IMPROVING MATHEMATICS LEARNING OUTCOMES IN UNITS OF TIME USING WALL CLOCK MEDIA AT SDN TUNJUNG 4

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ABSTRACT

Mathematics is a subject that is always considered difficult by most students. To be able to make students more interested and understand mathematical concepts, the teacher should present mathematics lessons as attractively as possible and change abstract mathematical concepts to be more concrete. The purpose of this study was to determine the increase in students' mathematics learning outcomes in unit time when learning was assisted by the use of wall clock media. This research is classroom action research with participatory collaborative research type. The research model used is a research model from Stephen Kemmis and Mc Taggart with data collection methods in the form of tests and interviews. The results showed that there was an increase in the number of students who completed learning from the original 30% before being given action, to 95% in the second cycle. Therefore, it can be concluded that learning mathematics in unit time using wall clock media can improve student learning outcomes.

A. Introduction

Education is something very important in human life. Education is a place to explore the potential possessed by human resources, both knowledge, morals, and skills. Education has the task of preparing quality human resources for development. A developed nation is supported by quality education. In the implementation of the education process will not be separated from the elements of learning and learning.

Improving the quality of education is the responsibility of all parties involved in education, especially for teachers, who are the spearhead in basic education. Teachers are the people who have the most role in creating quality human resources who can compete in the era of rapid technological developments that are increasingly sophisticated and modern today.

Mathematics subjects are difficult to understand and understand, as a result, the average student learning outcomes tend to be lower than other subjects. Students present more facts of legal knowledge, then memorize them instead of practicing thinking to solve problems so that learning becomes less fun. The learning process is very important in managing so that students look active and creative both physically, mentally and emotionally.

Mathematics is one of the subjects in schools that has a very important role in the world of education because mathematics can increase students' numeracy knowledge in logical, rational, careful, effective, efficient and critical thinking. Mathematics is also a field of science that underlies the development of technology where to master and create technology in the future it is necessary to master mathematics from an early age.

To be able to involve students directly in mathematics lessons. We need a method that stimulates students' brains and attracts students to be more active in learning and can be involved and experience firsthand the proving of the process and results of an experiment from students actively participating in learning, namely by using learning media in mathematics subjects in the learning process in the classroom.

B. Method

Pendekatan dan Jenis Penelitian

The type of research used in this researcher uses the type of participatory collaborative research. A cooperation is needed between other parties such as the

principal, class teachers and students. With this collaboration, valid data sources can be obtained, because essentially in Classroom Action Research this is part of the situation and conditions of the situation that must be investigated. There are several CAR models that are often used in the world of education, but in this study using the CAR model developed by Stephen Kemmis and Mc Taggart (Wijaya Kusumah and Dedi Dwitagama, 2010:21) in (Sulistiyanto, 2013), which consists of four components: planning, Action, observation and reflection. Data collection techniques used are tests and interviews. Data analysis in this study was obtained through observations or interviews and tests to improve understanding of mathematics learning in grade 2 students at SDN Tunjung 4. The test for increasing understanding in mathematics learning can be obtained at the end of the cycle calculated then presented and calculated the average score of the class.

C. Result and Discussion

Cycle I

From the results of the research in the first cycle, the actions taken consisted of action planning, action implementation, observation and reflection which were carried out on Wednesday, 6 April 2022 in class II SDN Tunjung 4. The action implementation stage consisted of 3 stages, namely introduction, core activity and closing. At the beginning of this core activity the teacher gave a pretest. The results of the data from the names of grade 2 students at SDN Tunjung 4 are as follows:

No	Students Name	Type Sex
1.	Alya Yosila	P
2.	Arkhan	L
3.	Aulia Iim	P
4.	Ainun Nisa	P
5.	Akbar Bima Putra Pertama	L
6.	Ahmad Azmil Alfarizi	L
7.	Andika	L
8.	Alya Latifatul Karomah	P
9.	Budiyanto	L
10.	Badrus	L
11.	Bassamoel Ahlam	L
12.	Dianatul Fahira	P
13.	Dika Maulana	L
14.	Fahilda	P
15.	Fira	P
16.	Fathir Ahza Arsani	L
17.	Firoh	P
18.	Fajar Danis Kurniawan	L
19.	Gus Arya Bima	L

