**ICCCM-JOURNAL OF SOCIAL SCIENCES AND HUMANITIES**
2022; 1(4): 15-23
Published online 08 01 2022 ( https://icccmjssh.com/ )
doi: 10.53797/icccmjssh.v1i4.3.2022
e-ISSN 2811-4469

# The Effectiveness of *Think Pair Share* Model Towards Class 4 Science Learning Outcomes

**Putri, Khoirisa Aftika[1*], Murtono[2] & Utomo, Slamet[3]**

[1,2,3]Muria Kudus University, 59327 Central Java, Indonesia

*Corresponding author: aftikaputri94@gmail.com

**To Cite This Article:**
Khoirisa Aftika, P., Murtono, & Utomo, S. (2022). The Effectiveness of Think Pair Share Model Towards Class 4 Science Learning Outcomes. *ICCCM Journal of Social Sciences and Humanities, 1*(4), 15–23. https://doi.org/10.53797/icccmjssh.v1i4.3.2022

**Abstract:** The purpose of this research is to analyze the effect of the *think pair share* learning model on the science learning outcomes of fourth graders in elementary schools. The approach used in this research is a quantitative approach. The design of this study used a *quasi-experimental* design with a *nonequivalent* control group design. The control group with *conventional* learning and the experimental group using the think pair share learning model. The research instrument used observation, and *pre-test* and *post-test* questions. Data analysis used is validity test, reliability test, homogeneity test, average similarity test, difference test, gain index calculation. The results of the study showed the influence of the *think pair share* learning model on the science learning outcomes of fourth grade students in elementary schools, this is based on the output of Pair 2 on the paired samples test obtained the value of Sig. (2-tailed) obtained 0.000 < 0.05 or t-count 8.609 > t-table 1.68957, So it can be concluded that there is a difference in the average student learning outcomes of the experimental class with the average student learning outcomes of the control class.

**Keywords:** Learning outcomes, science, think pair share

## 1. Introduction

Every educational effort in Indonesia is in accordance with the functions and objectives of National Education, as written in the Law of the Republic of Indonesia No. 20 of 2003, concerning the National Education System Article 1.

Education is a conscious, planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed for himself, society, nation and state. From the above understanding, there are words learning, learning, and being active in the educational process, so it can be concluded that the educational process includes learning and learning activities that emphasize the activeness of students to develop their potential. According to Hariyanto & Suyono (2012: 9), learning is an activity or process to acquire knowledge, improve skills, improve behavior, attitudes, and strengthen personality.

The problems encountered in elementary schools are very diverse, these problems are caused by various factors. One of the problems found was related to the subjects of Natural Sciences. These problems, among others, are regarding student learning in teaching and learning activities that are not yet optimal, such as during lessons, students tend not to pay attention to the material presented by the teacher. Student learning activities during the teaching and learning process are less than optimal, for example, students are busy chatting with their friends when the teacher delivers learning materials so that learning is only one way. The use of learning models that are less varied or less involving students in the learning process causes less learning activities so that it has an impact on student learning achievement. In this case, what is commonly used by teachers in delivering material is using the lecture method (Wuryandani, 2021).

Elementary schools in Bonang District have carried out learning by referring to the 2013 curriculum. bodies in Animals and Plants. Learning on the material has not shown optimal results (one of the main obstacles is the lack of enthusiasm of students to learn, students are more likely to accept whatever is conveyed by the teacher, silent and reluctant to ask questions or opinions). This is because the learning carried out by the teacher tends to use the lecture learning method, question and answer and assignment. Whereas in the learning framework to identify the parts of animals and their functions, students must be involved mentally, physically and socially to prove themselves about the truth of the theories they have learned through the scientific process. As a result, when the test is held, the science value obtained by students is very low (Triyanti, Murtono, & Sri, 2021).

**Corresponding author: aftikaputri94@gmail.com*

Based on the above assumptions, the researcher offers an alternative action to overcome the existing problems in the form of applying other learning models that prioritize student activities and provide opportunities for students to develop their potential to the fullest. The learning model in question is the *Think Pair Share* learning model.

