Improving Learning Outcomes and Learning Motivation in Mathematics Through Demonstration Methods with Number Card Media Assistance for Class I Students of SD Negeri 2 Samigaluh in Academic Year 2021/2022

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ABSTRACT: This study aims to improve the mathematics learning outcomes of class I students at SDN 2 Samigaluh for the 2021/2022 academic year. This type of research is Classroom Action Research which was carried out for 2 cycles with 2 meetings in each cycle. The results of the data in this study indicate that the learning outcomes of students have increased, namely, in cycle I, a percentage of 85.72% was obtained, and in cycle II a percentage of 100.00% was obtained. As for the results of the data on students' learning motivation, it showed a significant increase where in the first cycle the 1st meeting obtained a percentage of 52.57% and the 2nd meeting obtained a percentage of 72.94%. Whereas in cycle II, the 1st meeting obtained a percentage value of 85.51% and the 2nd meeting obtained a value of 90.11%. Thus, the use of the demonstration method using number card media aids can improve learning outcomes and learning motivation of class I students at SDN 2 Samigaluh in the mathematics subject for the 2021/2022 academic year.

INTRODUCTION

A teaching and learning activity will always experience changes along with the times. This is one of the conditions in which an educator must always update strategies when teaching and learning activities with students occur. The same thing also happens to mathematics subjects which are always considered to have higher difficulties in terms of teaching an educator and receiving these lessons from students [1]. Mathematics is a basic science that plays an important role in developing science and technology and advancing human thinking. In addition, mathematics is a means of supporting various sciences that can be used in analyzing and simplifying various problems both for mathematics itself and problems that arise in everyday life [2]. Learning mathematics in elementary schools is an interesting subject to develop because mathematics is a deductive, axiomatic, formal, abstract science and uses symbolic language [3].

Because of the diversity and abstractness of mathematics lessons, some students view mathematics as a difficult subject to learn. This of course can result in the development of student learning and a decrease in student learning motivation. So when learning motivation decreases, this will affect student learning outcomes [4]. This is also supported by a statement from Arsyil [5] which states that learning motivation has a positive relationship with student learning outcomes. So, the higher the motivation possessed by students, the better the learning outcomes of students will be and vice versa if the learning motivation of students is low then this can affect student learning outcomes.

The real conditions occurred at SDN 2 Samigaluh, where the learning outcomes of first-grade students in mathematics were not optimal. This is evident from the acquisition of students' daily mathematics test results which are under the Minimum Completeness Criteria. The minimum completeness criterion score that must be obtained by class I students in mathematics is 65. Out of 7 students, only 2 students scored above the minimum completeness criteria or around 28.57%, while students who scored below the Minimum Completeness Criteria scored 5 students or around 71.43%.

This is because the learning process is boring, tends to be passive, and does not invite students to be active during learning. One of the causes of this phenomenon is that the teacher has not applied the right methods and media in accordance with the circumstances of the students so learning looks passive, rowdy, and lacks motivation. Most of the learning process carried out at SDN 2 Samigulan is conventional learning where the learning is dominated by the teacher.

One alternative solution in dealing with the phenomena that occur at SDN 2 Samigaluh is to apply appropriate learning methods. One method that can be used is the demonstration method. The demonstration method is a method of teaching by practicing an activity accompanied by an oral explanation [6]. The proper use of the demonstration method can provide several benefits for students, namely being able to provide a real picture of a concept to students, guiding students to gain direct experience of material, and can increase learning motivation and student learning outcomes [7].

Learning outcomes are achievements achieved by students in the academic field through exams and assignments, and activeness in asking and answering questions that support the acquisition of these learning outcomes [8]. In essence, learning outcomes are a change in the attitude of each individual as a result of the learning process. The learning outcomes obtained by each individual can provide information related to individual abilities in learning the learning material explained by the teacher [9].

Learning motivation is an impulse that exists in every individual that can lead to behavior to maintain it, provide energy, and a certain direction in achieving the desired goals [10] including the behavior of learning mathematics. Learning motivation can also determine the persistence of each individual's learning. Individuals who are motivated to learn will try to study well and diligently in the hope of getting even better results [11]. Hamalik [12] also argues that learning motivation has several functions, namely encouraging the emergence of behavior, directing behavior to achieve the desired goals, and encouraging effort and even better achievement.

Based on the description above, the researchers took the initiative to conduct research to increase learning motivation and learning outcomes of class I students at SDN 2 Samigulah in mathematics using the demonstration method with media aids number cards for the 2021/2022 academic year.

RESEARCH METHODS

This type of research is Classroom Action Research conducted for 2 cycles. Where this research was carried out from January to March 2022. The sample in this study was students in class I at SDN 2 Samigaluh for the 2021/2022 academic year. The stages of this research consisted of planning, action, observation, and reflection stages.

The data collection technique in this study used observation which later the research data would be analyzed descriptively and presented in tabular form. Qualitative Data Analysis Techniques are carried out to determine teacher activity in teaching and learning activities. Each aspect then averaged the percentage between 1st meeting and 2nd meeting in each cycle and then compared between Cycle I and Cycle II.