20.	Jihan Talita Ulfa	P
21.	Liana	P
22.	Muhammad Fadal Ari Sodikin	L
23.	Maysella Putri	P
24.	Moh. Sholeh Basori	L
25.	Mohammad Rivaldo	L
26.	Nita Ramadhani	P
27.	Naufal	L
28.	Raidatul Inayah	P
29.	Raya	P
30.	Syaifur Rohman	L

The first cycle pretest that was conducted found that there were only 9 students who were declared complete or 30% while 21 students were declared incomplete or 70%. From the results when the first cycle was held, the students got the highest score of 93, the average score was 67 and the lowest score was 33. The number of students who had learning outcomes or grades that met the learning completeness standard were 9 students. These results indicate that there are still many students who have learning difficulties, as evidenced by the level of completeness obtained. The following is the Pre-Test table obtained:

Table 1. Cycle I Pretest Learning

No	Students Name	Pretest	Description
1.	Alya Yosila	60	Not Complete
2.	Arkhan	33	Not Complete
3.	Aulia Iim	47	Not Complete
4.	Ainun Nisa	53	Not Complete
5.	Akbar Bima Putra Pertama	53	Not Complete
6.	Ahmad Azmil Alfarizi	93	Complete
7.	Andika	80	Complete
8.	Alya Latifatul Karomah	40	Not Complete
9.	Budiyanto	53	Not Complete
10.	Badrus	67	Not Complete
11.	Bassamoel Ahlam	73	Tuntas
12.	Dianatul Fahira	60	Not Complete
13.	Dika Maulana	40	Not Complete
14.	Fahilda	33	Not Complete
15.	Fira	80	Complete
16.	Fathir Ahza Arsani	87	Complete
17.	Firoh	93	Complete
18.	Fajar Danis Kurniawan	33	Not Complete
19.	Gus Arya Bima	67	Not Complete
20.	Jihan Talita Ulfa	60	Not Complete
21.	Liana	47	Not Complete
22.	Muhammad Fadal Ari Sodikin	40	Not Complete
23.	Maysella Putri	40	Not Complete
24.	Moh. Sholeh Basori	87	Complete
25.	Mohammad Rivaldo	53	Not Complete

26.	Nita Ramadhani	93	Complete
27.	Naufal	80	Complete
28.	Raidatul Inayah	67	Not Complete
29.	Raya	60	Not Complete
30.	Syaifur Rohman	53	Not Complete
Amount		1.825	
Average		60,8	

After the pretest activity, it was continued by continuing the material on the unit of time using the lecture method without learning media. After finishing the lesson, students were asked to do a posttest. The purpose of the posttest is to find out how much students understand about the material that has been taught. Here are the student's posttest learning outcomes in the first cycle as follows:

Table 2. Cycle I Posttest Learning Outcomes

No	Students Name	Postest	Description
1.	Alya Yosila	67	Not Complete
2.	Arkhan	47	Not Complete
3.	Aulia Iim	53	Not Complete
4.	Ainun Nisa	33	Not Complete
5.	Akbar Bima Putra Pertama	60	Not Complete
6.	Ahmad Azmil Alfarizi	80	Complete
7.	Andika	87	Complete
8.	Alya Latifatul Karomah	53	Not Complete
9.	Budiyanto	53	Not Complete
10.	Badrus	67	Not Complete
11.	Bassamoel Ahlam	87	Complete
12.	Dianatul Fahira	67	Not Complete
13.	Dika Maulana	47	Not Complete
14.	Fahilda	53	Not Complete
15.	Fira	93	Complete
16.	Fathir Ahza Arsani	80	Complete
17.	Firoh	73	Complete
18.	Fajar Danis Kurniawan	67	Not Complete
19.	Gus Arya Bima	60	Not Complete
20.	Jihan Talita Ulfa	67	Not Complete
21.	Liana	47	Not Complete
22.	Muhammad Fadal Ari Sodikin	53	Not Complete
23.	Maysella Putri	53	Not Complete
24.	Moh. Sholeh Basori	93	Complete
25.	Mohammad Rivaldo	53	Not Complete
26.	Nita Ramadhani	80	Complete
27.	Naufal	87	Complete
28.	Raidatul Inayah	67	Not Complete
29.	Raya	60	Not Complete
30.	Syaifur Rohman	53	Not Complete
Amount		1.940	
Average		64,6	

