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IMPLEMENTATION OF CARD SORT ACTIVE LEARNING STRATEGIES TO INCREASE MATHEMATICS LEARNING OUTCOMES FOR II CLASS STUDENTS OF SD NEGERI 013 KEPENUHAN TP 2017/2018

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Abstract, *This research is a classroom action research activity based on the low mathematics learning outcomes of students. The formulation of the problem in this study is how the implementation of the Card Sort strategy can further improve the mathematics learning outcomes of second grade students of SD Negeri 013 Kepenuhan. The motivation of this research is to describe the use of Card Sort strategy to further improve mathematics learning outcomes for second grade students of SD Negeri 013 Kepenuhan. The subjects of the research were the second grade students of SDN 013 Kepenuhan, totaling 20 people. The object of this research is the application of the card sort type of active learning strategy and mathematics learning outcomes. This research was conducted in two cycles. Data collection techniques used are test, observation, and documentation methods. The strategy of investigating information in this examination is graphic examination. The conclusion of the research is that the application of the card sort type of active learning strategy can improve the mathematics learning outcomes of second grade students of State Elementary School 013 Kepenuhan, especially on the subject of dividing two-digit numbers.*

Keywords *:* Active learning, Card Sort.

I. INTRODUCTION

Mathematics as the science of structure and relationships, requires symbols. The symbol means to help manipulate the rules with applicable operations (Hudojo, 1990). Given the goals and roles to be achieved, education requires the existence of a strategy in such a way that mathematics can be understood, fun and can be applied in everyday life.

Based on preliminary research in grade II at State Elementary School 013 Kecepatan, it is known that the mathematics learning outcomes of grade II students are still relatively low. This can be seen from the average daily test scores of students who do not meet the Minimum Completeness Criteria (KKM). so that the indications related to the low student learning outcomes in these mathematics subjects.

The ratio between the perfect situation and the real situation on the ground, until a gap is found between the two. From this information, it is known that the percentage of students' complete learning outcomes is still far from the expected KKM. Not only from the insufficient learning outcomes of students,

the gap can also be observed from the reality that the teacher's efforts in tackling the case have not created maximum results. such as holding group studies, repeating modules that have not been understood, providing additional training and guidance in the form of narrative questions and the like, but the teacher's efforts have not been able to maximize student learning outcomes.

In this study, a problem formulation can be formulated, namely how to apply an active learning strategy of Card Sort type to improve student learning outcomes in studying mathematics on the subject of dividing two-digit numbers in class II State Elementary School 013 Kepenuhan.

This study aims to describe the application of an active learning strategy of card sort to improve students' mathematics learning outcomes in learning mathematics on the subject of dividing two-digit numbers in grade II State Elementary School 013 Kepenuhan.

Result is a term used to indicate something that a person achieves after making an effort. While learning is a process that is characterized by a change in a person. According to George J. Mouly quoted by Trianto (2010) in his book, learning is basically a process of changing one's behavior thanks to experience.

The result is something that is obtained from an activity, created, either individually or in groups. "Results will never exist as long as the individual does not carry out an activity" (Djamarah, 2010). This indicates a result obtained from the existence of a learning process activity that results in changes in a person. Furthermore, Djamarah also revealed the special characteristics of changes in behavior due to the learning process, namely:

1) Changes that occur in every individual who learns will be aware of the change or at least increase in skills and habits.
2) Changes in learning are continuous and functional. Changes that occur in a person are continuous and not static and beneficial for their lives or subsequent learning processes.
3) Changes in learning are active, positive and active. In learning change, the change is always increasing and is aimed at getting something better than before.
4) Changes in learning are not temporary, changes that occur in learning are permanent and permanent.
5) Changes that occur because there are goals to be achieved.
6) Change covers all aspects of behavior. (Djamarah, 2010)

Learning outcomes according to Nana (2010) are skills that students have after

they welcome their learning experiences. On the other hand, Dimyati and Mujiono said that learning outcomes are the result of an interaction between the act of practicing and the act of guiding. On the teacher's side, the act of guiding ends with an assessment of the results of the practice.