*Think Pair Share* learning model is learning that gives students the opportunity to work alone and collaborate with others. This model can activate all students during the learning process and provide opportunities for collaboration between students who have heterogeneous abilities (Aluvalu, Kulkarni, & Asif, 2017). Meanwhile, according to Hamdayama (2014: 201), the *Think Pair Share* type or think in pairs share is a type of learning designed to influence student interaction patterns.

The *Think Pair Share* learning model has several advantages, namely: 1) It gives students more time to think, answer and help each other, 2) It is easier and faster to form groups, 3) Students are more active in learning because they complete their assignments in groups, where each group only consists of 2 people, 4) Students have the opportunity to present the results of their discussions with all students, so that the ideas can spread, 5) Allowing students to formulate and ask questions about the material being taught, because they indirectly get examples of questions posed by the teacher and have the opportunity to think about the material being taught.

Based on the description, it can be concluded that the *Think Pair Share* learning model is in accordance with the characteristics and needs of elementary school students. This model can improve students' ability to remember information and a student can also learn from other students and convey their ideas to each other to be discussed before being presented in front of the class. In addition, *Think Pair Share* can also improve self-confidence and all students are given the opportunity to participate in class. *Think Pair Share* as a cooperative learning method which consists of 3 stages, namely thinking, pairing, and sharing. The thinking process (thinking) students are invited to respond, think and look for answers to the teacher's questions, through the pairing process students are invited to work together and help each other in small groups to jointly find the most appropriate answers to the teacher's questions. Finally, through the sharing stage, students are invited to be able to share the results of the discussion with friends in one class. So, through this *Think Pair Share* model, students' mastery of academic content on subject matter can increase and ultimately improve student achievement.

The effectiveness of the *Think Pair Share* model in science learning is strengthened by research conducted by Widiantara, Kristiantari, & Ganing (2014) showing that the *Think Pair Share* type cooperative learning model assisted by visual media has an effect on mathematics learning outcomes in fifth grade students of Public Elementary School Gugus Petulu for the 2013/2014 school year. This is due to differences in syntax in the learning process. The advantages of the *Think Pair Share* learning model emphasize the discussion process so that students can communicate their opinions and learn from their friends' ideas. While conventional learning does not use a definite syntax, in learning it is more adapted to the circumstances and the wishes of the teacher when teaching students, so that students tend to only be passive learners.

Based on the background that has been stated previously, the researcher wants to know the effectiveness of the conventional learning model or lecture by comparing it to the *Think Pair Share* model in learning science grade IV in elementary schools. Researchers want to examine a problem through experimental research entitled "Effectiveness of the *Think Pair Share* model on science learning outcomes for grade 4."

## 1.1 Conceptual Framework

Understanding self-study in general is a change in the person who learns because of experience with a series of activities. For example, by reading, observing, listening, imitating, remembering, and so on. According to Rudin et al. (2022) states, "learning is an active process, what is meant by an active process here is, not only activities that look like body movements, but also mental activities, such as thinking processes, remembering and so on." Meanwhile, according to Yew & Goh (2016) argues that, "learning is a process of changing individual behavior through interaction with the environment".

In learning there is a learning process, the learning process is influenced by two main factors, namely factors from within students and factors that come from outside students. factors that come from students, especially their abilities. Besides the ability factors of students, there are other factors such as learning motivation, interest and attention, attitudes and study habits, perseverance, socio-economic physical factors and psychological factors (Sudjana, 2015).

Science or Science is a collection of knowledge about natural phenomena that are compiled and formulated systematically based on the process of applying the scientific method (Khotima et al., 2021). As stated in Minister of National Education Regulations Number 22 of 2006 concerning Standards of Content for Primary and Secondary Education Units, science education is expected to be a vehicle for students to learn about themselves and the natural environment, as well as prospects for further development in applying it in everyday life. Meanwhile, according to Budiastra et al. (2020) states that: Natural science as a scientific discipline is also referred to as a natural science product because it is a collection of results of empirical and analytical activities carried out by scientists for centuries. Natural Science as a product in the form of facts, concepts, principles, and science theories.

