

Application of *Snowball Throwing Type Cooperative Learning Model* to Improve Student Learning Outcomes of Class VB Fractional Materials SD Negeri 181 Pekanbaru

Desnelti Desnelti¹, Heny Sunarti², Andella Putri³, Eza Rahmi⁴, Marwa Marwa⁵, Bambang Supeno⁶

^{1,2} SD Negeri 181 Pekanbaru, Indonesia

³ SD Negeri 192 Pekanbaru, Indonesia

^{4,5,6} Graduate School of Pedagogical Sciences, Universitas Lancang Kuning, Indonesia; marwa@unilak.ac.id

Abstract: In the formation of students' potential and abilities, education is the main milestone. During learning The application of the Snowball Throwing Type Cooperative Learning Model students can try to build or create knowledge by giving meaning to what they have learned (Verawati, 2011). To collect data for this study, a test method was used. After the data was collected, a descriptive analysis method was used. In the pre-cycle learning outcomes, the average class score increased from 59% to 69% in the first cycle, then to 80% in the second cycle. Meanwhile, the student absorption score increased from 59% to 68% in the first cycle, then to 80% in the second cycle. In addition, learning completeness increased from 33% of pre-cycle learning outcomes to 67% in cycle I, then to 100% in cycle II. The application of the Snowball Throwing Type Cooperative Learning Model is an effective method to improve the mathematics learning outcomes of VB grade students at SD Negeri 181 Pekanbaru. It can improve the mathematics learning outcomes of students in class VB SD Negeri 181 on fractional material.

Keywords: *Mathematics, Snowball Throwing type cooperative, Student learning outcomes*

1. INTRODUCTION

Education is the main milestone in developing students' potential and abilities. Teaching methods are also very decisive in the learning process to ensure that students understand and master the material. One of the models that is starting to gain popularity is the Cooperative Learning Model, where students work together and support each other in the process. Innovative and cooperative learning strategies such as contextual approaches and PAIKEM have been proven to improve students' abilities (Ridwan, 2022). This is especially true for mathematics, where Jigsaw's cooperative learning approach has been shown to improve their grades (Shoffa, 2017).

Education is a key pillar in the formation of capable and qualified individuals. The learning model used by instructors is an important component of the educational process. A well-run learning model can help students understand and engage in learning activities. The Snowball Throwing Cooperative Learning Model is an interesting learning model to use, especially when teaching material about fractions to VB students of SD Negeri 181. It has been proven to significantly improve student learning outcomes in several elementary school subjects.

Pangkey (2021) and Roheni (2020) found that this methodology improved the learning outcomes of PKn and Social Studies, while Syarifuddin (2023) and Luthfiyah (2023) showed better student engagement and learning outcomes in science and mathematics. According to these findings, the Snowball Throwing model is an excellent educational tool for first-graders. This gives them the ability to work together in groups, solve problems, and improve their understanding of fractions collectively.

The Snowball Throwing cooperative learning methodology has been proven to significantly improve student learning outcomes in several elementary school subjects. Syarifuddin (2023) and Luthfiyah (2023) both show greater student engagement and learning outcomes in science and mathematics. Pangkey (2021) and Roheni (2020) found that this methodology improves the learning outcomes of PKn and Social Studies. Based on these findings, education is a planned effort and effort with the aim of creating an atmosphere and learning process so that students can actively develop their religious, religious, spiritual, spiritual, and spiritual potential, and spiritual awareness, skills needed by themselves, society, countries, and states. To achieve its educational goals, schools have implemented a learning process, which is a system of various parts that are interconnected with each other.

Mathematics is a very important field of study in daily life because almost all activities related to it (Novtiar & Aripin, 2017; N.L.S. Nuraini & Laksono, 2019). Learning activities are carried out by teachers and students. Teaching behavior is teaching behavior. Learning is a thinking process. Students learn to think and seek support for those who ask questions. If we consider education in schools, we will see that it focuses not only on the subject matter, but also on how students acquire knowledge and the ability to control themselves. There are many learning models that have been developed today (Sanjaya, 2011), but the most effective learning occurs when having fun (Hernowo, 2011). 2007 One of the reasons students learn well is because they enjoy letting others follow the tar learning process, as well as creating a comfortable learning environment and environment.

To implement the learning model, teachers must use a learning approach. Method is a way to achieve goals (Rusman, 2011). In this study, *the Snowball Throwing* method was used. The principle of the snowball game is used to throw *Snowball Throwing*. In *Snowball Throwing* shooting practice, students can try to increase or create knowledge by giving articles to what they have learned (Verawati, 2011).

