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THE EFFECT OF COOPERATIVE LEARNING MODEL OF THINK PAIR SHARE (TPS) TO LEARN NATURAL SCIENCE STUDENTS GRADE V ELEMENTARY SCHOOL

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Abstrak *Penelitian ini bertujuan untuk mengetahui pengaruh dari model cooperative learning tipe think pair share (TPS) terhadap hasil belajar IPA siswa kelas V SDN Margasari II Kecamatan Telukjambe Timur Kabupaten Karawang Tahun Pelajaran 2018/2019. Penelitian ini merupakan jenis penelitian kuantitatif. Populasi yang digunakan dalam penelitian ini adalah seluruh siswa SDN Margasari II Kecamatan Telukjambe Timur Kabupaten Karawang. Peneliti mengambil sampel sebagian dari anggota populasi maka didapat sampel 58 orang siswa dengan jumlah siswa kelas eksperimen sebanyak 29 siswa dan kelas kontrol sebanyak 29 siswa. Teknik pengumpulan data melalui hasil belajar siswa pada mata pelajaran IPA. Teknik analisis data untuk menguji hipotesis dilakukan dengan perhitungan Test Of Homogenity Of Variance. Hasil dinyatakan valid 20 dari 40 butir instrumen yang diujicobakan. Perolehan nilai rata-rata kelas kontrol sebesar 76,72 sedangkan perolehan nilai rata-rata kelas eksperimen sebesar 80,69. Hasil dari uji reabilitas diperoleh nilai sebesar 0,806. Hasil pengujian hipotesis, terdapat pengaruh yang signifikan antara model cooperative learning tipe think pair share (TPS) terhadap hasil belajar siswa pada mata pelajaran IPA. Hal ini diperoleh rhitung 0,806 ≥ r tabel 0,355 dengan signifikansi 0,05 dan n= 58 menunjukkan bahwa hipotesis diterima. Dari hasil penelitian ini dapat disimpulkan bahwa model cooperative learning tipe think pair share (TPS) dengan hasil belajar siswa mata pelajaran IPA memiliki pengaruh yang signifikan.*

Keywords: Model Cooperative Learning Tipe TPS, Hasil Belajar IPA

I. INTRODUCTION

Education in elementary school becomes a valuable learning for students in coaching efforts that are presented to students through the provision of educational stimuli in the student growth process. The most important component in basic education is curriculum. In relation to the importance of a curriculum in the education level, according to

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Sukmadinata (2017:4) said that "the curriculum has a central position in the entire education process that directs to all forms of educational activities in order to Educational objectives". So, in this case the curriculum is considered to be a very important role in the process of education.Because it has a role to lead to all forms of educational activities in order to achieve educational objectives. One of the subjects in elementary school is Natural Sciences (IPA).

Natural Sciences (IPA) is essentially as a basic science related to human life, because the material contained within the natural sciences includes various materials such as various events of natural phenomena, living creatures, and Regarding the causal relationship that can be resolved or sought by applying scientific methods. Natural science is also a basic science that has real material but also there are some things that are abstract or difficult to be considered as a real or abstract thing because it cannot be detected directly by the five Human senses. So in the process of learning it is necessary that innovations and changes can help students understand the material or things that tend to be abstract to something more real to the students.

In accordance with the characteristic developmental behavior of elementary school students, according to Piaget (in Yusuf & Sugandhi, 2013:61) stated that: "Judging by the aspect of cognitive development, at present time is at a concrete stage characterized by the ability (1) Classify (classify) objects based on the same characteristics; (2) Drafting or associating (linking or counting) numbers or numbers; and (3) solving a simple problem ". In natural sciences subjects will become more meaningful when the learning process can be understood and understood by students.The student's understanding of a natural phenomenon, the basic concepts of natural science can be observed in the environment around his life through the process of thinking individually and then conducting discussions with friends and teachers where the process is a series of Learning activities through scientific work processes.

The process of learning natural sciences activities that occur in elementary school so far tends to still be dominated by information transfer activities or only to convey the material without the reciprocal of students and still memorized, as well as the use of models Learning that is less varied so that it can affect the process and learning outcomes that cause the learning to become less effective and give less impact or meaning to the students. So in the process of learning done in the classroom is required an update, as students are taught by to find out first on the problems or questions given by the teacher, after which students are taught to each other Discuss the issue and share it in front of the class with other friends, so that the learning process becomes more effective and meaningful to students.

