

# Increasing The Activeness and Learning Achievement of Fourth Grade Students in Science Subjects Through Cooperative Learning Model at SDN Brebeg 01

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## ABSTRACT

Low student activeness and learning achievement are the background of the problem. The goal is to improve student activeness and learning achievement. This research uses the Classroom Action Research method. The research subjects were fourth grade students totaling 34 students, consisting of 17 male students, and 17 female students. Data collection techniques are observation, documentation, and tests. This research consisted of two cycles. Each cycle consists of two meetings and four stages, namely planning, action, observation and reflection. The research was conducted in September 2021. The application of the Think Pair Share type of Cooperative Learning model can increase activity and improve science learning achievement more than using the lecture and question and answer method. The data shows that in the pre-cycle student activeness was only 10 students, 8 students completed learning and the class average was 58.2 and in cycle 1 it increased to 24 active students, 22 students completed learning and the class average was 72.1. In Cycle 2, there were 34 active students, student 32 completions, and a class average of 82.9.

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## 1. INTRODUCTION

Education is one of the basic transactional communication processes that is reciprocal, both between students and teachers and between students and other students, in order to achieve predetermined goals. Education has the aim of developing students to become human beings who are faithful and devoted to God Almighty, have noble character, are healthy, knowledgeable, capable, independent, creative, and become democratic and responsible citizens [1]. In order to achieve this goal, teachers or educators carry out guidance, teaching and training activities. The role of educators is very dominant to provide more meaningful education in all learning at school. One of them is learning in Natural Science subjects.

Natural Science is simply defined as the study of the phenomena of the universe [2]. This science is important for humans to learn to fulfill their needs. Einstein stated "Science is the attempt to make the chaotic diversity of our sense experience correspond to a logically uniform system of thought" [3]. Natural Science or Science is one form of effort that makes various experiences into a certain logical system of thinking patterns, known by the popular term scientific thinking patterns.

Natural Science is taught with methods that do not attract students' attention, so that understanding of the material is not maximized. As in the researcher's class, namely class IV SDN Brebeg 01 in the Natural Sciences subject in the 2021 / 2022 academic year with material on the human body skeleton and its functions. The

results of observations and formative tests in the initial study of 34 students were only 10 students active in learning and 8 students who completed learning, so there were still 26 or 76% of students who had not reached the minimum class completion criteria of 70.

Based on the results of the formative test in the initial study conducted by the researcher, some data regarding students' shortcomings in learning were obtained through observation, reflection, and interviews. The students' shortcomings in learning included lack of attention when learning took place, lack of interest and boredom in learning, talking to themselves during lessons, not paying attention when the teacher explained the lesson, and a lack of understanding of the subjects being taught..

The researcher tried to analyze the problem by conducting discussions and exchanging information with the supervisor, principal, and peers, as well as by surveying students about the learning process. Based on a series of activities, it can finally be suspected that the factors causing the above problems are: the material covered by the teacher is too fast, the language used by the teacher is difficult for students to understand, the teacher does not involve students actively in learning, the teacher has not used teaching aids that can attract students, and the learning model used is not appropriate for involving students' activeness in learning.

One of the alternatives to overcome the above problems is Classroom Action Research (PTK) which consists of four steps, namely Planning, Action, Observation and Reflection through the Think Pair Share type Cooperative Learning model to increase student activeness and learning achievement in science learning for fourth grade students of SDN Brebeg 01 Jeruklegi District.

The Think Pair Share Cooperative Learning Model is one type of cooperative learning that aims to influence interactions between students [4]. The Think Pair Share learning model was first developed by Fran Lyman, who stated that it is an effective learning model for creating a variety of active class discussions. Think Pair Share can give students time to think more actively, respond, and help each other, so that learning becomes active.

There are three steps in the Think Pair Share model, namely thinking, pairing and sharing [5]. In the thinking step the teacher gives a problem for students to think about independently in about 3 minutes. In the pairing step, the teacher divides students into pairs. Students have the opportunity to share ideas with their partner and discuss to find the correct answer. In the final sharing step students share the results of paired discussions with other pairs. Students share answers to all friends in front of the class. Ended with the conclusion of the most appropriate answer to the problem given.

The steps of the Think Pair Share Learning Model make students more active. Students are accustomed to thinking, exchanging opinions with partners and sharing ideas in front of the class. The use of this learning model matches the characteristics of students, namely forming treatment as a result of the learning environment [6]. Designing learning by using the right learning model can provide opportunities for students to do activities actively.