Interest is the tendency to always pay attention and remember an activity. Activities that a person is interested in are accompanied by joy and pleasure, as well as continuous attention (Hilgard; Slameto, 2010). A student will study thoroughly and become the most proficient, or they will learn according to the weight of their potential (Winkel, 2004). In elementary education, fractional matter is essential for building a more complex understanding of mathematics in the future. Therefore, it is crucial to look for learning approaches that are not only effective but also foster student drive and engagement.

In this article, we will discuss the idea behind the Snowball Throwing Type Cooperative Learning Model, why it is considered useful for learning fractional materials, and how its application can improve student learning outcomes. We hope that this article can provide comprehensive insights into the use of innovative learning approaches to improve the quality of education in VB classes at SD Negeri 181 Pekanbaru.

2. METHOD

This class action research was carried out in the VB class of SD Negeri 181 Pekanbaru. There are 39 students in this class, consisting of 14 boys and 25 girls. To improve mathematics learning outcomes on fractional materials, learning in this class has been carried out in accordance with the lesson plan designed as an application of the Snowball Throwing type cooperative learning model. The research was carried out in two cycles, with four stages: (1) planning, (2) implementation of actions, (3) observation/evaluation, and (4) reflection. Figure 1 shows the design of the research stages.

According to the image above, this classroom action study was carried out according to the research design. In the first cycle, this research began by making preparations, namely (1) making a Learning Implementation Plan (RPP) using the Snowball Throwing learning model, (2) making tools and media that will be used in learning activities, and (3) making instruments, such as tests to measure students' mathematical ability in each cycle according to the material studied. The test method was used to collect data in this study.

The test method consists of collecting data in the form of tasks that must be performed by the individual or group of people being tested. After the data collection in this study, descriptive analysis was used to determine the high and low level of students' mathematics learning outcomes, which was then converted into a five-scale Benchmark Assessment (PAP).

Fractional Materials in the Elementary Curriculum

One of the materials taught in elementary school is fractional material. Understanding fractions is essential because they are used in many everyday things, such as shopping, cooking, or in more complex fields of mathematics and science. Teachers must find effective ways to teach fractional material to their students so that they can understand and use it well.

Snowball Throwing Type Cooperative Learning Model

The cooperative learning model encourages students to cooperate and interact throughout the learning process. *Snowball Throwing* is an example of a cooperative learning model that allows students to work in small groups and gradually improve their understanding of a particular subject.

Snowball Throwing learning begins with students being given questions or assignments related to fractional material. They then work in small groups to answer questions or complete tasks. Once finished, they "throw" the answers to the next group, who then check and complete the answers until the whole class is involved and all answers have been checked and corrected together.

3. RESULT

1. *Snowball Throwing* Type Cooperative Learning Model Can Improve Student Learning Outcomes of Class VB Fractional Materials SD Negeri 181 Pekanbaru

Based on the results of the research on the use of the *Snowball Throwing* type cooperative learning model in learning fractional mathematics, 39 students of class VB SD Negeri 181 Pekanbaru in the first semester of the 2023/2024 school year are presented in Table 1.

NO	DESCRIPTION	INITIAL VALUE	CYCLE I	CYCLE II	INCREASED
1	Sum	1240	1425	1675	250
2	Average	59%	67%	80%	12%
3	Absorbency	59%	69%	80%	12%
4	Learning Completeness	33%	67%	100%	33%

Based on Table 1 above, it can be explained that the average class score increased from 59% in pre-cycle learning outcomes to 69% in cycle I, then to 68% in cycle II. The student absorption score also increased from 59% in pre-cycle learning outcomes to 68% in cycle I, then to 80% in cycle II. In addition, learning completeness also increased from 33% in pre-cycle learning outcomes to 67% in cycle I, then to 100% in cycle II.

2. Factors of the *Snowball Throwing Type Cooperative Learning Model Can Improve Student Learning Outcomes of Class VB Fractional Materials SD Negeri 181 Pekanbaru*

Based on the results of interviews from group representatives and observations based on learning indicators with the cooperative method of snowball Trowing, several factors were found to increase student learning outcomes in fractional materials as follows

1. Sisiwa involvement

Are your children already involved in our learning process today?" I already feel involved in the learning process that we carry out today," said Dimas

2. Improves Understanding of Fractions

What is your score today? "Alhamdulillah, my grades are good and I already understand the learning about this fraction," said Bintang

3. Improves Social Skills

Can today's learning foster cooperation between your friends? "I am very excited about today's learning because I can communicate with friends," said Fadel

4. Learning becomes fun

How do you feel about learning today? "Today's learning is very fun because the learning is made like a ball game that makes us fun and excited," said Arini.