From the student's perspective, learning outcomes are the end of boundaries and the peak of learning methods. Learning outcomes, for some, are the result of the teacher's actions, an acquisition or (process, method, act of achieving) teaching goals. On the other hand is the improvement of students' psychological skills. The results of the practice are distinguished as the result of teaching and the effect of accompaniment. The consequences of teaching are measurable results, as stated in report cards and result in accompaniment to the application of insight and expertise (Mujiono, 2010).

Measurement of students' understanding skills from the learning being taught can be done through an ability test. The ability of insight and understanding of these students is the ability or achievement. For Muhibin Syah (2008) the achievement test is a measuring tool used to determine the degree of success of a teaching program. From some of the opinions of experts, it is clear that learning outcomes are something that belongs to students as a result of the learning activities they carry out and is the final determinant in carrying out the arrangement of learning activities.

For Merson U. Sangalang in sincere Tu' u (2007) said that there are several important aspects that contribute to student success in achieving good training results, namely: intellect, ability, attention and attention, style, health, training method, environment. family, social area, school and learning support advice. Learning which is a way of activity to change the behavior of students in learning, it turns out that there are many aspects that influence it, in outline divided into various aspects. Slameto (2003) suggests that the factors that influence practice are of many types, but can be classified into only 2 groups, namely internal aspects and external aspects. The internal aspect is an aspect that is contained in the person who is learning. Which is listed in the internal aspects such as, physical aspects, intellectual aspects, and aspects of fatigue. On the other hand, external aspects that affect learning can be grouped into 3 aspects, namely, family aspects, school (organizational) aspects, and community aspects.

Other aspects that can also affect learning such as motivation to learn, interest and attention, actions and learning routines, intensity, socio-economic, physical and psychological aspects. After that, the

factors that contribute to ensuring the level of efficiency and success in learning for students are the approach to learning and strategies or tips for approaching and teaching methods (Syah, 2013).

Benchmarks for measuring the results of practice can be tried through assessment. Assessment is an evaluation of the level of success of students in reaching the goals that have been inaugurated in a program (Syah, 2006). In connection with the evaluation of upgrading, Moekijat in Mulayasa (2010) suggests an upgrading evaluation method that includes views of insight, expertise, and subsequent actions: 1) Evaluation of knowledge learning can be tried with written, oral and questionnaire tests. 2) Evaluation of practicing skills can be tried with practical tests, analysis of skills and analysis of obligations, and evaluation by teaching participants themselves. 3) Evaluation of action learning can be done with notes on attitude entries from oneself, a list of attitude entries that are matched with program objectives, and sematic differential ratios (SDS).

Based on the opinion above, it can be seen that assessment is something that is very meaningful in determining the success of students. There is also a form of test submitted to teaching participants that must always comply with the basic requirements, namely that the test must: 1) Have validity (measure or take into account what will be measured or estimated, especially regarding the basic competencies of the standard module that has been studied. 2) Has reliability (constantness, determination of the results obtained by a teaching participant when tested again with a similar test). 3) Proving objectivity (being able to measure what is being measured, in addition to the instructions for its application to be clear and clear so that it does not lead to an understanding that has nothing to do with the purpose of the test. 4) The application of evaluation must be efficient and practical. (Mulyasa, 2010).

Based on the philosophy above, it can be seen that the implementation of tests that are efficient, fair and in accordance with the established criteria will result in good practice results. Because the results of practice are something that belongs to students as a result of the learning activities they carry out.

The card sort strategy is an upgrading strategy in the form of pieces of paper that are shaped like cards that contain data or subject matter. Active learning in the form of card sort is learning that emphasizes student activity, where in this learning each student is given an indicator card containing data about the material to be discussed, after which students group according to the indicator card they have. After that, students

discuss and present the results of the dialogue about the material from their group categories. Here the teacher acts more as a provider and explains material that needs to be discussed or material that students have not understood after the presentation ends. The card sort strategy is a collaborative activity that can be used to teach concepts, character groupings, facts about an object or review previously submitted knowledge or repeat information. Powerful exercise in this strategy can help to dynamic the fatigue category (Zaini, 2010). For Fatah Yasin (2008), card sort is a strategy used by educators with the meaning of inviting teaching participants to create concepts and facts through grouping the material reviewed in learning.

