

Implementation of the Make a Match Type Cooperative Learning Model in Improving the Mathematics Learning Outcomes of Grade IV Students at MI Al-Aqsha Mola

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Abstract

This study aims to determine the learning outcomes of students in Mathematics after using the Make A Match cooperative learning model. The subjects were 14 students of grade IV MI Al-Aqsha Molas. This classroom action research was carried out continuously through two cycles, consisting of 4 stages, namely: planning, action, observation and reflection. Each cycle was carried out in 3 meetings and at the end of each meeting a post-test (end of cycle test) was carried out. Data collection techniques were carried out through observation and testing. Data collection used instruments in the form of observation sheets of student activities and teacher performance in the learning process. To determine the achievement of student learning outcomes, an evaluation sheet was used consisting of a pre-test and post-test. The results show that the implementation of Make a Match type cooperative learning in Mathematics subjects can improve the learning outcomes of grade IV students of MI Al-Aqsha Molas. So, classroom action research was declared successful because it had achieved the indicators of success of the action that had been set.

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Introduction

Learning is a teaching and learning process between teachers and students, where a teacher tries to prepare students to become knowledgeable and noble citizens who are useful for their nation and religion. Learning objectives describe the form of behavior or expected abilities that students can have after the learning process by making learning plans, because the learning process begins with careful planning. If the planning is done well, then half the success can be achieved and the other half lies in the implementation of learning, it will not necessarily achieve success if it is done carelessly so that the learning process is less interesting, boring, does not stimulate students to be active and

creative, so that learning objectives are not achieved. Therefore, good planning and proper implementation will also determine the success of the learning process (Mulyono, 1999:28). In addition, one of the important elements in the success of the learning process is the use of an effective learning model. The application of a particular learning model will affect the success in improving learning achievement in a learning process, this is also in accordance with the 2013 curriculum, learn in class requires students to be more active in learning activities. The basic objective of developing an appropriate and effective learning model is basically to create a comfortable learning atmosphere, so that they can play an active role in the teaching and learning process. Teachers in the teaching and learning process must choose and use a learning model that is appropriate to the material being taught. By using a learning model, it will greatly help improve student learning outcomes, one of the models that can be used in the teaching and learning process is the Make a Match model (making pairs).

Make a Match is one type of cooperative learning method. The Make a Match learning model can train students to actively participate in learning evenly, and requires students to work together with their group members so that responsibilities can be achieved, so that all students are active in the learning process (Rusman, 2011:223). One of the advantages of this model is that students will look for suitable partners to solve a concept and topic while learning in a pleasant atmosphere.

Based on the results of initial observations conducted at MI Al-aqsha Molas, many students have not completed the minimum completion criteria (KKM) set by the school, which is 70. The average scores obtained by students are 59.28 with a percentage of incomplete students of 64.29%. The large number of students' incomplete scores is due to students being bored with learning activities in class, so that students do not pay attention to the material taught by the teacher. The models and strategies applied in learning are also less varied and innovative, the use of media on materials that require concrete explanations is also lacking.

Based on the description of the problem, one effort to improve the quality of learning is to apply a learning model to teaching and learning activities, one of which is the Make a Match learning model. If the Make a Match learning model is used in learning activities, learning will be more interesting and enjoyable, so that learning can be achieved as desired.

Make a Match (finding a partner) is one of the cooperative learning models that is effectively applied in learning. The Make a Match learning model is a group learning model that has two members. Each member of the group is not known in advance but is sought based on the similarity of the pair, for example, a pair of questions and answers.

The steps or procedures for implementing the Make a Match learning model are as follows:

- a. The teacher delivers the material or gives students assignments to study the material at home.
- b. Students are divided into 2 groups, for example group A and group B. Both groups are asked to face each other.
- c. The teacher distributes question cards to group A and answer cards to group B. The teacher tells students that they are only looking for/matching the cards they are holding with the cards of other groups.
- d. The teacher asks all members of group A to find their partners in group B. If they have found their respective partners, the teacher asks them to report to him. The teacher records them on the paper that has been prepared.
- e. The teacher informs the students of the time limit, the teacher also directs the students to gather alone if the time limit is up and the students who have not found their partners.
- f. The teacher calls one pair to present. Other pairs and students who do not get a partner pay attention and provide feedback on whether their partner is suitable or not.
- g. Finally, the teacher confirms the truth and suitability of the questions and answers from the pair giving the presentation. And so on until all pairs have presented.