Based on the posttest in the first cycle, there were 9 students who had complete scores, while the other 21 students were declared incomplete. In the first cycle, the students' average score was 64.6. At the stage of implementing the action which took place the same as cycle I, the difference was that the teacher used learning media in the form of a wall clock and at the same time used the question and answer method to reactivate students. In the first cycle there is no learning media. The teacher continues to carry out the pre-test in cycle II, here are the results of the pre-test in cycle II as follows:

Tabel 3. Cycle II Pretest Learning Results

No	Students Name	Pretest	Description
1.	Alya Yosila	93	Complete
2.	Arkhan	93	Complete
3.	Aulia Iim	60	Not Complete
4.	Ainun Nisa	87	Complete
5.	Akbar Bima Putra Pertama	80	Complete
6.	Ahmad Azmil Alfarizi	67	Not Complete
7.	Andika	73	Complete
8.	Alya Latifatul Karomah	87	Complete
9.	Budiyanto	60	Not Complete
10.	Badrus	67	Not Complete
11.	Bassamoel Ahlam	67	Not Complete
12.	Dianatul Fahira	87	Complete
13.	Dika Maulana	60	Not Complete
14.	Fahilda	60	Not Complete
15.	Fira	40	Not Complete
16.	Fathir Ahza Arsani	93	Complete
17.	Firoh	40	Not Complete
18.	Fajar Danis Kurniawan	73	Complete
19.	Gus Arya Bima	93	Complete
20.	Jihan Talita Ulfa	80	Complete
21.	Liana	80	Complete
22.	Muhammad Fadal Ari Sodikin	67	Not Complete
23.	Maysella Putri	87	Complete
24.	Moh. Sholeh Basori	93	Complete
25.	Mohammad Rivaldo	73	Complete
26.	Nita Ramadhani	60	Not Complete
27.	Naufal	80	Complete
28.	Raidatul Inayah	93	Complete
29.	Raya	87	Complete
30.	Syaifur Rohman	80	Complete
Amount		2.260	
Averagre		75,3	

In the results of the pretest cycle II, there were 11 students who did not meet the standard of completeness score, while 19 students were declared complete or met the standard of completeness score. In this second cycle, the average score

was 75.3. Followed by the teacher who uses learning media in the form of a wall clock. Like the same thing that was done before the pretest started. After learning is complete, students are asked to do the posttest as in the case in cycle I. The following are the results of posttest learning in cycle II as follows:

