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THE APPLICATION OF LEARNING USING ANIMATED VIDEO APPLICATIONS TO IMPROVE MATHEMATICS LEARNING OUTCOMES OF GRADE VI STUDENTS OF SD NEGERI 018 RAMBAH

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Abstract, *This study aims to improve the ability of class VI students of SD Negeri 018 Rambah in understanding Fraction Count Operation material in mathematics learning using Animation Video media. This research is a classroom action research consisting of 2 (two) cycles, each cycle consisting of 4 (four)) stages. Cycles I and II each consisted of 3 meetings. The research subjects consisted of sixth grade students of SD Negeri 018 Rambah. Data on the ability of students to understand fractional arithmetic operations were collected using observation sheets and tests. Based on the results of data analysis, the average post-test score in the first cycle was 70.24 with the percentage of students achieving the Minimum Completeness Criteria (KKM) of 67% . In the second cycle, the average post-test score was 83.57 with the percentage of students who achieved the Minimum Completeness Criteria (KKM) of 86%. The results showed that the application of animated video media had an effect on increasing mathematics learning outcomes for fractional arithmetic operations.*

Keywords *:* Animated Videos, Learning Outcomes, Learning Media.

I. INTRODUCTION

In general, learning mathematics at both elementary and secondary levels is still considered a difficult subject for students to understand, so students are afraid of mathematics. The findings at the time of observation showed that there were still many elementary school students who had difficulty understanding mathematics. As happened to the sixth grade students of SD Negeri 018 Rambah, based on the results of the pre-cycle average conducted by the author, of the 21 students only 29% of students got scores above 70, while 71% got scores below 70. This shows that the minimum completeness criteria have not been achieved. (KKM) which has been set by the school is 70. This happens because there are several obstacles, including the lack of student interest in learning, the lack of interest in learning activities so as to minimize student motivation in learning, and the lack of use of media in learning.

One of the efforts to improve the quality of mathematics learning in the classroom, teachers can use media that are adapted to the learning styles of students (Ferry, et al. 2019). According to Nusir (2012:13) said that the use of interactive multimedia programs is very effective in improving students' skills or abilities in learning basic mathematics, because

children will be motivated by graphics and animations, especially when cartoon characters they know are used in games in learning. In addition, there are several benefits of learning media including: teaching will attract students' attention so that it can be understood more by students, teaching methods will be understood more by students, teaching methods will be more varied, students do more learning activities, because not only hear the teacher's description, but also other activities such as observing, doing, and so on (Sudjana, 2005).

In learning mathematics, students have their own learning style. Style learning is the basic potential or tendency of the child's potential. In designing learning, be it strategies, methods, learning media and activities that In involving students, teachers must pay attention to the different learning styles that students have. Learning styles are generally divided into visual, auditory, and kinesthetic. Differences in learning styles can indicate the best way for students to absorb information more quickly. As a teacher can understand how style students' learning, it may be easier to determine strategies in the process learning and can provide maximum results (Deporter and Hernacki, 2005; Ferry, 2019). The media used in this research is animated video. Media application animation in learning has a significant relationship to attention, interest, motivation, as well as other things that exist in students (Anwar, Liliawati and Utama, 2013). Interest High learning starts from self-motivation in the students themselves so that it affects positive on learning outcomes, (Nurhasanah, 2016). The solution to the problem used is to use animated video media which is expected to motivate students and increase student interest in learning so that it has an impact on increasing student learning outcomes.

II. RESEARCH METHODS

The type of research used is Classroom Action Research (CAR) where a scientific research activity is carried out rationally, systematically and empirically on various actions taken from the preparation of a plan to assessment. to real actions in the classroom in the form of teaching and learning activities, to improve and improve the conditions of learning carried out. The subjects of this study were sixth grade students of SD Negeri 018 Rambah. The design used is a model The design uses two cycles, with each cycle consisting of four stages, namely planning, action, observation and evaluation, and reflection (Stephen Kemmis and MC. Taggart, 1988; Somawati, 2019).