Referring to Minister of National Education Regulations number 22 of 2006, it can be concluded that science is an important subject for students. In order for the goals of science to be achieved, learning in schools must be meaningful to students. Therefore, a teacher must design effective and meaningful learning by using appropriate learning models, so

that students can understand concepts and be able to apply them in everyday life. However, in learning science in grade IV Public Elementary School in Bonang Regency, teachers still often use conventional learning models. Learning only uses lecture, discussion, and question and answer methods. Teachers like to appoint students to memorize and take notes on extensive and plentiful science material. Referring to the initial conditions of science learning, students get bored quickly, passively, and pay less attention to the teacher's explanation (Amin et al., 2021).

Shaturaev (2014) argue that the science teaching and learning process should be more emphasized on the process skills approach, so that students can find facts, build concepts, theories and scientific attitudes that can have a positive effect. on the quality of educational processes and products. It is necessary to develop a science learning model that involves students actively in learning activities to find or apply their own ideas (Slamet, et al., 2021). In this regard, one of several science learning strategies that are considered appropriate is the think pair share learning model.

*Think Phair Share* (TPS) is a type of cooperative learning designed to influence student interaction patterns. First developed by Frank Lyman at the University of Maryland, he stated that “Think Phair Share is an effective way to vary the atmosphere of class discussion patterns. TPS type cooperative learning gives students the opportunity to work alone and cooperate with others. Meanwhile, according to Prahl (2017) suggests that "*Think Pair Share* helps students develop understanding of concepts and subject matter, develop the ability to consider the values of a subject matter".

*Think Pair Share* aims to allow students to think before sharing among pairs or groups or with the whole class. Students often wish to share ideas in pairs or groups and then present them to the rest of the class. In the Think Pair Share learning model there are steps, namely: 1) Step 1 [Thinking]: the teacher asks a question or problem related to the lesson and asks students to take a few minutes to think for themselves the answer or problem. Students need an explanation that speaking or doing is not part of thinking, 2) Step 2 [Pairing]: then the teacher asks students to pair up and discuss what they have learned. Interaction during the time allotted can unify answers if a question is asked or unify ideas if a specific problem is identified. Normally the teacher gives no more than 4 or 5 minutes to pair up. 3) Step 3 [Sharing]: In the final step, the teacher asks the pairs to share with the whole class what they have talked about. It is effective to go around the room from couple to couple and continue until about half of the couples have had a chance to report.

Thus, the researcher can describe that the steps in *think pair share* are the educator explains the points of the material to be taught and the teacher asks questions or problems related to the material. Then students are given approximately 5 minutes to think individually. After that, the next step, the teacher asks each student to pair up, to discuss the results of their thoughts with each group in pairs. The activity ended with sharing their answers with all students in the class. The teacher asks the pair or group to share or convey their thoughts.

## 1.2 Research Objectives

This study was conducted to analyze the effect of the *think pair share* learning model on the science learning outcomes of fourth grade students in elementary schools.

# 2. Methodology

## 2.1 Research Design

This study uses a quantitative approach with the type of experiment that aims to test the hypothesis from the data that has been collected in accordance with the previous theories and concepts. Experimental research is research that is intended to determine whether there is a consequence of "something" imposed on the subject under investigation (Arikunto, 2010:20).

The design of this study used a *quasi-experimental design* with a *nonequivalent control group design*. This design involved two groups, namely the experimental group and the control group. This is in accordance with the opinion of Sugiyono (2012: 79) who argues that, "In the nonequivalent *control group design*, one group is given treatment and the other is not treated, meaning the same as usual"**.**

This research was conducted to see the effect on the science learning outcomes of fourth grade students by using different learning models and tested in different classes where the first class became a control class whose learning was using conventional learning models and the second class became an experimental class whose learning used a learning model. *think pair share*.

## 2.2 Respondents of The Study

The population in this study were all fourth-grade students in the Ahma yani cluster as many as 52 students. The research sample was the fourth-grade students of Public Elementary School No. 1 Gebangarum as the control group as many as 30 students and the fourth-grade students of Public Elementary School No. 2 Gebangarum as the experimental group as many as 27 students. The sampling technique is purposive sampling.