Table 4. Cycle II Posttest Learning

No	Students Name	Posest	Description
1.	Alya Yosila	80	Complete
2.	Arkhan	93	Complete
3.	Aulia Iim	60	Not Complete
4.	Ainun Nisa	40	Not Complete
5.	Akbar Bima Putra Pertama	80	Complete
6.	Ahmad Azmil Alfarizi	87	Complete
7.	Andika	73	Complete
8.	Alya Latifatul Karomah	80	Complete
9.	Budiyanto	80	Complete
10.	Badrus	60	Not Complete
11.	Bassamoel Ahlam	87	Complete
12.	Dianatul Fahira	80	Complete
13.	Dika Maulana	87	Complete
14.	Fahilda	73	Complete
15.	Fira	40	Not Complete
16.	Fathir Ahza Arsani	93	Complete
17.	Firoh	33	Not Complete
18.	Fajar Danis Kurniawan	60	Not Complete
19.	Gus Arya Bima	87	Complete
20.	Jihan Talita Ulfa	93	Complete
21.	Liana	80	Complete
22.	Muhammad Fadal Ari Sodikin	73	Complete
23.	Maysella Putri	73	Complete
24.	Moh. Sholeh Basori	87	Complete
25.	Mohammad Rivaldo	80	Complete
26.	Nita Ramadhani	60	Not Complete
27.	Naufal	80	Complete
28.	Raidatul Inayah	93	Complete
29.	Raya	93	Complete
30.	Syaifur Rohman	80	Complete
Amount		2.265	
Average		75,5	

Based on the learning outcomes above, the highest score in the second cycle is 93, with an average value in the second cycle of 75.5 and the lowest score is 33. The number of students who exceed the standard of learning mastery scores is 23 students. From these results, it can be concluded that as many as 90% of students are considered to have met the standard of completeness scores and it can be concluded that all aspects considered at the time of observation can be categorized as very good.

In the implementation of the activities of cycle I and cycle II, it can be seen that what happened was an increase in student learning outcomes when using clock learning media in time unit mathematics subjects and using the question and answer method in class 2 SDN Tunjung 4. The following are student learning outcomes in cycle I and cycle II can be obtained as follows:

Table 5. Student Learning Outcomes Pretest, Posttest Cycle I and Cycle II

No	Students Name	Cycle I		Cycle II		Description
		Pretest	Postest	Pretest	Postest	
1.	Alya Yosila	60	67	93	80	Complete
2.	Arkhan	33	47	93	93	Complete
3.	Aulia Iim	47	53	60	60	Not Complete
4.	Ainun Nisa	53	33	87	40	Not Complete
5.	Akbar Bima Putra Pertama	53	60	80	80	Complete
6.	Ahmad Azmil Alfarizi	93	80	67	87	Complete
7.	Andika	80	87	73	73	Complete
8.	Alya Latifatul Karomah	40	53	87	80	Complete
9.	Budiyanto	53	53	60	80	Complete
10.	Badrus	67	67	67	60	Not Complete
11.	Bassamoel Ahlam	73	87	67	87	Complete
12.	Dianatul Fahira	60	67	87	80	Complete
13.	Dika Maulana	40	47	60	87	Complete
14.	Fahilda	33	53	60	73	Complete
15.	Fira	80	93	40	40	Not Complete
16.	Fathir Ahza Arsani	87	80	93	93	Complete
17.	Firoh	93	73	40	33	Not Complete
18.	Fajar Danis Kurniawan	33	67	73	60	Not Complete
19.	Gus Arya Bima	67	60	93	87	Complete
20.	Jihan Talita Ulfa	60	67	80	93	Complete
21.	Liana	47	47	80	80	Complete
22.	Muhammad Fadal Ari Sodikin	40	53	67	73	Complete
23.	Maysella Putri	40	53	87	73	Complete
24.	Moh. Sholeh Basori	87	93	93	87	Complete
25.	Mohammad Rivaldo	53	53	73	80	Complete
26.	Nita Ramadhani	93	80	60	60	Not Complete
27.	Naufal	80	87	80	80	Complete
28.	Raidatul Inayah	67	67	93	93	Complete
29.	Raya	60	60	87	93	Complete
30.	Syaifur Rohman	53	53	80	80	Complete
Amount		3.765		4.525		
Average		41,8		50,26		

D. Conclusion

Based on the results of the research that has been done, it can be concluded that learning using media can increase student activity in the teaching and learning process. Students become more active and often ask questions. In the first cycle there were 21 students who did not meet the standard of student mastery scores, compared to the second cycle after using standard learning media the students' completeness score rose to 95%. So in the second cycle the learning is said to be successful if the standard value of completeness is greater than the value of incomplete.

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