4. DISCUSSION

According to Cahaya ni (2016), the application of the Snowball Throwing type cooperative learning model can improve mathematics learning outcomes. Then the researcher also applied this method to VB class students at SD Negeri 181 Pekanbaru in the MTK subject, namely fractions and student learning outcomes in the fraction chapter also increased. This is because this model has the ability to improve student learning outcomes.

The Snowball Throwing type cooperative learning model begins with the group leader forming a group to get assignments from the teacher. Then each student makes a question in the form of a ball (question paper) and throws it to other students. Then each student gets an answer from the ball (Fitriasari, 2021; Usaningsih, 2021).

This Snow ball Throwing model is also known as a snowball, similar to a gaming activity. It is highly preferred by students to learn while playing. Therefore, it is a model that is able to increase students' confidence to voice their opinions in front of others. They will feel more courageous to speak in front of their classmates. During the learning process, students have the responsibility to answer questions asked by other students. This shows that cooperative learning models such as Snowball Throwing can teach responsibility to students. Learning while playing will create a fun learning environment, encouraging students to become activists and engage in learning activities.

Advantages of Implementing the Snowball Throwing Model

The application of the *Snowball Throwing Type Cooperative Learning Model* in teaching fractional material has a number of advantages. Here are some of them:

1. Increases Student Engagement: This model promotes active student involvement in the learning process. They work together in small groups and feel more involved in the learning process.
2. Improves Fraction Comprehension: In this model, students must think critically, answer questions, and provide input to their groupmates. This helps them understand fractional matter better.
3. Improves Social Skills: This learning model also builds students' social skills, such as communicating, collaborating, and providing feedback. This is an important skill in daily life.

4. **Reduced Fear of Mistakes:** In a cooperative environment, students feel more comfortable sharing their thoughts and ideas. They are not afraid to make mistakes, because their job is to help their groupmate to improve and understand better.
5. **Increases Learning Motivation:** Through interaction with classmates and feeling that they have an important role in the learning process, students become more motivated to learn and actively participate in lessons.

This finding is reinforced by several previous studies that show that the application of the *Snowball Throwing* learning model can improve learning outcomes (Asmariati, 2020; Hujaemah et al., 2019). Other studies also found that the application of the *Snowball Throwing* type cooperative learning model was able to increase student learning activities (Ratna Juwita, 2020; Santika et al., 2019). Other research shows that the *Snowball Throwing* learning model is effectively applied to the mathematics learning process (Firdaus, 2016).

According to Zulfiati (2014), the results of the study show that teachers may be able to choose and apply models that suit the learning characteristics of their students to encourage better learning outcomes. One of the cooperative learning models of the *Snowball Throwing* type can help increase learning activities.

According to many studies, the snowball throwing model is successful in a variety of educational settings. Hyifa (2023) said that this model improves students' understanding in high school. Farida (2021) looked at an increase in student participation in elementary school, and Bainani (2020) found that students in high school understood certain topics better. Agustina (2017) also saw an increase in learning outcomes in vocational schools. With this data, the snowball throwing method can be used at different levels and educational topics.

5. CONCLUSION

The application of the *Snowball Throwing* Type Cooperative Learning Model is an effective approach in improving the learning outcomes of students in grade V B at SD Negeri 181 in fractional materials. By encouraging cooperation, student engagement, and better understanding, this model helps students to more easily understand and master complex materials such as fractions. With this innovative learning approach, we can ensure that education at SD Negeri 181 remains relevant and provides maximum benefits for student development.

6. SUGGESTION

1. Conduct group learning to foster students' attitude of responsibility towards themselves and their group during the learning process.
2. Monitor all successful and unsuccessful students to continue the lessons they have learned in a better way.
3. Reflecting on each learning to improve the next learning process. To improve learning in the future, the results of this study must be reviewed. One of the follow-ups that we need to pay attention to is the establishment of a forum for aspirations and the improvement of teachers' professionalism in the future. Examples are the Teacher Working Group (KKG) and the Leadership Working Group (KKKS).

