ENHANCEMENT RESULTS LEARNING TROUBLESHOOTING USING *REALISTIC MATHEMATIC EDUCATION* APPROACH IN ELEMENTARY SCHOOL

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ABSTRACT

Based on experience and reflection multiplication of fractions learning at fifth class SDN 33 VII Koto Padang Pariaman district. Student learning outcomes are still low and learning is done by teachers are not using realistic problem to the beginning of learning. So the author through this research is trying to improve students' outcomes in subjects multiplication of fractions. The purpose of this study is to describe the planning, implementation and learning outcomes. This research is action research (class action research), this study used a qualitative and quantitative approach. Learning is used by using the realistic mathematics education approach. After doing research, there is an increase in student learning outcomes in the multiplication of fractions lesson using the realistic mathematics education approach. It can be seen, both from the abilities of teachers in designing learning from 83 % up to 94 %, implementation of learning increased 94% from 77%, and learning outcomes increased to 86.87 from 74.04.

Keywords: Learning Outcomes, Fraction Multiplication, RME Approach

INTRODUCTION

Fractional multiplication learning is one of the teaching materials that need to be given in class V of the second semester of elementary school listed in the Ministry of National Education (2006), namely basic competencies 5.3 "Multiplying and dividing various fractions." with students' daily lives is one way that can be done according to the problems encountered by students.

To make it easier for students to do fraction multiplication, it is necessary to have a visual aid that can be manipulated by students, because in general grade V students of elementary school (SD) are on average 10-11 years old. Students at this age have not been able to fully understand the abstract learning so the learning material must be concretized. This is in accordance with the opinion of Piaget (Danim, 2010) explains that "the age of 7-11 years is the concrete operational stage."

Therefore, so students can understand fraction multiplication material, learning can be started using concrete objects (Hermon and Dalim, 2016). Concreting abstract learning material will make it easier for students to develop their abilities to create active, fun and meaningful learning for students. Based on the experience and results of reflection, the author in class V SD Negeri 33 VII Koto Padang Pariaman on 5─6 March 2012 on fractional multiplication material investigators found an obstacle in implementing learning especially poor students understand the material multiplication of fractions with proven results Deuteronomy Daily value (UH) do not meet the minimum completeness criteria (KKM) which has been set at 70. Of the 15 students obtained scores above 7 KKM students and under the KKM 8 students. It means that the percentage of learning completeness in fraction multiplication is only 47 % or still low when compared to the standard of learning completeness according to the Ministry of Education and Culture (in Trianto, 2011) says "a class is said to be complete learning (classical completeness) if the class is 85% of students have completed their studies."

This is because during learning activities, the teacher does not give *real* things or realistic problems in students' daily lives as a starting point for learning. In addition, in the fraction multiplication learning the teacher does not emphasize *doing mathematics* in his learning but the teacher only focuses on the results. So that the understanding of fraction multiplication material cannot be mastered by students during the learning process (Hermon and Dalim, 2015).

Therefore, to help students understand the material multiplication of fractions and can apply it in everyday student life, learning can be done with the emphasis moved from the realistic problems and emphasizing the use of a situation that can be imagined *(imaginable)* by students. This refers to the characteristics of the *Realistic*

Mathematics Education (RME) Approach put forward by Treffers (in Wijaya, 2012), namely: 1) the use of context; 2) the use of models for progressive mathematicians; 3) utilization of student construction results; 4) interactivity; 5) linkages.

Using the *Realistic Mathematics Education* (RME) approach in fraction multiplication learning will be more meaningful for students because students will be more active and creative to solve a given problem so that the use of *Realistic Mathematics Education* (RME) approaches has the potential to improve the fraction of class V students. SD N egeri 33 VII Koto Padang Pariaman. This is in line with the opinion of CORD (in Wijaya, 2012) asserting that "a knowledge will be meaningful to students if the learning process is carried out in a context or learning uses realistic problems."

This *Realistic Mathematics Education* (RME) approach has four stages as according to Hadi (2005) there are four stages of the *Realistic Mathematics Education* (RME) approach, namely: "1) Preliminary stage; 2) Stage of developing the symbolic model of (mathematical and reflection); 3) Phase explanation (reaction and formalization); 4) Closing stage (mathematic in application) ".

The *Realistic Mathematics Education* (RME) approach has advantages namely according to Sutarsih (in Ariani, 2000) there are seven advantages of the *Realistic Mathematics Education* (RME) approach, namely: 1) learning is quite pleasant; 2) understand the material well; 3) more creative; 4) giving a clear understanding to students that learning mathematics through the process; 5) provide clear understanding to students about the relevance of mathematics to everyday life; 7) linkages; 6) meaningfulness. In addition, the *Realistic Mathematics Education* (RME) approach provides clear and operational understanding through a process that is constructed and developed by students.

By looking at the advantages of the *Realistic Mathematics Education* (RME) approach and the obstacles encountered in the field in fraction multiplication learning, the *Realistic Mathematics Education* (RME) approach is very suitable to be applied. The *Realistic Mathematics Education* (RME) approach uses

problems that have been found by students in their daily lives, as a starting point in learning fraction multiplication.

METHOD

This research is a classroom action research using a qualitative approach. This qualitative approach is concerned with improving or improving the learning process in a class. As for seeing the success of the learning process with a n qualitative closers supported by quantitative approach. This study will describe the use of the RME approach to improve fraction multiplication learning outcomes in class V SD N eerily 33 VII Koto Kabupaten Padang Pariaman. The study was conducted in four stages: (1) the stage of planning *(planning),* (2) the stage of action *(action),* (3) the stage of observation *(observation),*(4) the stage of reflection *(reflection).*

RESULTS AND DISCUSSION

Based on the observer's assessment of the Learning Implementation Plan (RPP) that has been prepared by the teacher, the total score obtained is 2 5 from the maximum score 3 2. Percentage score obtained is 78, 00%. This shows that the teacher's ability to breastfeed in the Learning Implementation Plan (RPP) is in a good category. Based on observers' observations of teacher activities during the learning process, the number of scores obtained is 28 and the maximum score is 40. Thus the average score percentage is 7 0 %. This shows the teacher's activities during the learning activities take place based on observations in good categories.

