

## IMPROVEMENT OF LEARNING OUTCOMES IN REDUCTING DENIMINATIONAL FRACTIONS IS NOT THE SAME AS STAD TYPE COOPERATIVE LEARNING IN ELEMENTARY SCHOOLS

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### ABSTRACT

The problem of learning the material geometrical properties particularly rectangular prisms and triangular prisms are: in the learning process, the teacher is not using a variety of methods such as focus group discussions were held infrequently. The results of studying the properties of rectangular and triangular prisms in fifth grade at elementary school with STAD in cycle I and II, which increased the average value obtained in the first cycle an average of 62.04 and the second cycle an average of 81, 04. Of the ability of teachers to design lessons from 75 % to 93%. Activities teachers from 57% to 91% increase. Student activity increased 68.75% from 87.51%. It can be concluded that the STAAD type can Abstract Based on the results of observations conducted by researchers in class IV SDI of Bukittinggi Community, it was seen that learning to reduce the disputed fractions was not the same, often dominated by teachers which caused students to be less active. Research procedures include: planning, implementation, observation and reflection. The approach in this study is a qualitative and quantitative approach. Research procedures include: planning, implementation, observation and reflection. The results of the research from each cycle carried out have increased. Seen in: a) Learning cycle I planning 75% while the second cycle 93%. b) Implementation of learning on researchers in cycle I 71% and cycle II 89%. Whereas for the first cycle students 57% and the second cycle 91%. c) Student learning outcomes cognitive aspects of cycle I 68.40 and cycle II 78.40, affective aspects of cycle I 62.04 and cycle II 81.04 and psychomotor aspects of cycle I 70.16 and cycle II 77.0.

**Keywords:** Learning Outcomes, Cooperative Learning, STAD

## INTRODUCTION

Learning to reduce fractions is one of the learning materials learned in grade IV of elementary school (SD) to be exact in the second semester of learning load in accordance with the curriculum level of the education unit (Ministry of National Education: 2006; Hermon and Dalim, 2006). This is because the use of fraction reduction is related to the next material. Knowledge of the reduction of fractions is found in students' daily lives, such as cutting paper into two rectangular shapes. In addition, to support so that the learning objectives can be achieved properly, learning must be centered on students so that students are more active in learning and prioritize working together in their groups (Hermon and Dalim, 2005; Nurhadi 2007).

Therefore, knowledge of the learning model is very needed by the teacher, because the success or failure of students in learning is very dependent on the right or not the learning model used by the teacher. One effort that can be used by teachers in improving students' ability to reduce the denominator mentioned is not the same is to use the Cooperative type STAD model. The use of types that are in Cooperative proved to be superior in improving student learning outcomes compared to the types of individual learning used so far. One type in the Cooperative model is the Student Teams Achievement Divisions (STAD) type. According to Nur (2006) explained that: Cooperative learning with type STAD, students are placed in study groups of four or five students who are a mixture of different academic abilities, so that in each group there are students who have high, moderate, and low achievement or variations in gender, racial and ethnic groups, or other social groups. The teacher first presents new material in class, then the team members learn and practice for the material in their group who usually work in pairs.

They complete worksheets, ask each other, discuss problems and do the exercises (Hermon, 2015). In the end the teacher gives a quiz that must be done individually by students. Each group member must give the group the best score by showing an increase in appearance compared to before or by achieving a perfect score. Groups that without having members increase in value and produce perfect scores will not win or get awards. 1. Based on the description above, in general the problems to be studied are "How is the increase in learning outcomes of the reduced fraction not the

same as the Cooperative Learning Model Student Team Achievement Division (STAD) in the 4th grade of Elementary School I Bukittinggi?". More specifically, the problems in this study are: (1) How is the learning plan for the reduction in the denomination not the same as the STAD type cooperative learning model in SDI Masyihah Bukittinggi? How is the implementation of the reduction in the denomination not the same as the STAD cooperative learning model in class IV of SDI Masyithah Bukittinggi? (2) How is the learning result of the reduction in the denomination not the same as the STAD type cooperative learning model in the 4th grade SDI Masyitah Bukittinggi?