The advantages of the Cooperative Learning Model type think pair share include: 1) Students are required to think and answer problems so that it will arouse student participation, 2) this model is suitable for solving simple problems, 3) Students as members have the opportunity to contribute to their group, 4) Interaction is easier between pairs [7].

The advantages of this Think Pair Share (TPS) learning model make students more active in learning because they can discover their own knowledge based on their own ideas, train them to think creatively and critically when solving problems, cooperate with their partner friends, and share the best ideas in front of the class. Learning activities become more interesting, and there is more interaction between students since almost every step of problem solving is discussed in pairs and groups.

The application of the think pair share (TPS) learning model is expected to improve student achievement and increase student activeness in the learning process. By familiarizing students to solve problems independently and cooperatively, it is expected to help students overcome various learning difficulties related to natural science learning.

Learning is a process of acquiring competence in knowledge, skills, and attitudes [8]. Through learning, students can gain new experiences and knowledge. Learning is essential for students in order to achieve satisfactory learning outcomes.

Learning achievement is a result that a person achieves after doing learning activities. Winkel states that learning achievement is evidence of learning success or one's ability to carry out learning that refers to the weight achieved [9]. Students will improve their learning achievement when they can apply learning in everyday life.

## 2. RESEARCH METHODS

This research was conducted using the method of classroom action research or PTK. Classroom action research is an action research conducted by teachers who conduct research simultaneously in their classrooms or collaborate with others by planning, observing, implementing and reflecting on activities that are collaborative

and participatory with the aim of improving or improving the quality of the learning process in their classrooms through a certain action (treatment) in a cycle [10].

The subjects of this study were fourth grade students of SDN Brebeg 01, totaling 34 students. As seen in this study, the researcher acted as a teacher in the classroom. Observer I is the fifth grade teacher of SDN Brebeg 01, and a peer as observer II. Each cycle was held 2 times a meeting. The implementation of each cycle should go through the stages of planning, action, observation, and reflection.

Research instruments are tools or devices used by researchers in data collection to facilitate work and improve results in the sense that they are more accurate, complete and systematic so that they are easier to process. The instruments used are: Observation Form To evaluate the researcher's performance during the study, the observer filled out an observation form that recorded the researcher's actions based on the steps outlined in the lesson plan. The observation form is divided into two parts: the teacher activity observation form and the student activity observation form.

The data analysis technique used in this research is a combination of qualitative and quantitative data. Therefore, data analysis to analyze the collected data includes comparative descriptive techniques and critical analysis techniques. For quantitative data, comparative descriptive statistical techniques were used, namely comparing results between cycles. Critical analysis techniques are related to qualitative data. Critical analysis techniques include measuring the disclosure of learning quality, student responses, opinions and opinions based on normative criteria obtained from theoretical studies and existing regulations.

This assessment aims to improve student learning achievement by assessing the level of student achievement at the end of each cycle, where the test will be in the form of a written test. Individual completeness learning results are processed according to the formula:

$$\text{Percentage Level of Individuals} = \frac{\text{Total score of values obtained}}{\text{Maximum Score}} \times 100$$

Students are said to be complete if their scores are equal to KKM or higher. The criteria for class completeness in Natural Science subjects is 70. Determining classical completeness the formula used is:

$$\text{Classical Completeness} = \frac{\text{Number of students who completed}}{\text{Total number of students}} \times 100$$

The success of this research is if the classical completeness of students has reached 85% of all students, and classical student activeness has reached 85% of all students. The criteria for the learning process of Natural Science in increasing activeness and learning achievement can be seen in table1.

**Table 1.** Classical Completion Interval

| Value Interval | Category       |
|----------------|----------------|
| 90 – 100%      | Very Good      |
| 80 – 89%       | Good           |
| 70 – 79%       | Good enough    |
| 60 – 69%       | Less good      |
| <59%           | Very Less [11] |

### 3. RESULT AND DISCUSSION

Researchers analyzed data on student activity and learning achievement in the pre-cycle which was carried out on September 6, 2021, with the aim of determining the increase in student activity and learning achievement in learning Natural Sciences on the material of the Human Skeleton and its functions. The pre-cycle results were used as a comparison of student activity and learning achievement after using the Think-Pair-Share cooperative learning model in the Natural Sciences subject of Human Skeleton and its functions in Class IV of SDN Brebeg 01.

Based on the data of students' scores before the action of 34 students, only 8 (23.53%) students have reached the KKM, and 26 (76.47%) students have not reached the KKM score. Student activeness in pre-action out of 34 students only 10 (29.41%) students were active in participating in learning.