The data collection technique in the study used: 1) *pre-test* carried out with the aim of knowing the extent to which the material or subject matter to be taught could be mastered by students (Sudijono, 2011:69), this test was carried out before the learning model was given to students and carried out to find out whether the research sample is normally

distributed and homogeneous so that the expected research results are truly the impact of the treatment given, 2) the *post-test* or final test is carried out with the aim of finding out whether all the subject matter that is classified as important can be mastered as well as possible by students, thus it can be seen whether the final test is better, the same, or worse than the initial test results. If the final test results are better than the initial test, it can be interpreted that the teaching program has been running and has succeeded as well as possible, 3) Documentation is used to strengthen the data obtained and is also used as authentic evidence that the researcher has actually carried out the research. The researcher will collect the following documents: Student Worksheet (LKS), *posttest*, e-mail, student list data, student group list, group score data, and posttest score data.

According to Arikunto (2015) states that, "Research instruments are tools selected and used by researchers in their activities of collecting data so that these activities become systematic and facilitated". Based on this opinion, the research instrument is a tool used to obtain the necessary data. The research instrument used test sheets in the form of *pretest* and *posttest* which were carried out by students before and after being given treatment. Both tests are made based on Basic Competence (KD). This learning outcome test is used to measure the extent to which students master the material provided.

Data analysis used is validity test, reliability test, homogeneity test, average similarity test, differentiating test, gain index calculation.

## 3. Findings and Discussion

The following are the results of data collection to analyze the learning outcomes of fourth grade science using the *think pair share* learning model.

## 3.1 Learning Outcomes

Learning outcomes consist of cognitive, affective, and psychomotor domains. The learning outcomes of the three domains are known from the final test scores, psychomotor scores and attitude scores. The final test is carried out at the end of the meeting. The final test was conducted to determine the extent to which students understood the material that had been taught by the teacher.

### 3.1.1 Control Class *Pretest* and *Posttest* Results (*Conventional*)

The control class was also given learning material about caring for living things in grade IV at Public Elementary School No. 1 Gebangarum, Bonang Demak which was held on 22 and 23 February 2021. The difference between the control class and the experimental class was that the control class was not given treatment in learning, only using conventional learning methods. namely lectures in front of the class, students listen while the experimental class is given a learning action that is using the *think pair share* learning model.

The first meeting gave a pretest to determine the students' initial abilities, then the second meeting the implementation of learning with the lecture method and *posttest* learning outcomes Science theme 3 caring for living things, the instrument was a multiple choice test that measured students' abilities in caring for living things which were adjusted to the achievement indicators. .

To find out whether there is an influence given to the use of conventional learning models based on the results of statistical calculations using the SPSS for Windows 24 program for the posttest pretest control class can be seen as follows:

**Table 1. Descriptive statistics of control class**

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Pre-Test Control | 30 | 53.33 | 80.00 | 64.0000 | 7.34555 |
| Post-Test Control | 30 | 60.00 | 86.67 | 72.8887 | 7.61774 |
| Valid N (listwise) | 30 | | | | |

In this study, the researcher acts as a teacher, the researcher uses a pretest and posttest sheet which aims to observe whether the teacher has designed and implemented the lesson well. Observations were made by the classroom teacher. Based on the SPPS output above, it can be explained that the *pretest* obtained a minimum score of 53.33 while the maximum value was 80 and the average was 64. The standard deviation was 7345. on the posttest test the control class has a minimum score of 60 while the maximum value is 86.67, the mean average is 72.88, the standard deviation is 7.617 so it can be concluded that learning outcomes using this conventional learning model cannot increase because in this learning students are only monotonous and cannot think creatively so that student learning outcomes cannot reach the minimum completeness criteria well.

### 3.1.2 The results of the Think Pair Share group pretest and posttest

In the experimental class, namely at Public Elementary School No. 2 Gebangarum, it was held on February 24 and 25, 2021 with two meetings, the first meeting gave a *pretest* to determine the students' initial abilities, then the second meeting was for the treatment of the *Think Pair Share* learning model and the *posttest* learning outcomes on caring material. living things, the instrument is in the form of a multiple-choice test that measures students' abilities in counting operations on whole numbers which are adjusted to the achievement indicators.