Based on the observation results at SDN Margasari II class V that the learning process is still dominated by teachers (teacher centered) conducted by speaking so that the learning pattern is still traditional with the provision of a number of concepts in the form of Lack of the students ' learning ideas, and still some variation in the implementation of the learning model in the classroom. So that the concept of natural sciences can be easily understood by students, it is necessary skills in delivering the material to the students.So that a teacher must already understand and master the content or material that will be taught so that the concept of material is easy to understand by the students.In addition to the understanding and mastery of the material that is capable, it should also be supported by a learning atmosphere in the classroom that is more conducive and enjoyable so as to optimize the competencies that are owned by the students.The way it is to implement the appropriate models of learning, so that

students are expected to develop their potential optimally.

One way that can be applied to solve the problem is to implement cooperative Learning model type Think Pair Share (TPS) in which the learning process is done by arranging the various things learned which are based on Initial knowledge is known and owned, or in other words the student is actively participating in learning not only being passive in accepting a thing.

The implementation of the think pair share (TPS) cooperative learning model when learning to teach is expected to be as an alternative to solving problems or solutions to problems as previously stated.The cooperative learning is a learning that students learn in small groups to discuss each other about material or problems given by the teacher to achieve maximum learning outcomes.

Based on the previous explanation, the researcher held a study titled "Effect of Cooperative Learning Model of Think Pair Share (TPS) on learning outcomes of natural sciences grade V students Elementary School".

The purpose of this research is to know the differences in natural sciences learning outcomes that implement cooperative model of think pair share (TPS) with which does not implement cooperative model of think pair share type (TPS) in class 5^{th} elementary school.

II. LITERATURE REVIEW

According to Mayer (in Karwono & Mularsih, 2017:13) says that "learning is a relatively permanent change in behavioral potentionality (potential behavioral) as a result of reinforced practice". Meanwhile, according to Gagne (in Karwono & Mularsih, 2017:13) says that "learning is a system in which there are various interrelated elements that produce a change of behavior".So learning is a process of activity that is done so that students can actively participate and interact with the environment so that there is a change of behaviour so that the students are involved in a variety of skills ranging from knowledge, skills, and attitudes. The activities of the teaching and learning process are known and measured by the extent of students ' understanding of the material and the outcome of learning that students have acquired. Measurements are carried out using study results tests. According to Dimyati & Mudjiono (2009:3) says that "learning outcomes are the result of an interaction of learning and follow-up". Meanwhile, according to Karwono & Mularsih (2017:13) says that "the feature of learning is change, someone is said to have learned when his behavior shows change, from the beginning not know to know, from can not be able, from not Capable of being able, and from unskilled to being skilled ". So that the overall or maximum result that students have achieved after following the learning activities in the classroom by learning a variety of subject matter can be said to be a result of learning.

The types and indicators of learning results according to Bloom in Taxonomy of Education Objectives into 3 domains, namely cognitive realm (knowledge), affective realm (attitudes), and psychomotor realm.Of the three domains, researchers only implemented a cognitive realm consisting of C1 to C6. According to Arikunto (2015:131-

133) states the following further details are C1 knowledge, C2 comprehension, C3 application, C4 analysis, C5 synthesis and C6 evaluation.

According to Darmodjo & Kaligis (in Muakhirin, 2014:53) says that "natural science is a rational and objective knowledge of the universe with all its content". So that natural science can be considered as a knowledge in the learning of the events or phenomena of the universe and its contents. Objects and problems that can be examined in natural sciences are objects that are found in nature as well as how to convey or explain various events or natural phenomena according to the experiments or observations have been conducted to Then compiled systematically. According to Harlen (in Wijayanti, 2016:3.188) stated that as follows: "There are three main characteristics of science: first, it is that

everyone has the authority to test the validity of the principle and the scientific theory, although it may seem logical and can be described hypothesized. Theory and principles are only useful if they match the reality. Secondly, it gives an understanding of the relationship between observable facts that allows the preparation of predictions before it came to the conclusion. The theory compiled must be supported by facts and proven data. Thirdly, it gives meaning that the theory of science is not the final truth but will change on the basis of the supporting devices of the theory. This gives emphasis to the creativity and ideas of past changes and possible future changes, as well as the notion of change itself".

Based on the explanation on the results of science study can be said that the results of learning natural science is a result of the whole or maximum achieved by students after the process of learning activities in the classroom by studying science lesson materials Knowledge of natural Sciences can describe the ability of actual students because of the activity of diversion or transfer of knowledge from people who have the ability of qualified in their field.

According to Suprijono (in Harefa, 2012:847) says that "learning models can also be interpreted as a pattern used for curriculum, organizing materials, and instruecting teachers in class". According to Dick and Carey (in Hijriati, 2017:78) says that "The learning model is a set of learning materials and procedures used together to elicit the learning outcomes of students". Based on the opinions of some of the experts above, a draft or learning process plan that teachers apply as a reference when learning to teach in a class is named with the learning model.