The results of student assessment on the material of the human skeleton and its functions using the Think Pair Share cooperative model in Cycle I were still classified as sufficient, with an average of 72. The average results of student assessment in Cycle I increased from before the action, namely from 58 in the very poor category to 72 in the sufficient category. In Cycle I, there were 22 students, or 64.71%, who reached individual completeness. Students who have not completed individually amounted to 12 students, with a percentage of 35.29%. Student activeness in Cycle I was 24 students, or 70.59%.

The students' learning achievement on the material of the human skeleton and its functions using the Think Pair Share cooperative model in Cycle II was classified as good, with an average of 83. In Cycle II, there were 32 students, or 94.12%, who reached individual completeness. Students who were not individually complete amounted to 2 students, with a percentage of 5.88%. Student activeness in Cycle II reached 34 students, or 100%.

To know clearly the improvement of each cycle can be seen in the graph below:

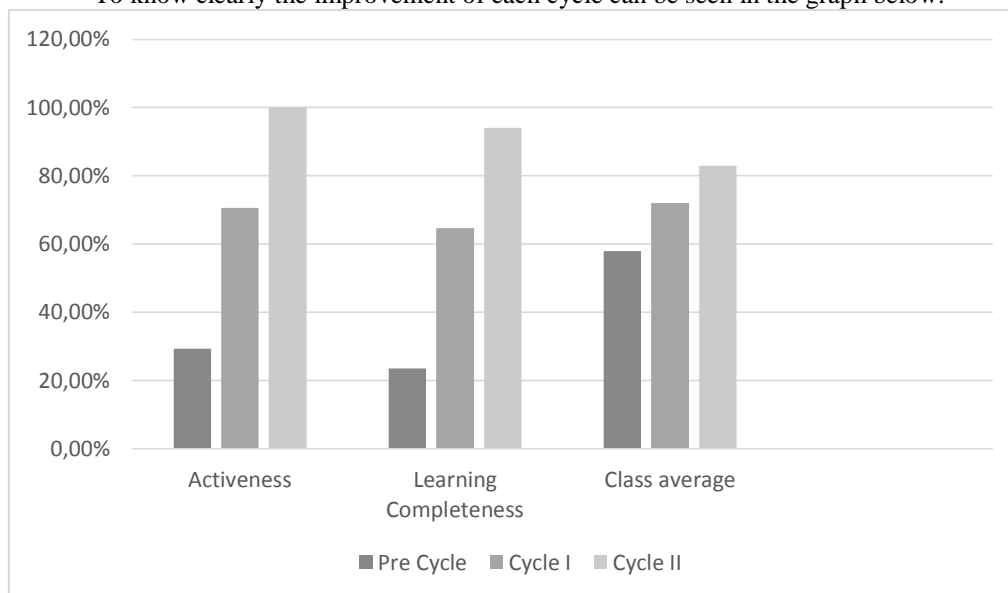


Figure 1 (Comparison Chart of Student Grades in Pre-action, Cycle I, and Cycle II)

Based on Figure 1, it can be concluded that the Think Pair Share cooperative learning model increased the activeness and learning achievement of students at SDN Brebeg 01 Jeruklegi on the material of the human skeleton and its functions. In Cycle II, the teacher implemented and applied the model well, and students actively participated in the learning process.

The success of the learning improvements mentioned above is inseparable from the theories and opinions of educational experts that researchers have used as reference materials. As stated by Lie, the Think Pair Share learning model is the optimal way to increase student participation [12]. Whereas a classical method allows only one student to come forward and share the results for the whole class, this Think Pair Share model provides at least eight times more opportunities for each student to be recognized and demonstrate their participation in front of others.

#### 4. CONCLUSIONS

Based on the data before the application of the Think Pair Share cooperative model, it is known that the pre-action student learning outcomes of the Natural Sciences subject on the material of the human skeleton and its functions were still lacking, namely with an average of 58, student learning activeness of 29.41%, and classical completeness of 23.53%. Student activeness and learning achievement in cycle I experienced an increase from before, namely from an average of 58 to a class average of 72, student learning activeness of 70.59%, and classical completeness of 64.71%. In cycle II, the average student learning outcome was 83 with 100% student activeness and 94.12% classical completeness. Out of 34 people, 32 had reached individual completeness, while student learning activeness was 100% and classical student completeness had reached 94.12%, and only 2 students were not complete (5.88%). Student activeness and learning achievement had reached the predetermined criteria.

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