Method

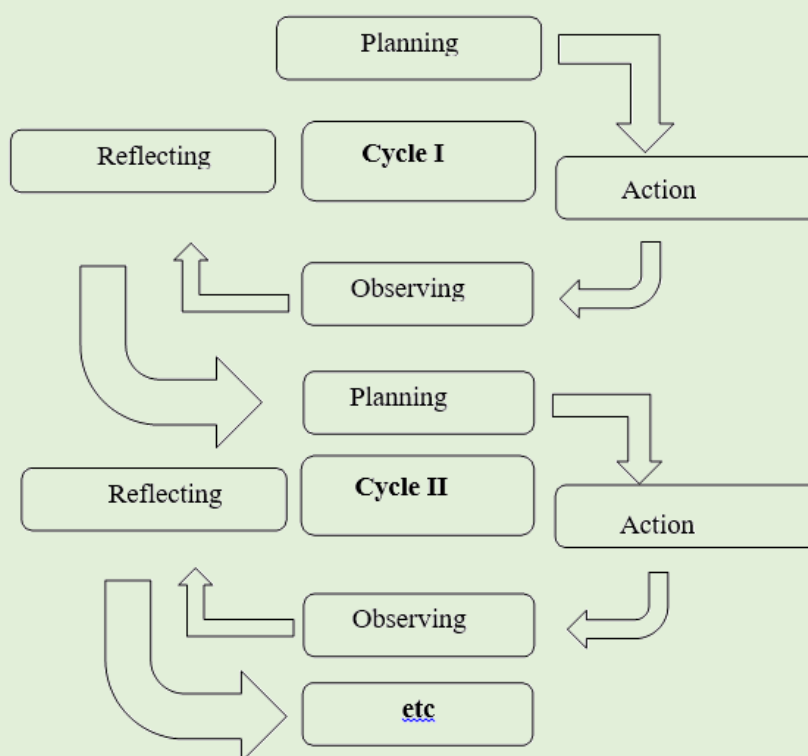
The research conducted by the researcher in this study is classroom action research. Action research conducted which aims to improve student learning outcomes (Sugiyono, 2016). Classroom action research is research conducted by teachers in the classroom to teach, with an emphasis on improving or enhancing practices and processes in learning (Susilo, 2009:16). The main objective of classroom action research is to improve and enhance the quality of learning and help empower teachers in solving learning problems in schools (Muslich, 2000:10).

Classroom action research is a form of reflective research by carrying out certain actions in order to improve and enhance the quality and learning outcomes and try new things in learning. Classroom action research is carried out in four activities in a repetitive cycle, the four activities in each cycle are planning, action, observation and reflection.

The subjects in this study were 14 students of grade IV MI Al-Aqsha Molas, consisting of 7 male students and 7 female students. This classroom action research was carried out continuously through two cycles, consisting of 4 stages; planning, action, observation and reflection. Each cycle was carried out in 3 meetings and at the end of

each meeting a post-test (end of cycle test) was carried out. Data collection techniques were carried out through observation and testing. Data collection used instruments in the form of observation sheets of student activities and teacher performance in the learning process. To determine the achievement of student learning outcomes, an evaluation sheet (test) was used consisting of a pre-test and post-test.

Figure 1 : Activities of Classroom Action Research



Result dan Discussion

Application of the Make a Match in Improving Mathematics Learning Outcomes

Based on the interview results, some information was obtained that the use of the Make a Match cooperative learning model has never been done in Mathematics learning in grade IV, students' abilities for Mathematics subjects are said to be relatively lacking. Based on the data obtained, the number of students in grade IV is 14 students. The researcher also said that the study would be conducted in several cycles, if in cycle I the researcher had not seen an increase in student learning outcomes. At the end of each cycle, a final action test will be held to measure how far the students' actions have been successful.