The card sort strategy, by using card media in learning practice, will help students master the lesson and increase their motivation in learning, because in the application of the card sort strategy, the teacher only functions as a provider, providing students with learning, while students practice in a different way. active with facilities and guidance from the teacher, as a result the active here is not the teacher but the students themselves who must be active in learning.

1) The application of learning in categories requires steps or methods of using the learning strategy. In Hizam Zaini (2010) it is stated that the implementation of the use of the card sort strategy is as follows:
2) Each student is given a piece of paper that records data or special types in a random way.
3) Paste the main types on the board or paper on the classroom wall.
4) Ask students to move and wander in the category to make cards of that type beforehand or let students create their own.
5) Teaching participants with similar types are requested to convey their respective types in front of the category. Along with submissions of each type, sharing points means that the lesson module is adrift.

The way of implementing upgrading that is tried using the card sort strategy requires a level of planning for the tools to be used in that strategy. The card sort strategy is a learning strategy that uses the card tool as an upgrading tool used in the application of the card sort strategy.

II. RESEARCH METHODS

The type of research conducted is Classroom Action Research (CAR). Suharsimi wrote that classroom action research is an observation of activities that are intentionally raised and occur in a class (Arikunto, 2006). CAR uses stages in the

form of a series of activity cycles that are used to obtain data or information to improve the quality of a group of students. Furthermore, according to Arikunto (2006), CAR is carried out to improve the effectiveness of teaching methods, assigning assignments to students, assessments, and others.

CAR is carried out in the form of an iterative cycle in which there are four main stages in learning activities, namely: planning, implementation, observation and reflection. The details of the activities at each stage are as follows:

1. Planning: Develop a plan of action like what, why, when, where and how the action will be carried out.
2. Implementation: The design of the model used and the lesson plan that will be applied.
3. Observation: Observing all things that happen during the learning process.
4. Reflection: Thoroughly review the actions that have been taken based on the data collected.

The subjects of this study were the second grade students of the State Elementary School 013 Kepenuhan, totaling 20 students. The object of this research is the card sort strategy to improve student learning outcomes.

Data collection in this study was carried out by several techniques. The data collection in this study was carried out by several techniques. The data collection techniques are as follows collection in this study was carried out by several techniques. The data collection techniques are as follows:

1. Test

The test is used to collect data about student learning outcomes, namely students' understanding of mathematics subject matter that has been taught through the application of an active learning strategy of card sort type. The form of the test is an essay.

2. Observation

Observations made in this study consisted of observing the activities of teachers in implementing the card sort strategy and observing student activities in following the learning process carried out.

III. RESEARCH RESULTS AND DISCUSSION

At the end of the implementation of learning in cycle I, the teacher evaluates by giving tests to measure students' abilities. The following is a recap of the value of learning outcomes obtained by students which is contained in the following table.

Table 1. Initial Test Results

No	Student Code	Mark
1	S1	68

2	S2	68
3	S3	70
4	S4	73
5	S5	70
6	S6	75
7	S7	70
8	S8	60
9	S9	76
10	S10	80
11	S11	65
12	S12	65
13	S13	65
14	S14	75
15	S15	78
16	S16	75
17	S17	70
18	S18	75
19	S19	75
20	S20	65

Based on Table 1, it is known that out of 20 students, 9 students achieved individual mastery. The results showed that the classical completeness of learning outcomes was 45% of the number of second grade students at SD Negeri 013 Kecepatan. These results indicate that the ability of students' understanding and knowledge of mathematics subject matter is still quite good. Therefore, the first cycle of research was conducted using a cart sort strategy in the hope of improving student learning outcomes.

At the end of the cycle II, the core learning activities are carried out making conclusions about the material that has been studied and suggesting students to study the material to be studied at the next meeting. The teacher also evaluates by giving tests to measure students' abilities. Table 2 is a recap of the value of learning outcomes obtained by students.

