Application of cooperative model make a match to improve student learning achievements on lesson of materials functions of human digestive organs in fifth grade on primary school

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Abstract. This study aims to improve student learning outcomes of fifth grade on the material function of human digestive organs by applying cooperative learning model Make a Match in science learning in primary school. Research method used is Classroom Action Research which starts from planning, implementation, observation and reflection then made improvement planning used in next cycle. This research consists of two cycles, each cycle is done in two meetings. The results showed that by applying cooperative learning model Make a Match in science learning can improve student achievement. Assessment of Cycle I RPP was 73% and increased by 10% to 83% in cycle II. While the implementation of learning cycle I by 77% and increased by 6 percent to 83% in cycle II. The results of student achievement in the first cycle of 74% and increased by 12% to 86% in cycle II. Based on the data analysis, it can be concluded that the application of cooperative model of Make a Match in science lesson can improve student achievement in fifth grade.

1. Introduction
Primary school education is the most basic skill development process of each student, where the student learns actively because of the encouragement within himself and the existence of an atmosphere that provides ease (conducive atmosphere) for his optimal development. One of the subjects in the SD curriculum is Science (IPA). Science learning in primary schools emphasizes the provision of a hands-on learning experience through the use and development of process skills and scientific attitudes. So it is necessary to create the conditions of science learning that can encourage active and curious students.

Winkel through Sunarto [1] argues that the achievement of learning is one proof that shows the ability or success of a person who did the learning process in accordance with the weight or value he achieved, but student achievement of fifth grade in SDN Pasirjengkol III can be categorized quite low. This can be seen from the results of daily tests obtained by students have not reached the Minimum Exhaustiveness Criteria (KKM), it can be seen from the number of students who do not meet the KKM there are 77% or as many as 33 students, and who meet the KKM only 23% or as many as 10 students.

The low level of learning achievement of children is low because in science learning activities in fifth grade SDN Pasirjengkol III usually teachers always use monotonous learning model, and always use conventional model (lecture) where the students only listen to the explanation from the teacher, record and do the exercises only, so the active participation of students in the learning process is still low. In addition, the lack of teachers' ability to use interesting and varied learning models in science learning, thus causing saturation and low student achievement in SDN Pasirjengkol III.
Seeing the problems that occur above, the need for a change model of learning more precise and interesting to motivate students to study hard. Therefore, researchers choose one of the learning models that can improve the learning achievement of science in fifth grade SDN Pasirjengkol III is a model of learning Make a Match.

2. Experimental Method
The subjects of this study are students of grade V SDN Pasirjengkol III, amounting to 43 students. The number of male students is 20 students, while the female students are 23 people. Students' learning ability of fifth grade is categorized into students with high ability, moderate, low, and very low.

The research method used in this research is classroom action research. Sanjaya [2] argues that classroom action research is a process of studying learning problems in the classroom through self-reflection in an effort to solve the problem by performing planned actions in real situations and analyzing any influence of the treatment. This research is implemented in two learning cycles with each cycle consisting of two learning meetings. Data collection techniques used in this study is through tests, observations, documentation, field notes and data analysis.

The problem that became the focus of research is the low achievement of students in science learning material function of human digestive organs in fifth grade SDN Pasirjengkol III. The alternative problem solving is the application of cooperative learning model Make a Match. Curran (Huda) [3] explains that Make a Match is a pair-searching technique, students are combined to find a partner from the card they hold. With this technique it is expected that the teacher can give opportunity to the students to share the ideas and consider the most appropriate answer, and can encourage the students to the spirit of cooperation.

The steps of Make a Match to be used in this study are as follows: (1) The teacher prepares the cards containing questions and answers about the subject matter to be taught, (2) The size of the card to be used is 10cm X 10cm with an attractive card background for children, (4) Cards are ready, then the cards are distributed to each student at random, (5) All get a card, group it between the question card holders and the group of answer card holders, position the students standing face to face. This position aims to make students easy to find their partner, (6) The two groups facing each other, students looking for matching card pairs by finding out who holds the pair of cards he holds. Teachers should give a time limit of 2 minutes to find a partner for students more spirit, (6) One round, the cards are shuffled again so that each student gets a different card than before, and so on, (7) After meeting with each other, the students join a group learning to do the next task from the teacher [4].

The Classroom Action Research design that will be used refers to the model of Classroom Action Research Hopkins (Arikunto) [5]. According to Hopkins, Classroom Action Research can be viewed as a spiral cycle of planning, action execution, observation (observation), and reflection followed by subsequent spiral cycles. The indicators of success in this study are as follows: (1) If the assessment of the RPP reaches 80% percentage, (2) If the learning implementation reaches 80% percentage, (3) If student achievement reaches 80% percentage.

3. Result and Discussion

3.1. Result
This section presented the results and discussion of research focus items, namely: (1) Learning Implementation Plan (RPP) by applying cooperative learning model of Make a Match; (2) application of cooperative learning model of Make a Match; (3) improvement of student achievement through application of cooperative learning model of Make a Match.

a. Observation data of RPP cycle I. Planning learning (RPP) cycle I according to the observer is good. But there are some aspects that are still considered less, namely the organizing of teaching materials, the selection of learning resources / media, and the suitability of the techniques with the learning objectives formulated. Based on the assessment of lesson planning (RPP) cycle I in the learning activities through the implementation of cooperative model Make a Match showed a percentage of
73%. However, it has not reached the desired target of 80% so it becomes a reflection material for the next lesson planning for the better.

b. Data on the implementation of learning cycle I. The implementation of learning cycle I according to the observer is good. However, there are some aspects that are still considered to be lacking, namely the aspects of mastery of learning materials, the attribution of the subject matter with other relevant knowledge, the mastery of the class, the appropriateness of instructional implementation with specified time allocation, and the final assessment according to competence. Based on the assessment of the implementation of learning cycle I in the learning activities through the implementation of the model make-Match cooperative showed a percentage of 77%. However, it has not reached the desired target of 80% so it becomes a reflection material for the implementation of the next lesson for the better.

c. Data test results achievement learning cycle I. Data of student achievement result of cycle I shows that students who reach KKM as much as 32 people or equal to 74% and 11 person or equal to 26% have not reached KKM. It has not reached the desired target that is 80% so it becomes the reflection material for the next cycle to increase even more.