The results of statistical calculations using the SPSS for Windows 24 program for the experimental class *posttest pretest* can be seen as follows:

**Table 2. Descriptive statistics of experiment class**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Pre-Test Experiment | 27 | 46.67 | 86.67 | 63.2100 | 9.67367 |
| Post-Test Experiment | 27 | 73.33 | 100.00 | 84.4437 | 8.47359 |
| Valid N (listwise) | 27 | | | | |

In this study, the researcher acts as a teacher, the researcher uses a *pretest* and *posttest* sheet which aims to observe whether the teacher has designed and implemented the lesson well. Observations were made by the class teacher. Based on the SPPS output above, it can be explained that the *pretest* obtained a minimum score of 46.67 while the maximum value was 86.67 and the average was 63.21. Standard deviation 9.673. in the *posttest* test the experimental class has a minimum score of 73.33 while the maximum value is 100, the mean is 84.44, the standard deviation is 8.473. So, it can be concluded that learning outcomes using this *think pair share* learning model have increased so that in learning this model students can be active and work together with groups.

The results of the *pretest* and *posttest* of fourth grade students in the control and experimental groups are depicted in the graph below.

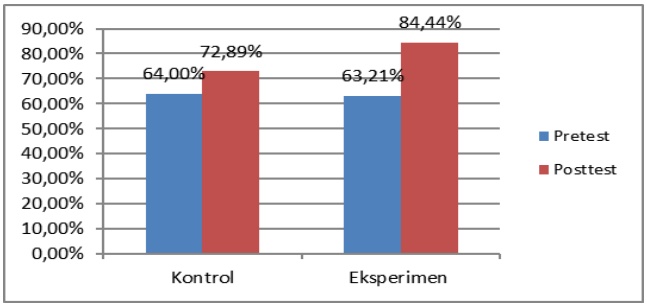


**Figure 1: Comparison of the average test results of the control and experimental classes**

It can be concluded that in this study, student learning outcomes showed that the average value of pretest and posttest in learning the *Think Pair Share* model was higher than the average value of pretest and posttest in conventional learning models. This is reinforced by the existence of research that supports the use of the *think pair share* learning model which is quoted from the research of Meiliana et al (2021) which states that the results of the difference in the average test increase, the average increase in mathematical communication skills the experimental class was 76.95% greater than the increase in the average mathematical communication ability of the control class of 50.53%. This proves that learning fractions using the *think pair share* method integrated with the environment is more effective in improving students' communication skills compared to conventional mathematics learning.

### 3.1.3 Average Similarity Test

The average similarity test was conducted to determine whether the two sample classes departed from the same average condition or not. The results of the analysis of the average similarity test data on the test scores of students' learning outcomes before learning in the experimental class 1 and experiments using One-Way Anova can be seen in the following table**.**

**Table 3. Results of the Average Similarity Test of Learning Outcomes (pretest)**

**ANOVA**

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 11.641 | 2 | 5.820 | .091 | .913 |
| Within Groups | 5384.448 | 84 | 64.101 | | |
| Total | 5396.089 | 86 | | | |

Source: Ouptut SPSS Versi 24.0

Based on the results of the analysis of the average similarity test of student learning outcomes before learning in the experimental class using One-Way Anova in the table above, the significance value of learning outcomes is 0.913 > 0.05, so it can be concluded that the two classes (experimental and control), have the same average score or the initial ability of the experimental class students is not better than the control class.

Thus, it is known that the initial abilities of the experimental and control class students are the same or not significantly different, it can be concluded that the two sample classes have met the requirements for treatment, namely providing learning with the *think pair share* learning model in the experimental class, which will then conducted a study to determine the level of difference in the effect of these treatments.

While the results of the analysis of the average similarity test of student learning outcomes after learning in the experimental class using the *think pair share* learning model at Public Elementary School No. 2 Gebangarum, the average similarity test using the One-Way Anova model can be seen in the following table:

**Table 4. Results of the Average Similarity Test of Learning Outcomes (*posttest*)**

**ANOVA**

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 4662,013 | 2 | 2331.007 | 42.639 | .000 |
| Within Groups | 4592,190 | 84 | 54.669 | | |
| Total | 9254,203 | 86 | | | |

Source: Ouptut SPSS Versi 24.0

Based on the results of the analysis of the average similarity test of student learning outcomes after learning in the experimental class using One-Way Anova in the table above, the significance value of learning outcomes is 0.000 < 0.05, so it can be concluded that the two experimental classes have unequal or non-identical (significantly different) means. The average similarity test for better understanding is described in the table below.