The pre-cycle results were taken by giving students a test. This was done to determine the initial score for the learning outcomes of Mathematics subjects before receiving action.

The results of the study at the pre-cycle/pre-action stage showed that learning without using the Make a Match learning model had not been able to improve learning success in grade IV, it was seen that only 5 or 35.71% of students achieved learning completeness and the average score obtained was 59.28 with a total score of 830, this result is still in the very low category. Analysis and reflection were conducted at the pre-cycle stage to formulate the causes of the problem because there were still students who did not pay attention to the material explained by the teacher, and some students were less enthusiastic, because the learning method/model was centered on the teacher, such as lecture mode, and limited use of media. Based on the results found above, the researcher planned an action, namely by implementing the Make a Match type cooperative learning model in the Mathematics subjects.

Cycle I

Planning stage, the researcher compiled the learning steps using the Make a Match cooperative learning model, then prepared the Learning Program Plan (RPP) to be used as a reference in implementing actions in cycle I.

Implementation stage, teaching and learning activities for cycle I were carried out in 2 teaching and learning meetings using the Make a Match cooperative learning model and 1 meeting to work on. The learning process refers to the learning scenario contained in the Learning Implementation Plan (RPP). In the results of the cycle I research, the Make a Match cooperative learning model has been applied, it can be seen that 8 or 57.14% of students have achieved learning completion with an average value of 69.28 with a total value of 970, this result is still in the low category as seen from the observation results, there are 6 students who have not achieved the completion criteria with a percentage of 42.86%. In this case, the application of the Make a Match cooperative learning model has been able to improve student learning outcomes, but has not reached the success indicator, namely 80% who have completed learning, so the researcher continues to the next cycle.

Observation Stage, the implementation of observation or observation of educator activities is observed by the fourth grade teacher during the learning process by filling out the observer sheet. During this process, it can be seen that the teacher's activities in the teaching and learning process using the Make a Match cooperative learning model are running well. The results of the observation in cycle I received a score of 3.47 with a good category. Furthermore, student learning activities are observed using the

observation sheet that has been prepared by the researcher, in order to determine whether or not there is an increase in learning. Student activities in participating in the learning process using the Make a Match cooperative learning model received a score of 3.00 with a good category.

Reflection Stage, based on the results of the analysis from the planning stage to the observation, it can be seen that the implementation of the Make a Match type cooperative learning model has been able to improve student learning outcomes but has not met the minimum completion criteria because there are still many students who do not understand the learning material, and there are still many students who do not pay attention to the teacher during learning and have not met the completion standard, which is 70. The learning process of cycle I, using the Make a Match type cooperative learning model to improve student learning outcomes in grade IV, can be seen from the learning process that can be measured through learning achievement with learning completion of 57.14% with an average value of 69.28, which has not reached the success indicator. So the researcher will continue the action to cycle II.

Cycle II

Planning stage, the researcher compiles the learning steps again using the Make a Match cooperative learning model, then prepares the Learning Implementation Plan (RPP) to be used as a reference in implementing actions in cycle II. The action plan in cycle II is prepared based on the results of the analysis and reflection in cycle I.

Implementation Stage, The implementation of teaching and learning activities for cycle II is still the same as cycle I, which is carried out in 2 meetings and 1 meeting to work on the post-test (final test). The first meeting with the indicator determines the least common multiple (LCM) and the greatest common factor (FPB) at the second meeting, namely Determining LCM and FPB in everyday life. Then at the third meeting, work on the post-test questions. The learning process refers to the learning scenario contained in the Learning Implementation Plan (RPP) that has been prepared.

In the results of cycle II, it can be seen that 92.86% of students have achieved learning completion and the average score obtained is 81.43 with a total score of 1,140, this result is already in the very good category. During the final test (post test) in cycle II, the researcher and class teacher paid more attention to students who paid less attention to the material being explained, gave an explanation again to students who paid less attention to the material and gave direction and motivation so that they always paid attention when the teacher was explaining. Based on the results of cycle II above, it can be seen that the results of learning Mathematics in class IV MI Al-Aqsha Molas have been said to be complete and the research is no longer continued.