RESULT AND DISCUSSION

TABLE 1. Average Value of Student Learning Outcomes

No.	interval value	Cycle I		Cycle II	
		Number of Average Students	Total Average Percent (%)	Number of Average Students	Total Average Percent (%)
1	$\leq 85 \leq 100$	1.5	21.43	2	28.57
2	$\leq 75 \leq 85$	3	42.86	4.5	64.285
3	$\leq 65 \leq 75$	1.5	21.43	0.5	7.145
4	$\leq 55 \leq 65$	1	14.29	0	0
5	≤ 55	0	0	0	0
	Sum	**7**	**100**	**7**	**100**

Based on the implementation of the actions for 2 cycles which were carried out in 4 meetings, data on student learning outcomes were obtained which showed a significant increase. The increase in

learning motivation is known by applying the demonstration method using number card media aids. The results of observations on the application of the demonstration method in learning mathematics in addition and subtraction with two whole numbers for class I SDN 2 Samigaluh can be seen in Table 1.

Table 1 shows that the level of understanding of students in adding and subtracting with two whole numbers has increased from cycle I to cycle II. In the first cycle of students whose grades met the KKM, the average score was 6.0 with a percentage of 85.72%, while in Cycle I the average score was 7.0 with a percentage of 100.00%.

The results of the research on students' learning motivation in mathematics in doing addition and subtraction with two whole numbers for 2 cycles, obtained observational data which can be seen based on Table 2.

TABLE 2. Observation Results of Student Learning Motivation

No	Student code	The average number of values of Cycle I		The average number of values of Cycle II	
		1st meeting	2nd meeting	1st meeting	2nd meeting
1	AA	2.63	3.73	4.23	4.47
2	AB	2.67	3.57	4.17	4.53
3	AC	2.6	3.7	4.33	4.53
4	AD	2.6	3.7	4.3	4.5
5	AE	2.5	3.8	4.43	4.57
6	AF	2.8	3.73	4.2	4.47
7	AG	2.6	3.3	4.27	4.47
	Total score	**18.4**	**25.53**	**29.93**	**31.54**
	Average Score	**2.63**	**3.65**	**4.28**	**4.51**
	Percentage (%)	**52.57**	**72.94**	**85.51**	**90.11**

Based on Table 2 above, in the first cycle, the first meeting obtained a percentage of 52.57% and the second meeting obtained a percentage of 72.94%. Whereas in cycle II the 1st meeting obtained a percentage value of 85.51% and the 2nd meeting obtained a value of 90.11%. The acquisition of the percentage of scores from cycle I to cycle II, shows that students' learning motivation has increased by 85%.

As for the results of observations on improving the quality of learning practices from cycle I to cycle II through the demonstration method with number card media tools, data on the ability of the researcher was obtained after observation by colleagues with several aspects of the assessment which can be seen in Table 3.

TABLE 3. Results of Observation of Teaching and Learning Using the Demonstration Method

No.	Aspect	onCycle I		Cycle II	
		Average value	Percent (%)	Average value	Percent (%)
1.	Manage learning spaces and facilities	4.50	90.00	4.75	95.00
2.	Carry out Learning Activities	3.92	78.34	4.59	91.67
3.	Manage Class Interaction	3.50	70.00	4.40	88.00
4.	Be open and flexible and help develop students' positive attitudes toward learning	3.80	76.00	4.50	90.00
5.	Demonstrating special abilities in thematic learning material Theme V My Experience Sub Theme 4 Memorable Experience with the Demonstration method and Number Card media tools.	3.20	64.00	4.40	88.00
6.	Carry out an assessment of the process and learning outcomes	4.00	80.00	4.75	95.00

No.	Aspect	onCycle I		Cycle II	
		Average value	Percent (%)	Average value	Percent (%)
7.	The general impression of the implementation of Learning	4.13	82.50	4.63	92.50
	Amount	**3.87**	**77.26**	**4.57**	**91.46**

Table 3 above shows that the teacher's ability to carry out the process of improving the quality of mathematics learning practices for 2 cycles consisting of 4, obtained the results of research in cycle I with a total average score of 3.87 with a percentage of 77.26%. While in cycle II, an average value of 4.57 was obtained with a percentage reaching 91.46%. This shows that the use of the demonstration method with number card media aids in learning mathematics and can increase the teacher's ability to carry out the learning process.

The application of the demonstration method using number card media aids in class I math lessons at SDN 2 Samigaluh is proven to be able to create a learning process that is more interesting, and fun and makes it easy for students to understand the material being explained. The use of number cards as a learning media tool can foster student motivation, where students give and receive information to each other to solve a problem. Therefore number card media is very effective to use because through number cards the teacher can guide students and direct students to find every material they learn.

CONCLUSION

Based on the results of the research that has been carried out, it can be concluded that the application of the demonstration method using number card media aids in mathematics can improve learning outcomes and learning motivation of class I students at SDN 2 Samigaluh in the 2021/2022 academic year.

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