The number of scores obtained from observations of field records on student activities in learning is 28 and the maximum score is 40. Thus the average score percentage is 70 %. This shows that the level of success of student activities during the learning activities is in the good category. The learning outcomes of each student are a combination of cognitive, affective, and psychomotor results. For overall student learning outcomes, then the average learning outcome is a combination of cognitive, affective, and psychomotor averages divided by three. Thus the average overall student learning outcomes are (67.66 + 70 , 06 + 6 9 , 93): 3 = 207.65: 3 = 69.22 (sufficient category).

Based on the observer's assessment of the Learning Implementation Plan (RPP) that has been prepared by the teacher, the total score obtained is 2 8 from the maximum score 3 2 . The percentage score obtained is 8 8 %. This shows that the teacher's ability to breastfeed in RPP is in a very good category. Based on observers' observations of teachers in learning activities, the number of scores obtained is 35 and the maximum score is 40 . Thus the percentage score averages 88 %, the category is very good.

The number of scores obtained from observations of field records on student activities in learning is 32 and the maximum number of scores is 40. Thus the average score percentage is 80 %.This shows that the level of success of student activities during the learning process is in a very good category. The learning outcomes of each student are a combination of cognitive, affective, and psychomotor results. For overall student learning outcomes, then the average learning outcome is a combination of cognitive, affective, and psychomotor averages divided by three. Thus the average overall student learning outcomes are (77.33 + 79.93 + 79.33): 3 = 236.59: 3 = 78.8 7 (good category).

The ability of the teacher in compiling the Learning Implementation Plan (RPP) cycle II is already very good. This is supported by the results of observations carried out by class V I teachers as observers. Where the score obtained is 30 from a maximum score of 32 , the percentage is 94 %. Teacher activities in learning activities this second cycle is in accordance with the plan that has been prepared and the level of achievement as expected. This fact is supported by the results of observations carried out by teachers of class V I and colleagues as observers, where the number of scores of teacher activities obtained during the learning activities is 39 and the maximum number of scores is 4 0 . Thus the average score percentage is 9 8 %. This shows the activities of the teacher during the learning activities based on observations in very categories well. With thus percentage the average score is 9 0 %. This matter to show that level success activity students for activities learning is located on very good category. With thus obtained the average yield learn the overall student is (83 , 33 + 8 9 , 20 + 87 , 8 0): 3 =260.33: 3 = 86, 87 (category very good).

Based on the results of field records and discussion of researchers with observers / observers 1 and 2, one of the problem formulations in the introductory section, which is about making the learning implementation plan is in accordance with the stages of the RME approach.

From the analysis of the first cycle of research, the average value of cognitive aspects for the first cycle experienced an increase from the first cycle of 72.53, which was at a good level of success . The average value for the affective aspect in the first cycle was 74.53, which was at the level of success well. The average score for the psychomotor aspect in the first cycle was 74, 87, which was at a good level of success.

Based on the exposure to the data from observations in the first cycle, it can be used as a basis for improving the development of student learning. For this reason, the results of reflection from the first cycle are continued in the next cycle (cycle II). From the analysis of the second cycle of research, the average value of cognitive aspects for the second cycle experienced an increase from the first cycle, namely 83.33. It was at a very good level of success. Assessment of the affective aspects also increased, the average value for the affective aspect in the second cycle was 89.20 . Being at the level of success is very good. Assessment for psychomotor aspects also increased, the average score for the psychomotor aspect in the second cycle was 87.80 . Being at the level of success is very good. Based on the description above research, the results of the action on the second cycle has reached the desired target and researchers have been successful in improving student learning outcomes VS class D Negeri 33 VII Koto Padang Pariaman district premises n RME approach.

CONCLUSION

From exposure to data and results of the research and discussion above, the researcher can draw conclusions from this study, namely: (1) Before carrying out learning, the teacher must make a Learning Implementation Plan (RPP). Learning Implementation Design must be in accordance with the steps of the learning method to be used. Which in the RPP must be reflected in all aspects starting from the formulation of indicators and learning objectives, selection of teaching materials, selection of sources and media, suitability of strategies with learning objectives, and completeness

of instruments. (2) The study with RME approach should follow the following steps: a) the preliminary stage: teacher provide a real problem, the student did me a group discussion; b) the development stage of the symbolic models so that students develop their own symbol in solving the problem of the concrete form to the abstract; c) the stage of explanation and reason: students are asked to provide answers and reasons; d) closing stage: consists of guiding students to conclude learning and giving tests (3) Use of the RME approach in fraction multiplication learning in class V SD It's scary 33 VII Koto Padang PariamanRegencycan improve student learning outcomes. This can be seen from the table of success of the second cycle students higher when compared to the success of students in cycle I which is 74.07 increased to 86.87and the recapitulation of the assessors a n process in the first cycle has also been increased in the second cycle where students already b M any gain value SB (Sang a t Good). Based on the conclusions listed above, the researcher proposes several suggestions to consider: for teachers, in order to be able to try and apply the more varied RME approach so that students can be interested in referring to the learning given ; for principals, can strive to improve the facilities and infrastructure that support the success of teachers in improving learning outcomes siswa.Untuk researcher as a student, to be able to add useful knowledge later to increase profesion al later; For readers, so that anyone who reads this article can add insight to the reader.

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