**Table 5. Recapitulation of Similarity Test**

| Category | Sig. Value | Decision | Information |
|---|---|---|---|
| Pre-test | 0.913 | 0.913 > 0.05 | Both experimental and control classes have the same average score or the same initial ability of students. |
| Post-test | 0.000 | 0.000 < 0.05 | The two classes have different average scores or students' abilities after being treated with different learning models have different abilities. |

Source: Data processing

If the average value of learning outcomes after learning is known there is a difference in the average learning outcomes of experimental class students who use the *think pair share* learning model at Public Elementary School No. 2 Gebangarum, then a different test is carried out using the paired-samples t-test method to determine whether the average learning outcomes of the experimental class 1 are better than the experimental class 2 or not or vice versa. The results of the t-test data analysis on the value of student learning outcomes after learning in experimental class 1 and experimental class 1 using paired sample t-test can be seen in the following table.

**Table 6. Paired Samples Test Student Learning Outcomes Paired Samples Test**

**Paired Samples Test**

| | | Paired Differences | | | | | T | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | Pre-Test Experiment-Post-Test Experiment | 21,23370 | 12,81595 | 2,46643 | 26,30352 | 16,16388 | 8,609 | 26 | ,000 |

Source: Output SPSS Version 24.0

Based on the results of the paired samples test, it can be concluded that: Based on the Pair 1 output in the paired samples test, the Sig value is obtained (2-tailed) obtained 0.000 < 0.05 or t-count 8.609 > t-table 1.68957, it can be concluded that there is a difference in the average student learning outcomes for the *pre-test* experimental class and *post-test* experimental class. Thus, it can be concluded that there is an influence of the *think pair share* learning model on the learning outcomes of caring for living beings in class IV Public Elementary School No. 2 Gebangarum, Bonang Demak.

### 3.1.4 N-Gain Test

Meanwhile, the gain index for the increase in learning outcomes for the subject matter of caring for living creatures of experimental class students at Public Elementary School No. 2 Bonang Demak which includes an increase in learning outcomes in the high category is 7 or 25.93% in the increase in learning outcomes in the medium category as many as 15 students or 55.56% and which includes an increase in learning outcomes in the low category as many as 5 students or 18.51%. In more detail, the results of the Experimental Gain index value are presented in the form of a table below:

**Table 7. Recapitulation of Experimental Gain Index values**

| No | Category | Student | % |
|---|---|---|---|
| 1 | Tall | 7 | 25.93 |
| 2 | Currently | 15 | 55.56 |
| 3 | Low | 5 | 18.51 |
| Amount | | 27 | 100% |

## 4. Discussion

Science learning for fourth grade students at Public Elementary School Bonang District, Demak Regency is still not optimal, it is indicated by the results of science learning in the material analyzing animal parts and their functions get a low average, identified based on the observations of researchers that in science learning some students look less active, less enthusiastic, and there are still many students who do not concentrate. Learning still tends to use one-way learning, so students do not understand the material. Teachers only rely on improvised material conveying tools which result in students becoming short of material for learning. Students are only treated to black and white writing with minimal pictures which makes students less motivated to learn. If this happens continuously, it will result in student learning outcomes becoming increasingly suboptimal.

The use of the model is very influential on the process and student learning outcomes, because it refers to the stage of thinking development. According to Piaget, elementary school students are still in the concrete operational stage. This situation makes students still think in real terms and cannot think abstractly. One method or media that can be used is the *think pair share* learning model. This model is in accordance with the characteristics of students where it contains material accompanied by pictures that have a three-dimensional impression when opened.

Therefore, this study was used to test the effectiveness of the *think pair share* model on the science learning outcomes of fourth grade elementary school students in Bonang District, Demak Regency.