Table 2. Cycle I . Test Results

No	**Student Code**	**Mark**
1	S1	70
2	S2	70
3	S3	90
4	S4	80
5	S5	80
6	S6	90
7	S7	70
8	S8	80
9	S9	80
10	S10	80
11	S11	70
12	S12	70
13	S13	80
14	S14	80
15	S15	80
16	S16	80
17	S17	80
18	S18	70
19	S19	80
20	S20	70

Based on the student scores in Table 2, it can be seen that from the 20 students, 13 students who achieved individual mastery increased from the previous meeting, which only reached 9 students. This shows that the mastery of classical learning outcomes is 65% of the number of students in class II SD Negeri 013 Kepenuhan. While the percentage value is already in the good category.

Cycle II learning activities ended by conveying conclusions from the material. The teacher also evaluates by giving tests like the previous meeting. The recap of the learning outcomes obtained by students is contained in Table 3.

Table 3. Cycle II Test Results

No	Student Code	Mark
1	S1	80
2	S2	80
3	S3	90
4	S4	100
5	S5	90
6	S6	100
7	S7	80
8	S8	70
9	S9	100
10	S10	90
11	S11	70
12	S12	80
13	S13	70
14	S14	78
15	S15	90
16	S16	90
17	S17	80
18	S18	80
19	S19	90
20	S20	90

Based on Table 3, it can be seen that from the 20 students, 18 students who achieved completeness individually increased from the previous meeting, which only reached 4 people. This shows that the mastery of classical learning outcomes is 90% of the number of students in class II SD Negeri 013 Kepenuhan. This percentage value is also still classified in the Very Good category and has reached the predetermined classical completion of 75%. The mastery of student learning outcomes before and after the action by applying the card sort type of active learning strategy is summarized in the completeness of student learning outcomes in Table 4.

Table 4. Classical Recapitulation of Student Learning Outcomes

No	Cycle	Number of Students who Reach KKM	Percentage Completeness	Average Learning outcomes
1	Precycle	9	45	71
2	Cycle I	13	65	78
3	Cycle II	18	90	85

Based on Table 4, it was found that before the action the number of students who completed 9 people with a completeness percentage of 45% with an average student learning outcome reaching 71, while student learning outcomes in the first cycle there was an increase in student learning outcomes to 13 people with the percentage of completeness rising to 65%. higher than before the action with an average of 78. In Cycle II there was an increase in student learning outcomes from previous learning outcomes with the number of students who reached the KKM as many as 18 people with a percentage of completeness reaching 90%, this result has

reached classical completeness that has been set with an average the average score of learning outcomes reached 85.

Based on these results, it can be concluded that the use or application of the card sort type of active learning strategy is one of the lessons that can improve student learning outcomes because in principle, each student is given the opportunity to find cards with the same category and present the category according to the card sort strategy procedure. The use of this card will increase student activity in following the learning process.

Learning activities with the application of the card sort type of active learning strategy are carried out by sorting and selecting cards according to their categories. The card sort strategy is a learning strategy using card media that has been adapted to a predetermined category. Learning with this strategy will involve the active role of students, so that each student will try to understand and master the subject matter contained in the card. This is also the main reason why the card sort type of active learning strategy is appropriate to be used to improve student learning outcomes.

IV. CONCLUSION

Based on the results of the research and discussion that have been presented, it can be concluded that there is an increase in the mathematics learning outcomes of class II students at SD Negeri 013 Fullness with the application of the card sort type of active learning strategy, especially in the division of two numbers. This can be seen from the results of the ability analysis of students' mathematics learning outcomes that have increased between before and after the action. The average percentage of students' achievement in classical mathematics learning outcomes in early learning (before the application of the action) is 45%, while after the application of the action it increases to 90%. Based on these results, it can be concluded that the application of the card sort type of active learning strategy can improve the mathematics learning outcomes of class II students of SD Negeri 013 Kecepatan, especially on the subject of dividing two numbers.

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