The teaching learning model that can be used during teaching and learning activities is by implementing cooperative learning model.Learning with this cooperative learning model students learn in small groups with different skill levels so that they can cooperate and responsibly help their friends to learn to improve understanding of a Specific material or subject matter.

According to Johnson (in Rofiq, 2010:31) says "Cooperative Learning is a teaching and learning activity in small groups, students learn and collaborate to get to the optimal learning experience, both individual experience and Group. Likewise Slavin (in Hamzah & Muhlisrarini, 2014:160) says that "Cooperative Learning is a way of learning that is based on the work of the groups done to achieve the purpose of learning".

Cooperative learning models have several types, including the type of cooperative learning model, think pair share (TPS) or think paired with shares. Frank Lyman and his colleague at the University of Maryland were the first to introduce this model, according to which Arends (in Hamdayana, 2017:201) stated that "think pair share is an effective way to make a variation of the atmosphere Class discussion pattern ". With this model it is assumed that almost as a whole of the way or used in this model can give students more time to think, respond, and cooperate with each other.

III. RESEARCH METHOD

This research was conducted in 5th grade students SD Negeri Margasari II. This research applies a quantitative approach with the research type of pseudo experiments. "The design used in this study was a non-equivalent control-group design" (in Sugiyono, 2018:79).

The population in this study is all students of elementary school Margasari II, District Karawang Timur, District Karawang samples of this research are students of class VA and VB class. Furthermore, to determine which class will be given treatment by applying cooperative learning model of think pair share and which is not given treatment (do not apply cooperative learning model of think pair share type) that is seen Based on the pretest results. Based on the pretests value that has been done, the results of that which become class of experimentation or class that is given treatment by implementing the model of cooperative learning type of think pair share is the class V B and the control

class (not Given treatment by implementing cooperative learning model of type think pair share) is VA class, because VB class pretests result is smaller than the result of Pretests class VA.

The technique used in the collection of this Pennelitian data is to implement a test instrument, the test that will be done is a written test of multiple choice, consisting of an initial test before treatment (pretest) and test after Given treatment (posttest).

The results of the data obtained to determine the presence or absence of the learning model and whether there is a significant difference to the outcome of cognitive learning in both research classes namely experiment class and control class. The hypothesis tests to be tested are:

H_0 : There are no differences in the results of the cognitive learning natural science class V among who implement model Coopertaive learning type think pair share with the results of cognitive learning natural science who do not apply models Cooperative learning type think pair share.

H_1 : There are differences in the cognitive outcomes of natural science class V who implement the model Cooperative learning type think pair share with the result of cognitive learning natural science that does not apply the model of coopertaive learning type think pair share

Hypothesis testing assisted with SPSS calculation version 23.

IV. RESULT AND DISCUSSION

The results of learning natural science early students were obtained from the pretests results performed at the first meeting. Descriptive and Pretest student learning results with the help of SPSS version 23.0 program shown in the following table:

Table 1. Descriptive Statistics Pretest value student learning Results

Class	N	Min	Maks	Mean	Std. Dev
Ekperimen	29	40	65	57.07	9.498
Control	29	45	60	60.34	9.994

Based on table 1 above, it shows that the description statistic to pretests that the class of ecperimen is the class that will receive treatment or treatment or the class has a lower average value, while the class to be used Control class, which is a class that does not receive treatment or treatment is the class has a higher average value " The class that has a lower average value is taken as a class of ecperimen in order to be visible difference to the outcome of the use of treatment in the form of cooperative model leaning type think pairshare to student learning outcomes. After the research has been conducted, researchers conducted a final test that could be called by Posttest, to assess and measure student learning outcomes at the end of the meeting in each class.Analysis of the descriptive posttest data of student learning results by implementing the help of SPSS program version 23.0 for Windows shown in the following table:

Table 2. Descriptive Statistics Pretest value student learning Results

Class	N	Min	Maks	Mean	Std. Dev
Ekperimen	29	65	95	80.69	6.778
Control	29	60	90	76.72	7.709

In accordance with table 2 above, the class that implements the think pair share- type cooperative learning model has a larger average value of the experiment class with an average of 80.69, while the average control class is smaller in value. i.e. 76.72. For maximum and minimum values both groups show a larger type of cooperative learning model think pair share. Where a higher minimum is present in the class of experimentation than does not implement a think pair share type cooperative learning model. However it has been explained that overall the higher average score is in the class implementing a think pair share type cooperative learning model.