The cycle consists of several stages, namely: stage (1) Planning which includes making lesson plans, preparing guidelines for observing student activity, consult with colleagues to make instruments, and condition students in order to be able to follow the lesson well. Stage (2) Implementation, is an activity the action is done by learning in class. At this stage, the research teacher has prepare the instrument to be used, the research teacher uses the zoom meeting application which will be followed by colleagues, as well as all students by using the media-assisted online method in the form of animated videos that will be displayed on the screen can be witnessed by all students. Stage (3), At this stage, observations are made on while the action is running. So both take place at the same time. On At this stage, the teacher who acts as a researcher makes observations and records everything what is needed and occurs during the implementation of the action. Data collection This is done by using structured learning, including observation carefully implementing action scenarios from time to time and their impact on dampaknya process and student learning outcomes. Stage (4) This stage is intended to examine thoroughly the actions that have been taken, based on the data that has been collected, then evaluation is carried out in order to improve the next action. Reflection in PTK includes analysis, synthesis, and assessment of the results of observations of actions taken done. If there are problems from the reflection process, a reassessment process is carried out through the next cycle which includes activities: re-planning, re-action, and re-observation so that the problem can be resolved.

In the implementation of cycle II, the learning process carried out in this cycle siklus includes: Phase (1) Researchers make lesson plans, prepare observation guidelines student activity, consult with colleagues to make instruments At this stage compiling a plan is strived to be a design based on the results improvement of weaknesses in cycle I. Phase (2) the research teacher uses the zoom application meeting that will be attended by colleagues, as well as all students by using media-assisted online methods in the form of animated videos that will be displayed on the screen which all students can see. Stage (3) conducts observations which include observing student learning activities during the learning process, evaluating learning process. The next stage is to reflect on the results of learning activities aktivitas students during the learning process and post test (final test of learning) at the end of the cycle which will be done using google forms.

III. RESEARCH RESULTS AND DISCUSSION

Before researchers make improvements to learning, researchers carry out activities precycle. In pre-cycle activities, the teacher delivers material without using media anything and only use the lecture method. Next, students are given questions that related to the material as a form of evaluation. The learning outcomes obtained before repair are as follows:

Table 1. Pre-cycle Student Learning Outcomes

No	Description	Results
1	Percentage of learning completeness	29%
2	The average value of learning outcomes test	54,05
3	Number of students who have finished studying	6
4	The number of students who did not finish studying	15
5	Greatest value	80
6	Least Value	20

Judging from the data above, it can be seen that the average student learning outcomes classified as relatively low, low learning outcomes, many factors cause it to be wrong The other is that the basic abilities of students are very low, the teacher uses conventional learning (lectures), so that learning is less interesting, teachers often ignore the use of learning media that can improve basic skills, and students tend to be passive in activities learning takes place.

Seeing the results above from 21 students, only 6 people scored above the maximum standard of KKM is 70 or only 29%, then improvements must be made learning. In the first cycle, the researcher used animated video media which delivered using a sharescreen, some students show a little enthusiastic and enthusiastic when the teacher gives the subject matter to the students. In cycle I, the teacher provides opportunities for students to do question and answer with the teacher and fellow students using online discussions, after the teacher gives assignments. From the results of the evaluation it was found that there was a slight increase, This increase is reflected in the number of students participating in more advanced lessons motivated and enthusiastic in participating in the teaching and learning process and being followed with the attitude of students who are no longer sleepy.

Table 2. Student Learning Outcomes Cycle I

No	Description	Results
1	Percentage of learning completeness	67 %
2	The average value of learning outcomes test	70,24
3	Number of students who have finished studying	14
4	The number of students who did not finish studying	7
5	Greatest value	100
6	Least Value	50

After the first cycle was carried out, the results were not as expected although the success rate of students increases and motivation increases from before repair. So the researchers did cycle II as a remedial action.

Table 3. Student Learning Outcomes Cycle II

No	Description	Results
1	Percentage of learning completeness	86 %
2	The average value of learning outcomes test	83,57
3	Number of students who have finished studying	18
4	The number of students who did not finish studying	3
5	Greatest value	100
6	Least Value	60

In the second cycle, the media used was animated video to improve mathematics learning achievement for class VI SD Negeri 018 Rambah so that students can be motivated in learning. In this case it is proven by an increase in student learning motivation. Many contributing factors include the media used are animated video media that children like, moving and sound videos with contrasting colors attract children's interest, as well as the way teachers deliver lessons and deal with students in learning. This attracts attention, fosters enthusiasm and raises awareness. positive impression so that students are motivated to study seriously.