Observation Stage, the implementation of observation or observation of educator activities is observed by class IV teachers during the learning process by filling out the observer sheet. During this process, it can be seen that the teacher's activities in the teaching and learning process using the Make a Match cooperative learning model are running well. It can be seen from the results of the observation in cycle II that it got a score of 4.00 with a very good category. Furthermore, student learning activities are observed using the observation sheet that has been prepared by the researcher, in order to find out whether there is an increase in learning. Student activities in following the learning process using the Make a Match cooperative learning model got a score of 3.52 with a very good category.

Reflection Stage, based on the results of observations of the application of the Make a Match type cooperative learning model in this classroom action research based on the results of initial observations showing that students did not appear active in learning. As a form of solution to this problem, the Make a Match type cooperative learning model is used for students in class IV MI Al-Aqsha Molas.

Implementation of the Make a Match in Improving Mathematics Learning Outcomes

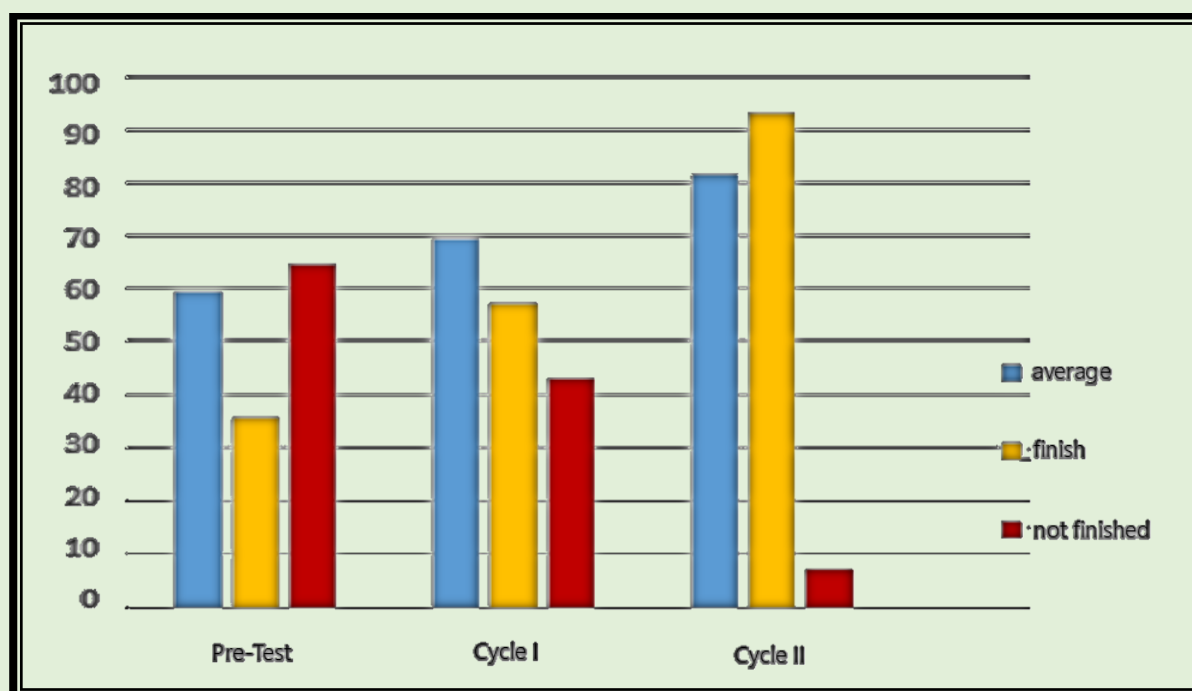
The implementation of learning using the Make a Match type cooperative learning model in this action research is based on the results of initial observations which show that 64.29% of students did not complete their studies and seemed inactive in the learning process. As a form of solution to this problem, the Make a Match type cooperative learning model is used for students in class IV of MI Al-Aqsha Molas. The discussion of all research analysis is as follows: Research on the activities of researchers in teaching by implementing the Make a Match type cooperative learning model on student learning outcomes in Mathematics subjects on factors and multiples of numbers in class IV of MI Al-Aqsha Molas was carried out in two cycles.