The purpose of this class action research is generally to describe an increase in learning outcomes in fraction reduction by the Student Team Achievement Division (STAD) Type Learning Model in class IV of SD I Masyitah Bukittinggi. Specifically the purpose of this study was to describe : (1) Planning for learning to reduce the mentioned fraction was not the same as the STAD type cooperative learning model in class IV SDI Masyitah Bukittinggi, (2) The implementation of the reduction in the denominator is not the same as the STAD type cooperative learning model in class IV of SD I Masyithah Bukittinggi. The learning outcomes of the reduction in the denomination are not the same as the STAD type cooperative learning model in class IV of SD I Masyithah Bukittinggi.

## METHOD

This research was conducted at the Masyithah Elementary School in Bukittinggi. The subject of the research was the fourth grade students of SD I Masyithah Bukittinggi with a total of 25 students consisting of 13 men and 12 women. The research conducted is classroom action research that uses qualitative and quantitative approaches. This research is a classroom action research using qualitative and quantitative approaches. This qualitative approach deals with the improvement or improvement of the learning process in a class. The study was conducted in two cycles, where each cycle consisted of two meetings. Each meeting includes the stages of planning, implementation, observation, and reflection. The data in this study will use two types of data, namely quantitative data and qualitative data. Data obtained from the subject to be studied are teachers and students with various aspects of behavior and activities. Data is collected

by techniques namely observation, documentation, and tests. While the research instruments used in this study were in the form of RPP and assessment sheets (APKG 1), observation sheets and test sheets and the answer key. Data analysis techniques used are qualitative data analysis and quantitative data analysis. Analysis of qualitative data is carried out by examining the collected data, reducing data, presenting data and drawing conclusions.

## RESULTS AND DISCUSSION

Planning for learning to reduce the denomination is not the same as the STAD type cooperative learning model manifested in the form of a Learning Implementation Plan (RPP). This plan was prepared based on the second semester program in accordance with the research that took place with a reduction in fractions. Based on the observations made by the observer on learning planning, the RPP assessment results in the first cycle of the first meeting were 75% with good criteria, and in the first cycle of the second meeting increased to 79% with good criteria. Then in the second cycle of meeting I, the results of the lesson plan assessment showed a value of 90.38% with very good criteria and in the second cycle of the second meeting showed a value of 94.23% with very good criteria.

The implementation of the mentioned fraction reduction learning is not the same as the STAD type cooperative learning model carried out in two cycles, where Cycle II 2 meetings, held on Monday 23 April 2013 and the second meeting was held on Thursday 25 April 2013. Furthermore, the second cycle of the meeting Monday, April 30, 2013. Observation of the implementation of learning is done by observing the aspects of the teacher and aspects of students. The Observer observes the implementation of each learning step by the teacher and students. Based on the observations of the implementation of learning in the first cycle of meeting I from the aspect of the teacher obtained a percentage of 63.56% less criteria and from the aspect of students 62.5% with less criteria. Then in the second meeting the percentage was 75% with sufficient criteria, and aspects of students 75% with sufficient criteria. Furthermore, in the second cycle there was a greater increase where in the first meeting on the teacher aspect there was a percentage of 87.5% with criteria of good and aspects

of students 84.38% with good criteria and in meeting II the aspects of teacher teachers were 93.75% with criteria are very good, and from the aspect of students 90.63% with very good criteria. The results of the above observations indicate that there is an increase in the implementation of learning to reduce the disputed fractions not the same as the STAD type cooperative learning model so that the STAD steps can be carried out properly by teachers and students.

Student learning outcomes are assessed from 3 aspects, namely cognitive, affective and psychomotor. Cognitive aspects are assessed by students' ability to offer individual tests. Affective aspects are assessed from the attitudes of students during the learning process, namely discipline, responsibility, cooperation, respect, and honesty. Furthermore, psychomotor aspects were assessed from the students' ability to observe the completeness of group learning in the learning process. In the first cycle of the first meeting, the results of the assessment of cognitive aspects were obtained with an average of 64.77, affective aspects 68.46, and psychomotor aspects 66.69 so that the three aspects obtained an average of 66.64. Furthermore, based on the assessment of learning outcomes in the first cycle of meeting II, the average cognitive aspects were 73.69, affective aspects 70.77, and psychomotor aspects 73, so that for these three aspects an average of 72.49 was obtained. Recapitulation of student learning outcomes for each cycle was obtained from the average value of three aspects, namely cognitive, affective and psychomotor at each meeting. This recapitulation shows an increase in learning outcomes with the STAD type cooperative learning model in class IV SD I Masyihah Bukittinggi.