After the improvement of learning cycle II, there was a relatively high increase, namely from 21 students, 18 students who were already above the KKM or reached 86%. In this Classroom Action Research (CAR) many things were found by researchers. This is closely related to the progress of researchers. To conduct research and improve student learning outcomes, it is done using video media, a more varied method, namely group discussions in the help of the WhatsApp application, researchers also emphasize abilities and provide reinforcement and provide questions that can motivate students.

Previously students were given material with the lecture method, then given evaluation. In this cycle students do not experience significant difficulties but students look passive and some students chat when the material is given. In the first cycle, students began to be given action by giving task activities. However, when the activity took place the students seemed very active and enthusiastic in learning doing the task given the same situation felt by the researcher in cycle II the enthusiasm of students to learn is very high, the learning process feels interactive between students and teacher.

The number of students and the percentage of students who were actively

involved in learning before the improvement of learning and after the improvement of learning showed an increase. Before improving learning, 6 students were actively involved (28.6%), then increased to 10 people (47.6%) in the first cycle. In the second cycle it became 18 people (85.7%). The condition of students who study actively, enthusiastically and interactively can affect student learning outcomes. This can be seen from the observations of researchers regarding student motivation and improving student learning outcomes.

The things found by the researchers at the beginning of the cycle were very influential in the next cycle. As previously stated in the first cycle, students are less enthusiastic, passive and tend not to pay attention to the lesson so that the learning outcomes low students. This makes researchers look for solutions, in order to find out the right way to improve learning in the next cycle. After conducting Classroom Action Research (CAR) in cycle II in class VI SD Negeri 018 Rambah, researchers are optimistic that high student motivation can improve learning outcomes. This is done by using video animation media and online discussion methods that involve students directly so that students can play an active role in learning and there must be cooperation between students, school teachers to improve the quality of school learning.

With regard to animation media, animation is the most interesting form of pictorial presentation, in the form of a moving image simulation that describes the displacement or movement of an object (Mayer and Moreno, 2002; Sukiyasa and Sukoco, 2013). The use of animation in the learning process is very helpful in increasing the effectiveness and efficiency of the teaching process, as well as increasing learning outcomes. In addition, the use of learning media, especially animation, can increase the attractiveness and motivation of students in participating in the learning process. (Sukiyasa and Sukoco, 2013).

Based on the results of observations and evaluations of student learning in Mathematics subjects, the material for Fraction Counting Operations before repairs was made and after improvements in learning cycle I and cycle II increased. This increase in student learning outcomes is influenced by the use of online discussion methods with animated video media.

Student learning outcomes before improvement were only 6 people (29%), in the improvement of learning in the first cycle increased to 14 people (67%) and in the improvement of learning in the second cycle increased to 18 people (86%). This

shows that the use of animated video media and online discussion methods can improve the learning outcomes of sixth graders at SD Negeri 018 Rambah.

This is in accordance with what Liza Yunita said, in her research, a learning is said to be successful if at least 75% of the total students have scored 70 in improving learning outcomes. Learning is said to be effective if statistically student learning outcomes show a significant difference between prior knowledge and knowledge after learning (Yunita, 2017).

The problems that occurred during the research were during the implementation of learning using the online discussion method. There are some students having problems opening the WhatsApp application because the cellphone is used while zooming in a meeting. To overcome this, the teacher asks parents for help to support in terms of facilitating Smartphones and laptops for each student.

In addition, according to some students, the video of the amination was shown too quickly, so there were some questions that had not been answered. Researchers can solve this problem by replaying animated videos.

The next problem is when the animated video has finished showing. There are some students who are busy alone, some use their smartphones to chat with their friends in the whatsapp group. This problem can be overcome by holding questions and answers related to the learning material. Besides that, the teacher can directly reprimand students who look not concentrated so they can continue learning with focus again.

IV. CONCLUSION

Based on the results of the research and discussion, it can be concluded that the use of animated video media in learning mathematics with fractional arithmetic operations can improve student learning outcomes for class VI SD Negeri 018 Rambah. The increase in student learning outcomes can be seen from the average post test results in each cycle. . The average post test results increased from 70.24 in the first cycle to 83.57 in the second cycle. The percentage of learning completeness also increased from 67% in the first cycle to 86% in the second cycle. In addition, the percentage of students who were actively involved also increased from 47.6% in the first cycle to 85.7% in the second cycle.

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