Thus, based on observational data, the results of analysis of cycle I data on RPP observation results, implementation of learning, and student achievement can be described clearly in the following diagram.

The results of the research cycle II are as follows:

a. Observation data of RPP cycle II. Planning learning (RPP) cycle II according to the observer is good. The assessment of lesson planning (RPP) cycle II in the learning activities through the application of cooperative model Make a Match shows the percentage of 83%. After confirmed with the success indicator, the lesson planning (RPP) in cycle II has exceeded the desired target of 80% so that the learning plan (RPP) that has been made declared successful.

b. Data on the implementation of learning cycle II. The implementation of learning cycle II according to the observer is good. The assessment of the implementation of learning cycle II in the learning activities through the implementation of the model Make-Match cooperative showed a percentage of 83%. Once confirmed with success indicator, then the implementation of learning cycle II has exceeded the desired target of 80% so that the implementation of learning cycle II declared successful.

c. Data analysis of learning achievement results cycle II. Data result of student achievement cycle II indicate that students who reach KKM counted 37 people or equal to 86% and 6 person or 14% have not reached KKM. It has reached the desired target of 80% so the research is declared successful.
Thus, based on observational data, the results of the analysis of cycle II data on the results of lesson planning assessment (RPP), implementation of learning, and student achievement can be described clearly in Figure 2 below.

3.2. Discussion

a. RPP

RPP according to Permendiknas no. 41 Year 2007 is an elaboration of the syllabus to direct student learning activities in an effort to achieve Basic Competence (KD). RPP is a planning that describes the procedures and management of learning to achieve one or more basic competencies in the Content Standards and is the elaboration of the syllabus. Assessment of RPP of cycle I reached 73%. This is according to the observer is good. But there are some aspects that are still considered less, namely the organizing of teaching materials, the selection of learning resources / media, and the suitability of the techniques with the learning objectives formulated. Assessment of RPP of cycle II reached 83%. This is according to the observer is good because almost all aspects are complete. Based on the above explanation, it can be said that the RPP has been made to improve student learning achievement on the material function of the digestive organs in humans. This is evident from the complete teacher planning for every aspect of the RPP. It can be seen based on the RPP assessment using the RPP section. In the second cycle reached the percentage of 83%. Thus, the RPP in cycle II has been satisfactory and has exceeded the desired target. Thus the RPP has been made declared successful.

b. Implementation of learning

According to Sudjana [7] "Implementation of learning is a process that is arranged in such a way according to certain steps for the implementation to achieve the expected results". Permendiknas No.41 Year 2007 explained that the implementation of learning is the implementation of RPP. Implementation of learning includes preliminary activities, core activities, and closing activities. Assessment of the implementation of learning cycle I reached 77% percentage. This is according to the observer is good. However, there are some aspects that are still considered to be lacking, namely the aspects of mastery of learning materials, the attribution of the subject matter with other relevant knowledge, the mastery of the class, the appropriateness of instructional implementation with specified time allocation, and the final assessment according to competence. Thus, there needs to be an improvement in the next cycle for some of these aspects and additions to other aspects. Assessment of the implementation of learning cycle II reached the percentage of 83%. This is according to the observer is good. the implementation of learning in cycle II has exceeded the desired target. Thus the implementation of learning that has been done declared successful.

c. Student achievement

According to Big Indonesian Dictionary [8] explained that learning achievement means: (1) The mastery of knowledge or skills developed by subjects, typically indicated by the value of the test or the value of the grade given by the teacher, (2) Real or perceived abilities (actual abilities) and which can be measured directly by specific tests. According to Suryabrata [9] achievement can also be defined as
follows: "Value is the last formulation that can be given by the teacher about student's progress / achievement during certain period". Thus, achievement is the result of a student's effort during a certain period of activity. Results of student achievement achieved after learning by applying cooperative model make a Match in cycle II reached the percentage of 86%. Thus, student achievement in cycle II has exceeded the desired target. Thus, the study is said to be successful.

4. Conclusion
Based on the results of research with the title "Application of cooperative model make a match to improve student achievement in science lesson of function of human digestive organs in fifth grade on primary school", the researcher can draw the following conclusion:

a. RPP that has been made to improve student learning achievement on the material function of digestive organs in humans. This is evident from the complete teacher planning for every aspect of the RPP. It can be seen based on the RPP assessment using the RPP section. In cycle II reached the percentage of 83% (very good category). Thus, the learning plan in cycle II has been satisfactory and has exceeded the desired target. Thus the learning plan that has been made is declared successful.

b. Implementation of learning by applying the model of Cooperative Make a Match can improve student learning achievement on the material function of digestive organs in humans. This can be seen from the implementation of learning activities from preliminary activities, core activities, and closing activities that are more effective and fun and involve students actively so that student learning achievement increases. The results of the implementation of learning in cycle II reached a percentage of 83% (very good category). Thus, the implementation of learning in cycle II has exceeded the desired target. Thus the implementation of learning that has been done declared successful.

c. Student achievement result achieved after learning by applying cooperative model Make a Match in cycle II reaching percentage equal to 86%. Thus, student achievement in cycle II has exceeded the desired target. Thus, the study is said to be successful.

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