REFERENCE

- Agustina, E.T. (2017). Implementation of *the Snowball Throwing* Learning Model to Improve Student Learning Outcomes in Making Wooden Craft Products with Manual Equipment.
- Asmariati, 2020; Hujaemah et al., 2019)
- Bainani, R. (2020). THE APPLICATION OF *THE SNOWBALL THROWING* LEARNING MODEL IN IMPROVING STUDENTS' UNDERSTANDING OF QANAHAH MATERIAL IN CLASS VIII MTS AL-MARHAMAH NGULAK, SANGA DISTRICT, MUSI BANYUASIN VILLAGE.
- Farida, H., Anjarini, T., & Suyoto (2021). The application of the *Snowball Throwing* Model with the theme of Our Friend's Environment as an Effort to Increase Learning Activeness.
- Handayani, N., 2021. *Snowball Throwing* Type Cooperative Learning Model Improves Fractional Learning Outcomes in Grade V Students of SDN Urangagung Sidoarjo. *Tambusai Education Journal*, 5(1), pp.615-619.
- Hernowo, 2009. Become a Teacher Who Wants and Teaches Creatively. Bandung :MLC.
- Maftukhah, S., 2016. Application of *Snowball Throwing* Learning Model to Improve Student Learning Outcomes of Fractional Materials in Class V Sdn Waru I Sidoarjo. *Journal of Elementary School Teacher Education Research*, 2, pp.270-281.
- Nuraini, N. L. S., & Laksono, W. C. (2019). Internal and External Motivation of Elementary School Students in Mathematics Learning. *Elementary School: A Study of Educational Theory and Practice*, 28(2), 115–124. <https://doi.org/10.17977/um009v28i22019p115>.
- Ridwan, M.H. (2022). THE APPLICATION OF INNOVATIVE LEARNING MODELS TO IMPROVE STUDENT COMPETENCE. *Tarbiyatuna Journal: Journal of Education, Thought and Development of Islamic Education*.

- Ritonga, S., 2018. Application of *the Snowball Throwing* Model to Improve the Learning Outcomes of Students in Mathematics Subject of Fractional Materials in Class IV of MIN Medan Tembung Academic Year 2017/2018 (Doctoral dissertation, State Islamic University of North Sumatra).
- Roheni, R. (2020). THE APPLICATION OF THE *SNOWBALL THROWING* TYPE COOPERATIVE LEARNING MODEL TO IMPROVE SOCIAL STUDIES LEARNING OUTCOMES FOR GRADE VI STUDENTS OF SDN CIBANDAN, KRAMATMULYA DISTRICT, KUNINGAN REGENCY.
- Rusman, 2011. Learning Models to Develop Teacher Professionalism, Jakarta: RajawaliPress.
- Sanjaya, W. 2011. Learning Strategies Oriented to Educational Process Standards. Jakarta: Predana Media.
- Sayekti, Siskha Putri, Zaeni Dahlan, Muhammad Fikri, Al-Faruqi Program, Educational Studies, Islamic Religion, Stai Al-, and Hamidiyah Jakarta. "Application of the Talking Stick Learning Model in Improving the Learning Outcomes of Pie Subjects." Journal.Laaroiba.Ac.Id. Accessed June 20, 2023. <https://doi.org/10.17467/jdi.v2i2.365>.
- Shoffa, S., & Suprapti, E. (2017). Improvement of Student Learning Outcomes in Numerical Method Courses with Jigsaw Cooperative Learning Model. *Journal on Mathematics Education*, 2, 178-188.
- Slameto, 2010. learning and the factors that influence it. Jakarta: Rineka Cipta.
- Sugiharto, K.N.F. et al., 2007. Educational Psychology. Yogyakarta. UNY Pres.
- Syarifuddin, S., Fadila, N., & Ahmadin, A. (2023). APPLICATION OF *SNOWBALL THROWING* TYPE COOPERATIVE LEARNING MODEL TO IMPROVE ACTIVITIES AND LEARNING OUTCOMES OF GRADE V STUDENTS IN SCIENCE SUBJECTS AT SDN MONTA. *Al Ibtidaiyah: Journal of Madrasah Ibtidaiyah Teacher Education*.
- Verawati, 2011. Implementation of *the Snowball Throwing* Learning Model to Improve Mathematics Comprehension and Learning Achievement in High School Students. Thesis, Bandung: University of Education Indonesia.
- Wati, S.D.E., 2021. The application of *the Snowball Throwing* method improves the learning outcomes of grade V students of fractional material. *Journal of Education: Research and Conceptual*, 5(1), pp.100-106.
- Winkel, W.S, 2004. Teaching Psychology. Yogyakarta: Eternal Media.
- Yumna Luthfiyah, A., & Puji Astuti, H. (2023). Improvement of Mathematics Learning Outcomes by Using *Snowball Throwing* Type Cooperative Learning. Nabla Dewantara.