The normality test is performed to determine whether the experiment class Pretests value and the control class are derived from the normal distribution population.In this normality test, the study implemented Kolmogorov-Smirnov with the help of SPSS software version 23.0 with a real-level $\alpha = 0.05$, with SPSS having a stronger degree of accuracy if a large amount of data or samples were analyzed more than 50 ($n < 50$). This normality test is done against the Pretests and posttest grades of the experimental class and the control class.

Table 3. Pretest value normality test results

	Class	Kolmogorov-Smirnov[a]		
		Statistic	Df	Sig.
Pretesr	1	.151	29	.090
	2	.134	29	.192

if the value of Sig < 0.05 then H_0 is rejected if the value of Sig ≥ 0.05 then H_0 is accepted.

In the table 3 above explains that the significant value of the normality test value of pretests for an experimental class of 0.090 means the value of sig > 0.05 so that H_0 is acceptable, this means that the pretests grade of the experimental class comes from the population a normal distribution, while the significant value of the normality test for a control class of 0.192 means the pretest value of sig > 0.05 so that H_0 is acceptable, it can be interpreted that the value of the student's study results in a normal distribution.

Test results of the normality of the experimental class posttest data and the control class by implementing the help of SPSS program version 23.0 for Windows is presented in the following table 4.

Table 4. Posttest value normality test results

	Class	Kolmogorov-Smirnov[a]		
		Statistic	Df	Sig.
Posttest	1	.161	29	.052
	2	.147	29	.109

Table 5. Test homogeneity Posttest Value student learning Results

Levene Statistic	df1	df2	Sig.
.709	1	56	.403

According to the table 5 above explains that the value of P-value or significance is 0403.The value is greater than the significance value of 0.05 then H0 is received.Thus, the results of the test with the Real's test apply the SPSS to the conclusion that there is significantly no difference in the final value variance between the experiment class and the control class.

The testing hypothesis is as follows:

H_0: There is not a significant difference of final learning outcomes for students who apply a model coopertive learning type think pair share with that does not apply model Coopertive learning type think pair share.

H_1: There is a significant difference of final. In the table 4 above shows that learning outcomes for students applying coopertive learning model of think pair share with who does not apply model Coopertive learning type think pair share.

"the significant value of the normality test value of posttest for an experimental class of 0052 means the value of sig > 0.05 so that H_0 is acceptable, this means that the posttest value of the control class comes from the population a normal distribution, while the significant value of the normality test for a control class of 0.109 means the value of sig > 0.05 so that H_0 is acceptable, which can mean that the posttest value of the students ' study results in a normal distribution ".

A test of homogeneity is used to determine the posttest grade of the experimental class and the control class has a homogeneous or not homogeneous variance.Testing of this homogenity of data applies laavene's Test by applying SPSS.

The hypothesis testing criteria are as follows:

H_0: Accepted If the value of significance (2-tailed) < $\alpha = 0.05$

H_1: Reject If the value of significance (2-tailed) > $\alpha = 0.05$

Table 6. T test scores Posttets student learning Results

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Posttest	Equal variances assumed	.042	3.966	1.906
	Equal variances not assumed	.042	3.966	1.906

To test the homogenity calculation implements SPSS version 23.0 with guidelines for taking the conclusion is: if Based on table 3, the value of significance (2-tailed) is 0.042, which is used for testing the average difference in the final value of students ' learning outcomes, namely two parties, because the value of sig 0.05 then H_0 received, meaning there is a difference in the final result Learn natural science among students who implement cooperative learning model type think pair share with who do not apply cooperative learning model type think pair share. From the proposed hypothesis testing results are acceptable, because the value of significance gained by 0.042 it does indicate that H_1 is acceptable because the value of value is significance (2-tailed) < α = 0.05. This proves that there is a significant difference in the outcome of the final learning outcomes of students who are in the class to implement cooperative learning model of think pair share type with which do not apply cooperative learning model of type think pair share.

V. RESULT

Based on the results of studies that have been done in the VA class as a control class and VB as experimental class of SD Negeri Margasari II Karawang, on the subject of natural science of the material of heat influence to change temperature and form of objects, then obtained results Learn VB grade students as experimental classes with the think pair share model cooperative learning to achieve an average value of 80.69, while learning outcomes of VA graders as control classes by not implementing cooperative models Learning types think pair share earns an average value of 76.72.

Based on the results of the analysis using the Indepedent test Sample T test showed that the implementation of a cooperative learning model type of think pair share in natural science subjects using the important TPS steps can be hit by learning natural science Grade V students at SDN Margasari II.

Improvement of natural science Cognitive learning results is seen from the results of different natural science cognitive learning among VB class students as an experimental class that in the learning process implementing a cooperative learning model of type think pair share with learning outcomes Cognitive Science of VA class as a control class in its learning does not use cooperative learning model of type think pair share.

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