Based on student learning outcomes in cycle 1, it was found that out of 25 students who attended the learning process only 11 students were able to obtain learning outcomes above the KKM, while 14 other students scored below the KKM and were declared incomplete. So the percentage of completeness in this first cycle is 44%, while what is expected is above 56%. The average value obtained from this cycle is 69.56. Furthermore, the results of the study in cycle 2 showed that in the second cycle of meeting I, the results of the assessment of cognitive aspects were obtained with an average of 80, affective aspects 76.54 and psychomotor aspects 77.38, so that the average obtained from the three aspects was 77, 97. And in the second cycle of meeting

II, the average cognitive aspects of 89.85 were obtained, affective aspects were 82.31, and psychomotor aspects were 83.38 so that the average of the three aspects was 85.18. Based on the explanation above, it was found that out of 25 students who took part in the learning process there were 12 students who obtained learning outcomes above the KKM and only 2 who obtained learning outcomes under the KKM were not complete. So that the percentage of completeness in this second cycle is 98% with the average value of the three aspects in this cycle is 81.60.

## CONCLUSION

From the results of the research and discussion, it can be concluded, the plan for implementing learning to reduce fractions in disagreement is not the same as the STAD type cooperative learning model consisting of 5 steps a) class b) team learning, c) quizzes, d) individual progress score, e) recognition team. The implementation of learning with STAD is carried out with 5 steps where at each meeting observations, reflections, and assessment of learning outcomes are conducted. The observations from the aspects of the teacher in the first cycle of meeting I obtained a percentage of 65.63% and the second meeting obtained a percentage of 75%. Observations from aspects of students obtained percentage in the first cycle of meeting I 62.5% and meeting II 75%. While the results of observations from the aspects of the teacher in the second cycle at the first meeting obtained a percentage of 87.5% and meeting II 93.75%. Observations from aspects of meeting I students were obtained as a percentage score of 84.38% and meeting II 90.63%. Learning outcomes of the reduction in the denominator are not the same as the cooperative learning model type STAD can improve student learning outcomes. The increase in student learning outcomes can be seen from the average obtained in the first cycle of meeting I was 66.64 with a percentage of completeness of 53.85%, and the average value in the second meeting was 72.49 with a percentage of completeness of 69.23 %, so that the average in the first cycle is 69.56 with the percentage of completeness in the first cycle of 53.85%.

## REFERENCES

- Basrowi and Suwandi. 2008. Understanding Qualitative Research. Jakarta: Rineka Cipta.
- Ministry of National Education. 2006. Curriculum Level of Education Unit Level of Basic Education. Jakarta: Ministry of National Education
- Hermon, D and Y. Dalim. 2005. Penggunaan Media Audio Visual untuk Meningkatkan Kreatifitas Belajar. Jurnal Pembelajaran. 28 (3) 266-276
- Hermon, D and Y. Dalim. 2006. Penerapan Kuliah Lapangan untuk Meningkatkan Hasil Belajar Mahasiswa. Forum Pendidikan. 28 (3) 156-161
- Hermon, D. 2015. Arahan Kebijakan Keberlanjutan Pendidikan 10 Tahun Pasca Bencana Tsunami di Kabupaten Aceh Jaya Provinsi Aceh. Seminar Nasional Geografi. Master Program of Geography Education. Universitas Negeri Padang
- Heruman. 2007. Mathematics Learning Models in Primary Schools. Bandung: PT. Youth Rosda Karya.
- Muslich, 2007. KTSP Competence and Contextual Based Learning: Guides for Teachers, Principals, and School Supervisors. Malang: Bumi Aksara.
- Slavin, Robert E. 2009. Cooperative Learning Theory, Research and Practice. Bandung: Nusa Media.
- Sanjaya, W. 2006. Learning Strategies Oriented by Educational Process Standards. Bandung: Kencana.
- Sardiman. 2011. Interaction and Motivation in Teaching and Learning. Jakarta: PT RajaGrafindo Persada.
- Sudjana, N. 2009. Assessment of Teaching and Learning Results. Bandung: PT Remaja Rosda Karya.
- Sugiyono. 2009. Educational Research Methods: Quantitative, Qualitative and R & D Approaches. Bandung: Alfabeta.
- Suryanto, A. 2009. Main Material for Learning Evaluation in Elementary School. Jakarta: Open University.
- Sumiati. 2007. Learning Methods. Bandung: Wahana Prima.
- Widyantini. 2006. Module: Mathematical Learning Model with a Cooperative Approach. Yogyakarta: Ministry of National Education