest results	0,096	Homogeneous Data
Postest results	0,268	Homogeneous Data

Based on the homogeneity of the pretest results of both classes with Levene's test using SPSS program.22 in the calculation of the value of significance obtained on the basis of the Mean that is $0.96 > \alpha = 0.05$. This means that both classes in this study have homogeneous data variance. Furthermore, testing the homogeneity of posttest results of both classes with Levene's test using SPSS program.22 in the calculation of the value of significance obtained on the basis of the Mean that is $0.268 > \alpha = 0.05$ then Ho is accepted. This means that both classes in this study have homogeneous data variance.

Furthermore, hypothesis testing using SPSS 22.0 program. The pretest value hypothesis test in the control class and experimental class used is a t-test to determine whether the two groups are the same starting point or not before the treatment. With hypothesis Ho: there is no difference between the initial ability of the control class and the experimental class, Ha : there is a difference between the initial ability of the control class and the experimental class. While the test of the difference in the value of the control class and experimental class posttest to determine whether there is a significant influence between the learning outcomes of experimental class students who were treated using the think pair share learning model with the control class that was not given treatment. With the hypothesis Ho: there is no significant difference between the results of the learning value of experimental class students (Think Pair Share learning model) and control class students Ha : there is a significant difference between the results of the learning value of

experimental class students (Think Pair Share learning model) and control class students). Both tests were conducted with the test criteria if the value of significance (2-tailed) < 0.05, then Ho rejected and Ha accepted, and if the value of significance (2-tailed) > 0.05, then Ho accepted and Ha rejected.

Table 8. Hypothesis testing with SPSS 22.0

	Significance value ***(2-tailed)***
Pretest results	0,880
Postest results	0,000

From the hypothesis test with t-test using SPSS 22.0 program on the pretest results of control and experimental classes to determine whether the two groups started from the same ability or not before the treatment. Based on the tests that have been done, the value of Sig(2-tailed) is 0.880 > 0.05, Ho is accepted and Ha is rejected. This means that in this study, there is no difference between the initial ability of control class students and experimental class.

In the post test results of the control class and experimental class to determine whether to know whether there is a significant influence between the learning outcomes of control class students without treatment and experimental class were treated cooperative learning model type think phair share. Based on the tests that have been carried out obtained the value of Sig(2-tailed) of 0,000 < 0.05 then Ho rejected and Ha accepted. This means that in this study there is a significant difference between the results of the learning value of experimental class students using the Think Pair Share learning model treatment with control class students without treatment.

Researchers provide treatment to students in Grade V to the subjects of science, namely in learning in the experimental class using cooperative learning model type think pair share, while in the control class without treatment learning model. In addition, the researchers also looked at the character of each experimental class and control class. In conducting the study, many students between the experimental class and the control class amounted to 59 students.

Based on the data of the research that has been described above, shows that different treatments obtain different end results between the control group and the experimental group taught using cooperative learning model think pair share type. In addition, the character of active students produces the highest grades in class.

4. CONCLUSION

Conclusion in this study the average learning outcomes of students in the experimental class is higher than the control class. Then in the posttest hypothesis test results can Sig (2-tailed) 0.000, then Ho rejected and Ha accepted. This means that there are differences in learning outcomes between experimental classes that are given treatment using cooperative learning model type think pair share compared to the control class without treatment. From the results of research that has been done the learning process by using cooperative learning model think pair share type is able to provide a good influence on the learning outcomes of science students. In addition, it is

able to improve the character of students to be active, thus encouraging significant changes in the science learning process in the classroom.

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