In this study, the observer was the class IV teacher of MI Al-Aqsha Molas. Based on the data collected, it shows that the researcher's activities have increased. In accordance with the data on researcher activity in each cycle, it shows that in cycle I, the researcher's activity obtained a value of 3.47 with a good category and in cycle II, it obtained a value of 4.00 with a very good category. The results of the analysis show that there is an increase in researcher activity in learning using the Make a Match cooperative learning model. Research on student activity in the learning process using the Make a Match cooperative learning model on improving student learning outcomes in Mathematics subjects with material on factors and multiples of numbers in class IV MI Al-Aqsha Molas was carried out in two cycles.

Based on the data collected, it shows that student activity has increased. In accordance with the data on student activity in each cycle with an average value of cycle I of 3.00 (good) and cycle II of 3.52 (very good). The results of the analysis show that there is an increase in student activity in learning using the Make a Match model, this shows that teachers can overcome the problems faced by using the Make a Match model. During the learning process, students appear to be increasingly active in participating in the learning process, this can be seen in cycle II in learning activities, especially core activities, which have reached a very good category, compared to learning cycle I with a good category.

Based on the results of observations after all cycles have been implemented, it can be concluded that learning activities using the Make a Match model have been effective, the quality of learning using this model is very good. The learning outcomes of students in the pre-test were still very low, out of 14 students only 5 people completed their studies with a percentage of 35.71 with an average score of 59.28. In the cycle I test, the number of students who achieved learning completion was 9 students with a percentage of 56.25% out of 16 students and an average score of 69.37. In cycle II, the number of students who achieved completion was 15 students with a percentage of 93.75% with a very good category and an average score of 83.75. This can be seen in the graph below:

Figure 2 : Diagram of Improvement in Student Learning Outcomes in Pre-test, Cycle I and Cycle II



Based on the diagram, in cycle II, it has met the the minimum completion criteria (KKM) determined by MI Al-Aqsha Molas of at least 70 in Mathematics and has met the success indicator, namely getting a score of $70 \geq 80\%$. Therefore, the learning outcomes of students in Mathematics for cycle II have achieved learning completion. Thus, it can be concluded that the completion of student learning outcomes through the Make a Match type cooperative learning model on the material of multiples and number factors for cycle II in class IV MI Al-Aqsha Molas has achieved learning completion. This proves that student completion has increased and is better for each cycle. Based on the explanation above, it shows that there is an increase in the average level of completion of student learning outcomes through the Make a Match type cooperative learning model on the Mathematics subject of multiples and number factors in class IV MI Al-Aqsha Molas.

Conclusion

Based on research conducted at MI Al-Aqsha Molas in class IV and from the analysis of the data obtained, it can be concluded that the application of the Make a Match cooperative learning model can improve student learning outcomes. This increase can be seen from the pre-action, namely 35.71% of students who completed learning and obtained an average score of 59.28 with a very low category, then increased in cycle I to 57.14% of students who completed learning and obtained an average score of 69.28 in the low category, and increased again in cycle II to 92.86% of students who achieved complete learning by obtaining an average score of 81.43 with a very good category and had achieved the success indicator, namely achieving a score of ≥ 70 reaching 80%. This increase can also be seen from the observation value of student activities, namely 3.00 in cycle I (Good) and increasing in cycle II to 3.52 (Very good).

Suggestions for teachers to always design learning models that can improve student learning outcomes in the classroom. One of them is the Make a Match type of cooperative learning model, by using this model it is expected that teachers will be more active and creative in improving the learning process in the classroom, both in terms of preparation and the final results obtained by students. Teachers must also create an active and enjoyable learning atmosphere so that students are more enthusiastic and enthusiastic in receiving learning materials so that all students can be active in participating in learning.

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