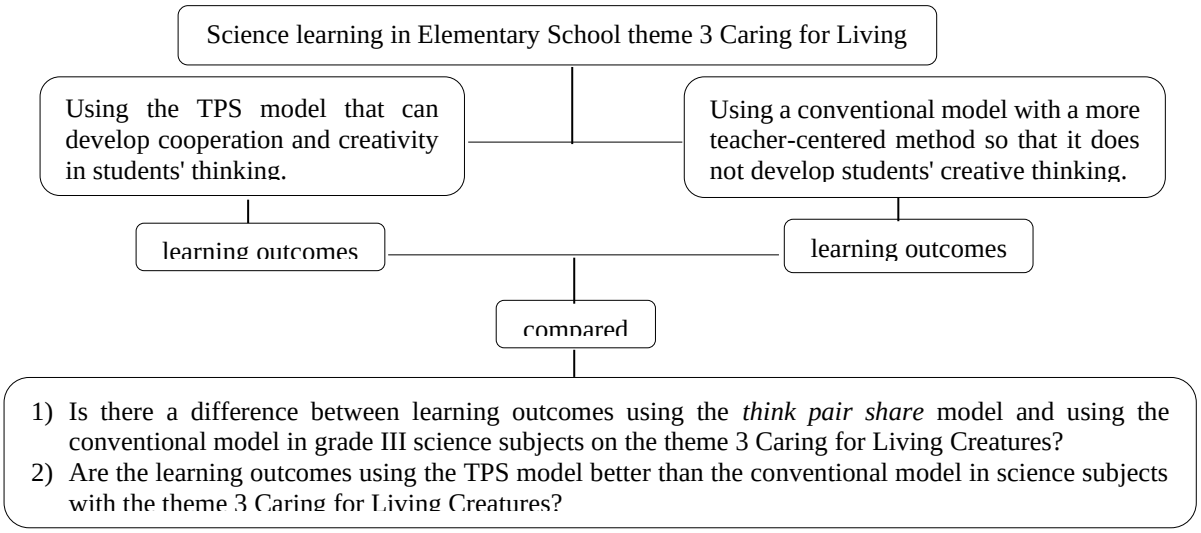


**Fig. 1: Conceptual Framework**

The next discussion analyzes whether there is an effect of the *Think Pair Share* learning model on improving student learning outcomes in caring for living things in grade IV Public Elementary School No. 2 Gebangarum. To get these answers, the test before being given treatment is called the experimental pretest and after being given treatment using the *Think Pair Share* learning model is called the experimental posttest.

Based on the research data, it is known that the pretest of the experimental class, namely grade IV Public Elementary School No. 2 Gebangarum, obtained a minimum score of 46.67 while the maximum value was 86.67 and the average or average was 63.21. The standard deviation of 9.67367 in the posttest test of experimental class 2 has an average of 84.44, a standard deviation of 8.47359, a minimum value of 73.33, and a maximum value of 100.

The next data needed is data to find out whether the two sample classes have the same average or not, so an average similarity test is carried out. From the data from the analysis of the average similarity test in the pre-test or the test before being given treatment between the experimental class control class 2, the significance value of learning outcomes was 0.913 > 0.05, so it can be concluded that both classes (experimental and control) have an average value. the same average or the initial ability of the experimental class students is not better than the control class.

However, after being given treatment, namely in the experimental class that uses the *Think Pair Share* learning model at Public Elementary School No. 2 Gebangarum, the average similarity test results are not the same or not identical (significantly different), this is based on the significance value obtained from the learning outcomes of 0.000 < 0 0.05, so it can be concluded that the experimental class after being treated with the *think pair share* learning model has an average that is not the same or not identical (significantly different).

Thus, it can be concluded that the application of the *Think Pair Share* learning model has an effect on student learning outcomes in science learning material caring for living things in grade IV Public Elementary School No. 2 Gebangarum, Bonang Demak.

## 5. Conclusion and Recommendations

Based on the results of the research and discussion, it can be concluded that there is an influence of the *think pair share* learning model on the science learning outcomes of fourth grade elementary school students, this is based on the output of Pair 2 in the paired sample testing obtained the value of Sig. (2-tailed) obtained 0.000 <0.05 or t-count 8.609 > t-table 1.68957, it can be concluded that there is a difference in the average student learning outcomes for the pre-test experimental class and *post-test* experimental class. Thus, it can be concluded that there is an influence of the *think pair share* learning model on the learning outcomes of caring for living things in grade IV Public Elementary School No. 2 Gebangarum Bonang.

Recommendations for students in order for the implementation of learning with the *think pair share* model to run smoothly, students should read the material first before learning so that the learning process runs optimally. Then, the use of time should be effective and efficient. For teachers when choosing a learning model, they should apply learning that provides opportunities for students to acquire new learning so that they can motivate student learning and can optimize student learning outcomes. the other is the *Think Pie Share* learning model.

## Acknowledgement

The author would like to thank you for participating in the elementary schools selected for my research. The author would also like to express appreciation to the master school of education at Universitas Muria Kudus for the guidance and constructive analysis of the research results.

## References

Aluvalu, R. K., Kulkarni, V., & Asif, M. (2017). Handling Classrooms with Students having Heterogeneous Learning Abilities. *Journal of Engineering Education Transformations*, *30*(3), 229-234.

Amin, S., Murtono, Madjdi, A. H., Ardianti, S. D., & Gung, Y. T. (2021). The Effect of Discovery Learning on Science Learning Achievements for Elementary School Students. *Asian Pendidikan*, *1*(2), 54-58. https://doi.org/10.53797/aspen.v1i2.9.2021

Arikunto, S. (2015). *Manajemen Penelitian,* Jakarta: Rineka Cipta.

Budiastra, A. A., Wicaksono, I., & Sanjaya, I. (2020). The New Generation Self-Directed Teaching Materials of Natural Science in Elementary Schools Validity Tests. *International Journal of Instruction*, *13*(4), 763-780.

Hamdayama, J. (2014). *Model Dan Metode pembelajaran Kreatif dan Berkarakter*. Bogor: Ghalia Indonesia.

Hariyanto, H., & Suyono, S. (2011). *Belajar dan pembelajaran: teori dan konsep dasar*. Bandung: Rosdakarya.

Khotima, D. A., Su'ad, Santoso, & Pratama, H. (2022). The Effectiveness of Android-Based Science Learning Model to Increase Student Learning Outcomes. *Asian Pendidikan*, *2*(1), 33-41. https://doi.org/10.53797/aspen.v2i1.5.2022

Meilana, S. F., Aulia, N., Zulherman, Z., & Aji, G. B. (2021). Pengaruh Model Pembelajaran Think Pair Share (TPS) terhadap Kemampuan Berpikir Kritis di Sekolah Dasar. *Jurnal Basicedu*, *5*(1), 218-226.

Permendiknas Nomor 16 Tahun 2007. *Standar Kualifikasi Akademik dan Kompetensi Guru*.

Prahl, K. (2017). Best practices for the think-pair-share active-learning technique. *The American Biology Teacher*, *79*(1), 3-8.

Rudin, C., Chen, C., Chen, Z., Huang, H., Semenova, L., & Zhong, C. (2022). Interpretable machine learning: Fundamental principles and 10 grand challenges. *Statistics Surveys*, *16*, 1-85.

Shaturaev, J. (2014). Comparative study on similarities and differences of teaching and learning process in primary schools in Indonesia and Uzbekistan. *Universitas Pendidikan Indonesia*.

Slamet, Suad, Madjdi, A. H., Arsyad Fardani, & Gung, Y. T. (2021). The Effect of Discovery Model on The Science Learning Outcomes of Class V Elementary School Students in The Wijayakusuma Cluster. *Asian Pendidikan*, *1*(2), 47-53. https://doi.org/10.53797/aspen.v1i2.8.2021

Sudjana, N. (2015). *Dasar-Dasar Proses Belajar Mengajar.* Bandung: Sinar Baru Algensindo.

Sugiyono. (2014). *Metode Penelitian Kuantitatif, Kualitatifdan R&D*. Bandung: Alfabeta.

Triyanti, Murtono, & Sri, U. (2021). Problem Based Technology and Science Development to Improve Science Learning Outcomes in Elementary Schools. *ANP Journal of Social Science and Humanities*, *2*(2), 151-156. https://doi.org/10.53797/anp.jssh.v2i2.21.2021

Widiantara, G. N. T., Kristiantari, M. R., & Ganing, N. N. (2014). Pembelajaran Kooperatif Tipe TPS Berbantuan Media Visual Meningkatkan Hasil Belajar Matematika Siswa Kelas V SD. *MIMBAR PGSD Undiksha*, *2*(1).

Wuryandani, W. (2021). The Effect of the Think-Pair-Share Model on Learning Outcomes of Civics in Elementary School Students. *Cypriot Journal of Educational Sciences*, *16*(2), 627-640.

Yew, E. H., & Goh, K. (2016). Problem-based learning: An overview of its process and impact on learning. *Health professions education*, *2*(2), 75-79.